

CONAX CORPORATION

2300 WALDEN AVENUE
BUFFALO, NEW YORK 14225

Nuclear Products Division

No. IPS-400

REV.	DATE

TEST REPORT

QUALIFICATION OF ELECTRICAL CONNECTION

TERMINAL BLOCKS/JUNCTION BOXES

IN CONTAINMENT ENVIRONMENT OF

A LOSS OF COOLANT ACCIDENT

OR A STEAM LINE BREAK ACCIDENT

FOR

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

FOR

SALEM GENERATING STATION

PREPARED BY J. D. DePasquale DATE 4-25-79
J. D. DePasquale - Project Test Engineer

APPROVED BY F. J. Illig DATE 4/25/79
F. J. Illig Project Manager - Test

R. L. Diroure DATE 4/25/79
R. L. Diroure - Quality Assurance Manager

G. M. Rhodes DATE 5-9-79
G. M. Rhodes - Manager of Engineering

Accepted for Public Service Electric and Gas Company:

By: W. M. Pavincich Date 5-17-79
W. M. Pavincich - Senior Engineer
P.S.E.&G. Test Coordinator

7907250382

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No. IPS-400

REVISION RECORD

REV.	AFFECTED PARAGRAPHS	BRIEF DESCRIPTION OF REVISION	DATE	APPROVAL SIGNATURE
Orig.	All	Original Release	4/25/79	<i>J. DePasquali</i> J. DePasquali Project Test Engineer

FORM 58-12

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ABSTRACT

Testing was conducted to environmentally qualify protected electrical Terminal Blocks, Buchanan Model 616508-6 and Buchanan Model 2B112N, which were mounted in the specified Junction Boxes for Public Service Electric and Gas Company for the Salem Generating Station.

The test models consisting of junction boxes, terminal blocks, and cables were assembled at the Salem Generating Station in accordance with prescribed installation practices for that plant, and are identical in all respects (excepting length of conduit connected to box) to such equipment presently installed at Salem.

The testing demonstrated the capability of the Terminal Blocks and Junction Boxes to perform as required throughout the duration of the tests in accordance with the specified acceptance criteria.

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TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.0	Objective	1
2.0	Applicable Documents	1
3.0	Materials Tested	1
4.0	Test Facilities	2
5.0	Test Equipment and Calibration Data	3
6.0	Test Procedure	4
7.0	Test Results	10
8.0	Conclusion	29

APPENDIX

A	Test Data	
B	Public Service Electric and Gas Company Test Procedure for Qualification of Electrical Connection Terminal Blocks in Containment Environment of a Loss of Coolant Accident or a Steam Line Break Accident, dated 11/30/78, Revision 1, 1/5/79.	
C	Public Service Electric and Gas Company Drawing no. 212805 D 4131-1, Public Service Electric and Gas Company Drawing E-101278 (sheets 1 and 2) Revision Ø.	
D	Report on Terminal Block Irradiation Test for Public Service Electric and Gas Company from Isomedix Inc., Parsippany, New Jersey, dated November 10, 1978.	

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1.0 OBJECTIVE

The purpose of this test was to qualify protected electrical Terminal Blocks and the Junction Boxes in which they were mounted for a Loss of Coolant Accident (LOCA) and a Steam Line Break (SLB) environment in accordance with the Public Service Electric and Gas Company Test Procedure dated 11/30/78, Rev. 1, 1/5/79, shown in Appendix B.

2.0 APPLICABLE DOCUMENTS

- 2.1 Public Service Electric and Gas Company Test Procedure for Qualification of Electrical Connection Terminal Blocks in Containment Environment of a Loss of Coolant Accident or a Steam Line Break Accident dated 11/30/78, Rev. 1, 1/5/79, shown in Appendix B.
- 2.2 Public Service Electric and Gas Company Drawing No. 212805-D-4131-1, shown in Appendix C.
- 2.3 Public Service Electric and Gas Company Drawing E-101278 (sheets 1 and 2), Rev. Ø, shown in Appendix C.
- 2.4 Report on Terminal Block Irradiation Test for Public Service Electric and Gas Company from Isomedix Inc., Parsippany, New Jersey dated November 10, 1978, shown in Appendix D.

3.0 MATERIALS TESTED

3.1 Individual Items

- 3.1.1 Four (4) Buchanan Terminal Blocks (irradiated to 200 megarads), Model 616508-6, marked A, B, C, and D.
- 3.1.2 Eight (8) Buchanan Terminal Blocks (irradiated to 200 megarads), Model 2B112N, marked E, F, G, H, I, J, K and L.
- 3.1.3 Six (6) galvanized steel Junction Boxes measuring 13-1/2" x 13-1/2" x 6" with cover. These boxes were fabricated in accordance with Public Service Electric and Gas Company Drawing No. 212805-D-4131, Figure 3. Each of the boxes was fitted with two (2) 2" close nipples secured with a 2" Meyers scru-tite hub.

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- 3.1.4 Twenty four (24) 10' long lengths of 9 conductor number 14 Control Cable rated for 600 volts. This cable was manufactured by Triangle P.W.C. Inc. and was supplied on Manufacturer's Reel No. 17025 (Salem Reel No. S5054).

3.2 Assemblies

- 3.2.1 Six (6) Junction Box Assemblies each consisting of one (1) Junction Box, two (2) Terminal Blocks, and four (4) lengths of Cable assembled as per PSE & G Company sketch E-101278 (sheets 1 and 2), Rev. Ø, shown in Appendix C. These assemblies were designated as follows in the actual test:

<u>Assembly</u>	<u>Configuration</u>	<u>Terminal Blocks</u>	
		<u>Position 1</u>	<u>Position 2</u>
1	Left Hand	E	F
2	Right Hand	G	A
3	Left Hand	H	I
4	Right Hand	C	J
5	Left Hand	K	B
6	Right Hand	L	D

NOTE

Positions of Terminal Blocks D and L were interchanged per direction of W. Raughley of Public Service Electric and Gas Company. See Appendix B, Section III B.

4.0 TEST FACILITIES

- 4.1 The Irradiation Test and the DC High Potential Test were conducted at Isomedix Inc., Parsippany, New Jersey (see Appendix D).
- 4.2 All other tests were conducted at the Conax Nuclear Products Testing Laboratory, Buffalo, New York. The boiler system used includes a 200 KW electric boiler (Fulton Boiler Works) which supplies 90 to 100% saturated steam, a 50 inch diameter 25-1/2 inch long cylindrical autoclave (Conax Corporation) constructed of boiler plate and high strength bolts, an automatic water conditioner, two 350 gallon spray solution storage tanks, and associated pumps, controls and valves.

5.0 TEST EQUIPMENT AND CALIBRATION DATA

<u>Item</u>	<u>Manufacturer</u>	<u>Conax Serial Number</u>	<u>Calibration Date</u>	<u>Range Used</u>	<u>Accuracy % F.S.</u>
AC Milliammeters	Simpson	31 thru 42	12/78	0-10 ma	2
Multimeter	Digitec	2120	11/78	0-200 VAC	0.5
Multimeter	B & K	290	3/78	0-500 VDC	1.5
DC Milliammeter	Simpson	27	9/78	0-200 ma	2
DC Milliammeter	Simpson	21	11/78	0-100 ma	2
AC Ammeter	Amprobe	RS3	4/78	0-6A	3
DC Power Supply	B & K	1602	Ref. Only	0-400V	N/A
Megohmmeter	Hippotronics	3920-1102	10/78	0-5000 VDC	2
Dielectric Tester	Hippotronics	2	12/78	0-3750 VDC	2
Chart Recorder	Esterline Angus	53640	12/78	0-500°F	0.5
Chart Recorder	Leeds & Northrup	610032	12/78	0-400°F	3

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6.0 TEST PROCEDURE

6.1 Testing to be conducted in accordance with the Public Service Electric and Gas Company Test Procedure for Qualification of Electrical Connection Terminal Blocks in Containment Environment of a Loss of Coolant Accident or a Steam Line Break Accident dated 1/30/78, Rev. 1, 1/5/79, shown in Appendix B.

6.2 The Test Procedure is summarized below

6.2.1 Test Preconditioning (not conducted at Conax).

6.2.1.1 Terminal Blocks - All blocks were exposed to a Cobalt - 60 Gamma field at a dose rate of 0.98 megarads per hour for a total of 200.2 megarads. Pre-exposure and post-exposure high potential tests were performed on all terminal blocks.

6.2.2 Preparation for testing.

6.2.2.1 The "as supplied" terminal blocks to be removed from the junction boxes and replaced with the designated irradiated terminal blocks.

6.2.2.2 In each junction box, one thermocouple to be mounted on the top of one of the terminal blocks and one thermocouple to be mounted on the inside surface of the junction box. The thermocouple lead wires to be run out through the 2 inch nipples.

6.2.2.3 The openings of the 2 inch nipples to be filled with PR855 fire resistant RTV silicone foam packaged in SEMKIT two part sealant cartridge. All space in the nipples not occupied by cable to be filled with silicone foam.

6.2.2.4 Two (2) 1/4" weep holes to be drilled in the bottom (as situated in the test chamber) of each Right Hand Junction Box.

6.2.3 Test Service Conditions.

6.2.3.1 LOCA Test #1 and SLB Test #2

6.2.3.1.1 All terminal points of one block in each test assembly to be wired to an AC source so as to impress 140 VAC across neighboring points. Odd numbered terminal points to be energized to carry 2-5 amperes.

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- 6.2.3.1.2 The lower six terminal points of the second block in each test assembly to be wired to a DC source so as to impress 140V across neighboring points. Line current to be limited to 100 milliamperes.
- 6.2.3.1.3 Test circuitry to be arranged so as to identify single point failures (see Figure A and Figure B).
- 6.2.3.1.4 The above service conditions to be maintained throughout the duration of each test except when insulation resistance measurements are being performed (approximately 20 minutes, twice daily).

6.2.3.2 SLB Test #3.

- 6.2.3.2.1 Terminal points of one block in each test assembly to be wired to a DC source so as to impress 140V across neighboring points: 1 & 2, 5 & 6, 11 & 12.
- 6.2.3.2.2 Test circuitry to be arranged so as to identify single point failures (see Figure C).

NOTE

Test service conditions for SLB Test #3 were specified per direction of W. Raughley of Public Service Electric and Gas Company. See 6.2.4.3.

6.2.4 Test Profiles - Environmental Conditions (IDEAL).

- 6.2.4.1 Loss of Coolant Accident (LOCA) Test #1
- 6.2.4.1.1 125°F @ 0 psig to 286°F @ 50 psig in 10 seconds.
- 6.2.4.1.2 Maintain 286°F @ 43 psig until $t = 2$ hours, 47 minutes.
- 6.2.4.1.3 15 minutes maximum ramp of 286°F @ 43 psig to 240°F @ 10 psig.
- 6.2.4.1.4 Maintain 240°F @ 10 psig until $t \geq 240$ hours.

POSITION 1 RIGHT-TER. BLK. G
POSITION 1 LEFT-TER. BLK. E

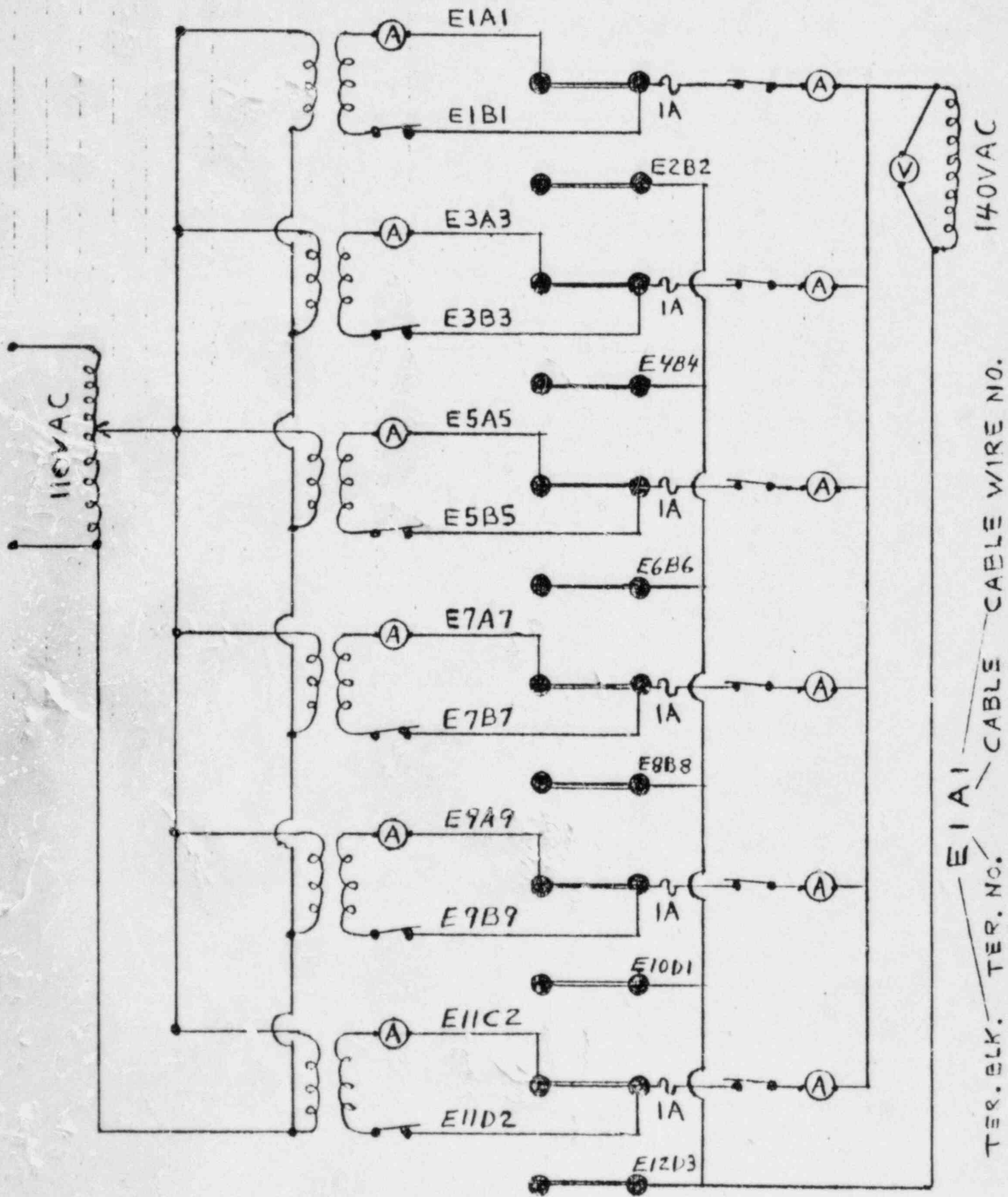
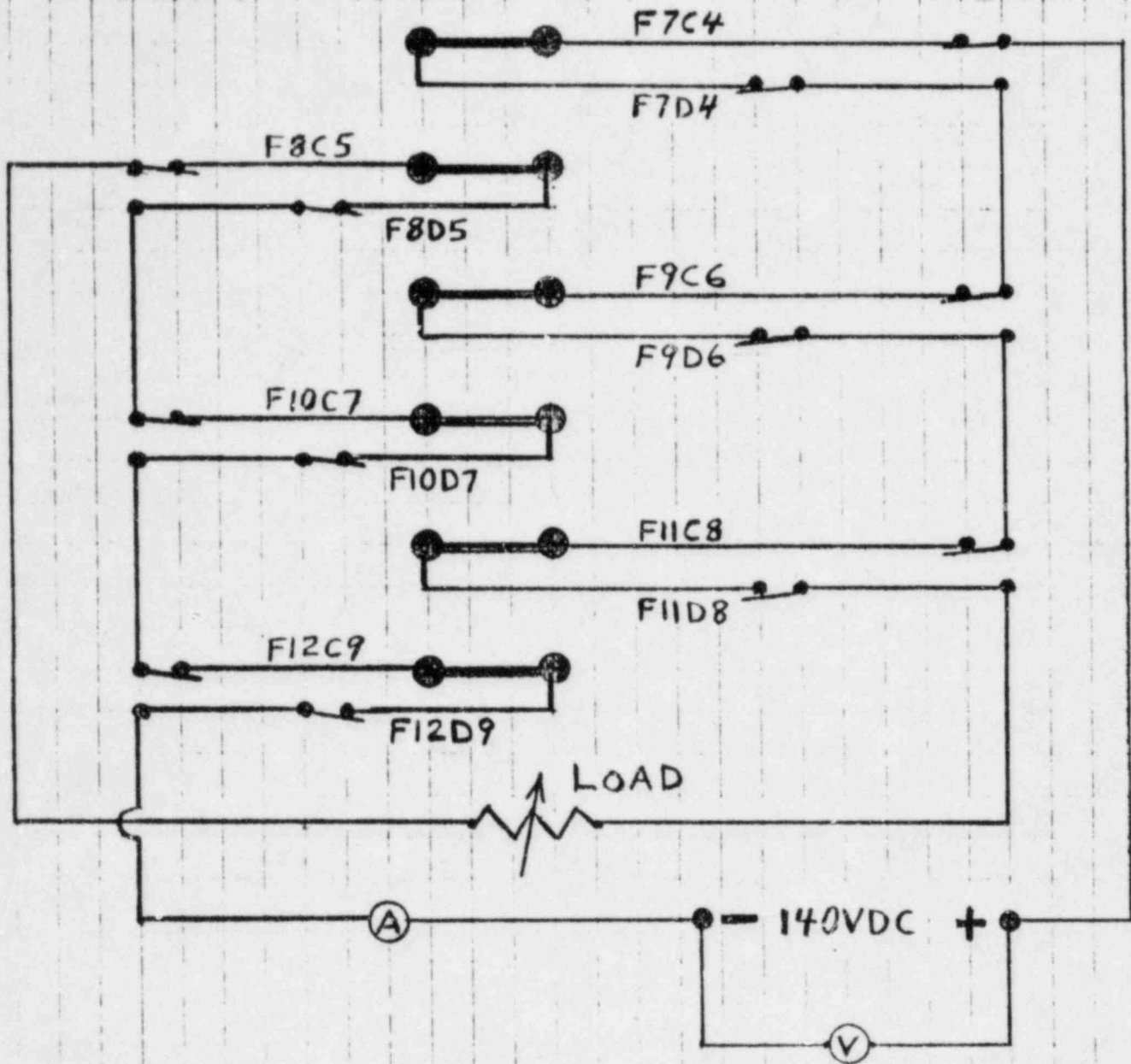


FIGURE B

IPS-400

POSITION 2 RIGHT-TER. BLK. A
 POSITION 2 LEFT-TER. BLK. F



F7C4

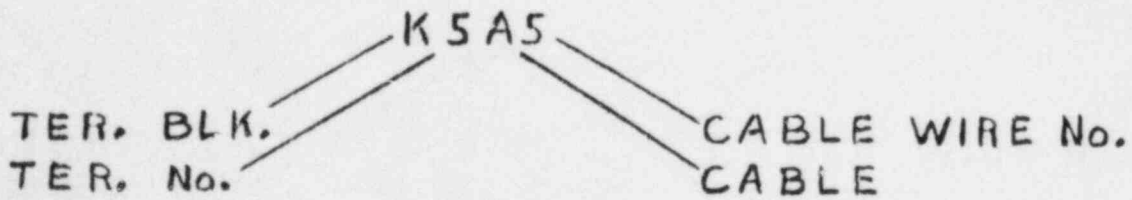
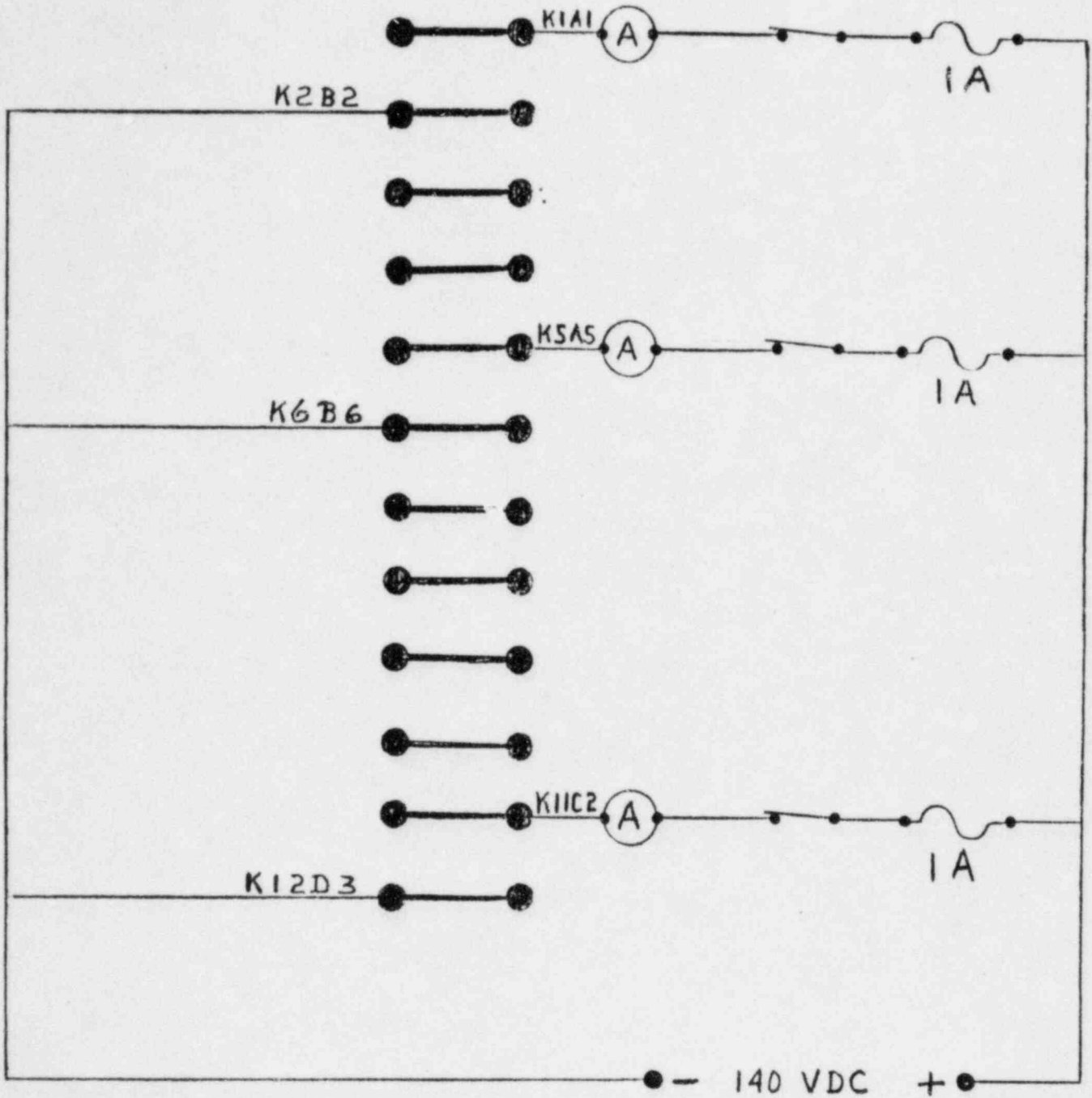
TER. BLK. CABLE WIRE NO.
 TER. NO. CABLE

NOTE: ABOVE CIRCUIT WAS DUPLICATED FOR TER. BLK. A EXCEPT THAT POWER SUPPLY WAS COMMON FOR BOTH TER. BLKS.

FIGURE C

IPS-400

POSITION 1 RIGHT - TER. BLK. L
 POSITION 1 LEFT - TER. BLK. K



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6.2.4.2 Steam Line Break (SLB) Test #2.

- 6.2.4.2.1 125^oF @ 0 psig to 350^oF @ 43 psig minimum in 5 minutes maximum.
- 6.2.4.2.2 Maintain 350^oF @ 43 psig until t = 10 minutes.
- 6.2.4.2.3 15 minute ramp of 350^oF @ 43 psig to 240^oF @ 10 psig.
- 6.2.4.2.4 Maintain 240^oF @ 10 psig until t = 24 hours.

6.2.4.3 Steam Line Break (SLB) Test #3.

- 6.2.4.3.1 125^oF @ 0 psig to 350^oF @ 43 psig minimum in 5 minutes maximum (because of the characteristics of saturated steam, 131 psig was required to achieve 350^oF).
- 6.2.4.3.2 Maintain 350^oF @ 43 psig for 1 minute minimum.
- 6.2.4.3.3 15 minute ramp of 350^oF @ 43 psig to 240^oF @ 10 psig.
- 6.2.4.3.4 Maintain 240^oF @ 10 psig until t = 1 hour.

NOTE

Test Profile Environmental Conditions for SLB Test #3 were specified by W. Raughley of Public Service Electric and Gas Company. These conditions differ from 6.2.4.2 above. See 7.7 "Discussion".

- 6.2.4.4 Chemical Spray to consist of 1.2% (by weight) boric acid solution with sufficient sodium hydroxide added to maintain a pH of 8.5 to 10.0. Spray rate to be 0.15 to 0.2 GPM/FT². Spray to be initiated 5 minutes after achievement of peak temperature and continued for 24 hours (1 hour for SLB Test #3).

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- 6.2.4.5 The basis for the evaluation of accelerated aging is the American Society for Testing and Materials (ASTM) document D2304.

Based on the relationship developed in the above document, the following equivalencies are established:

1 hour @ 240^oF is equivalent to 29.63 hours
@ 152^oF

237 hours @ 240^oF is equivalent to 7022.3 hours
@ 152^oF

6.2.5 Description of Tests.

- 6.2.5.1 Test #1 - Test Assemblies 1 and 2 subjected to LOCA, chemical spray, and test service conditions.
- 6.2.5.2 Test #2 - Test Assemblies 3 and 4 subjected to SLB, chemical spray, and test service conditions.
- 6.2.5.3 Test #3 - Test Assemblies 5 and 6 subjected to SLB, chemical spray, and test service conditions.

NOTE

Test #3 was from a LOCA test to an SLB test at the direction of W. Raughley of Public Service Electric and Gas Company. (See Appendix B, Section VIII C).

6.2.6 Acceptance Criteria.

The assemblies are expected to perform, throughout the duration of the tests, in the mode described in Section 6.2.3 above. If leakage current of any test circuit exceeds 1 ampere, post test examination shall determine the cause of the leakage current, that is, if the failure was in the tested circuit or in the connections to the test circuit.

7.0 TEST RESULTS

7.1 Test Preconditioning (not conducted at Conax)

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7.1.1 Inspection of the twelve (12) Terminal Blocks after exposure to the specified radiation showed no evidence of physical deterioration or dielectric deterioration.

7.1.2 The certified test report from Isomedix Inc. is shown in Appendix D.

7.2 Test Setup

7.2.1 The test items were assembled, installed, energized, and subjected to the specified environmental conditions as shown below:

<u>Assembly</u>	<u>Configuration</u>	<u>Test</u>
1	Left Hand	LOCA Test #1
2	Right Hand	
3	Left Hand	SLB Test #2
4	Right Hand	
5	Left Hand	SLB Test #3
6	Right Hand	

7.2.2 Figure D shows two (2) of the assemblies.

7.2.3 Figure E shows the test chamber set up.

7.2.4 Figure F shows the instrumentation set up.

7.3 Testing was monitored in accordance with the Conax Nuclear Quality Assurance Program (see Q.C. stamps on Data Sheets).

7.4 The initial part of LOCA Test #1 was witnessed by W. Pavincich, G. Supplee, and W. Gailey of Public Service Electric and Gas Company. SLB Test #2 and SLB Test #3 were witnessed by W. Raughley of Public Service Electric and Gas Company.

7.5 Detailed Data Sheets are shown in Appendix A.

7.6 The test results are summarized below:

7.6.1 LOCA Test #1.

7.6.1.1 Pretest Insulation Resistance Test at 500 VDC between each point and ground, and between adjacent points.

7.6.1.1.1 Measurements ranged between 75 and 5000 megohms.

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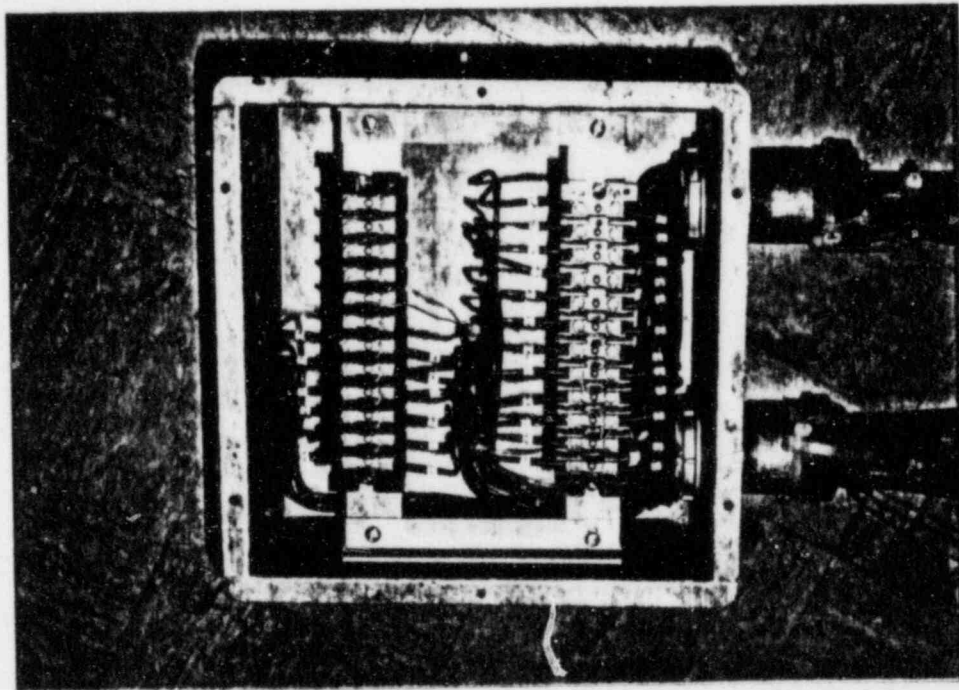
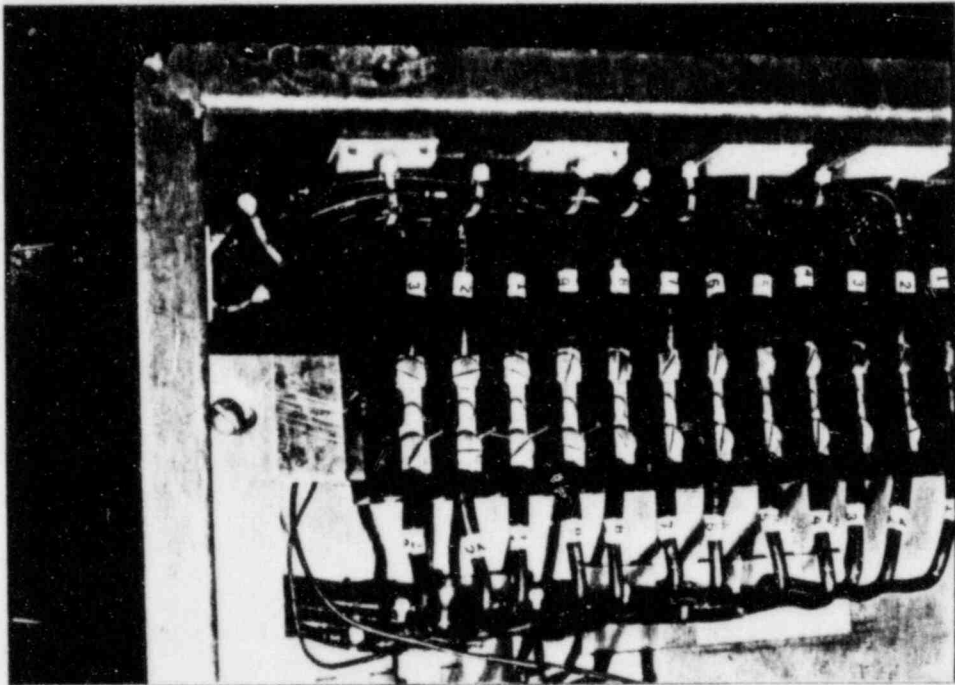


FIGURE D

JUNCTION BOX ASSEMBLIES - PRETEST

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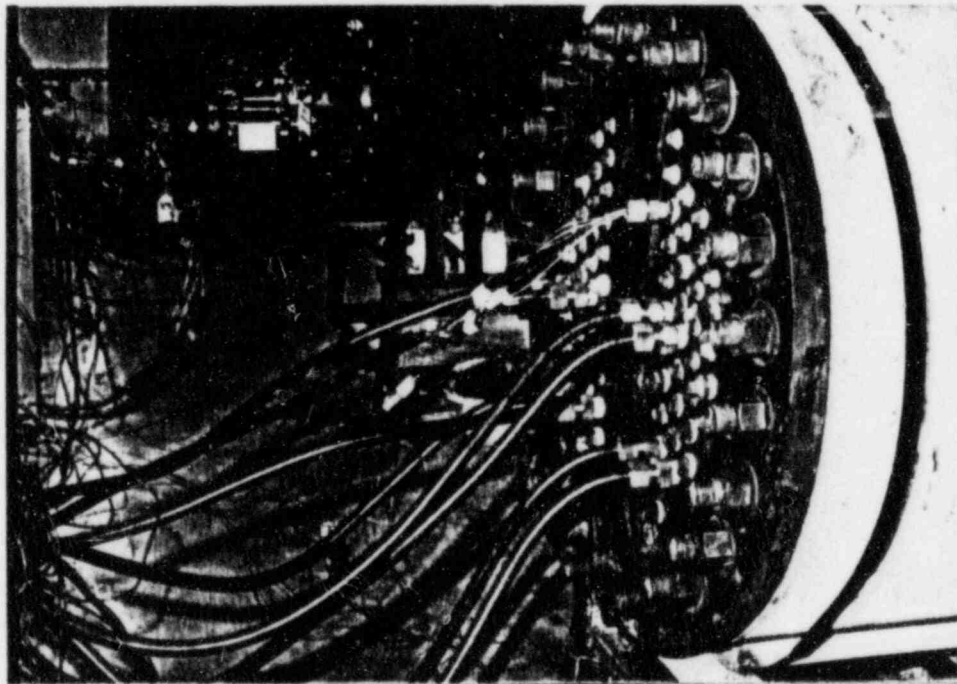
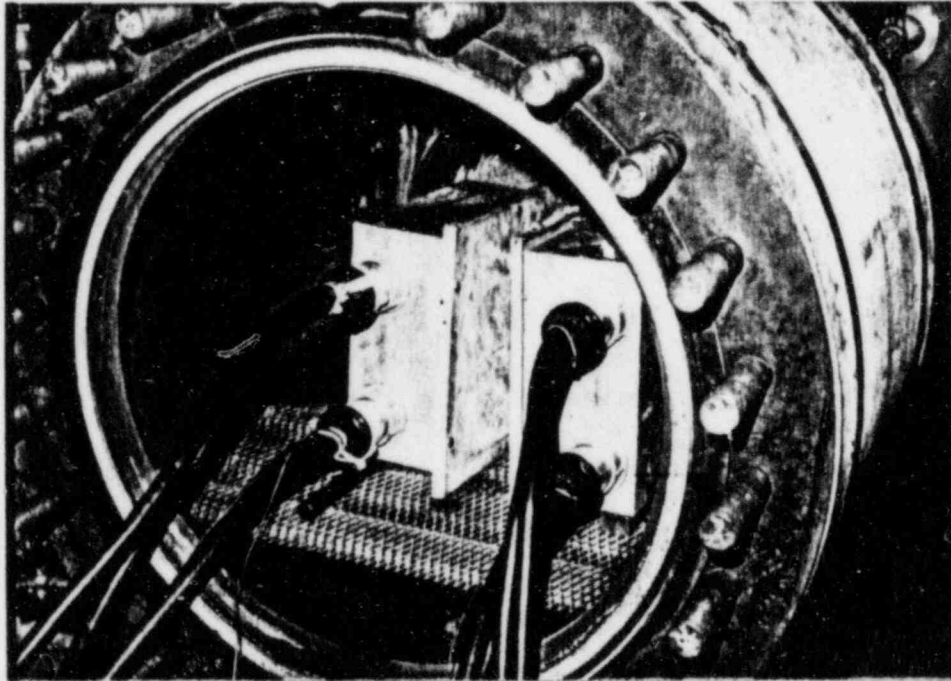


FIGURE E
TEST CHAMBER SET UP

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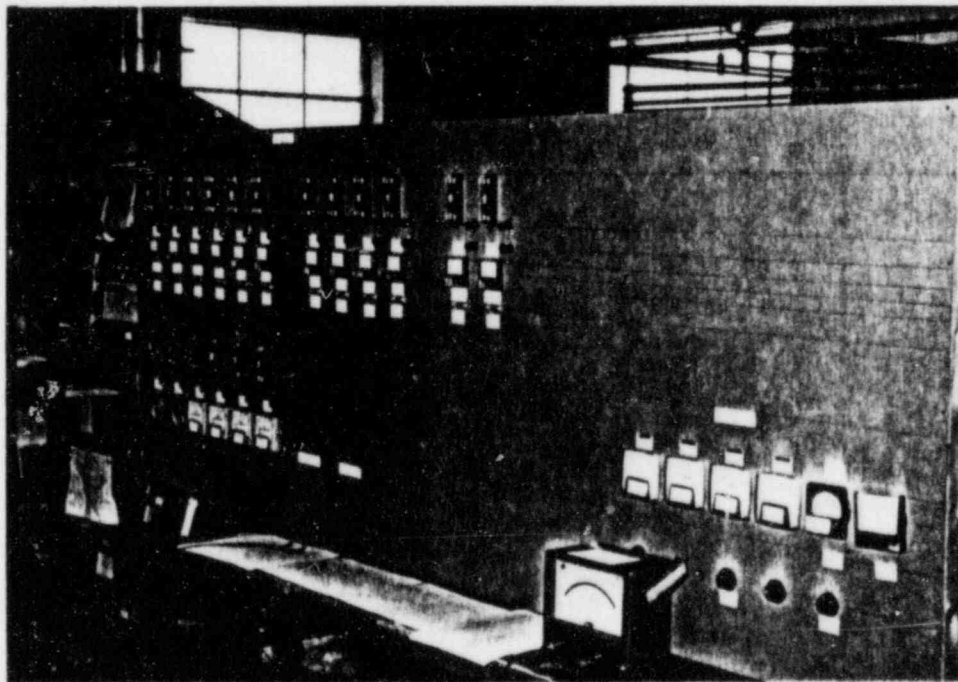
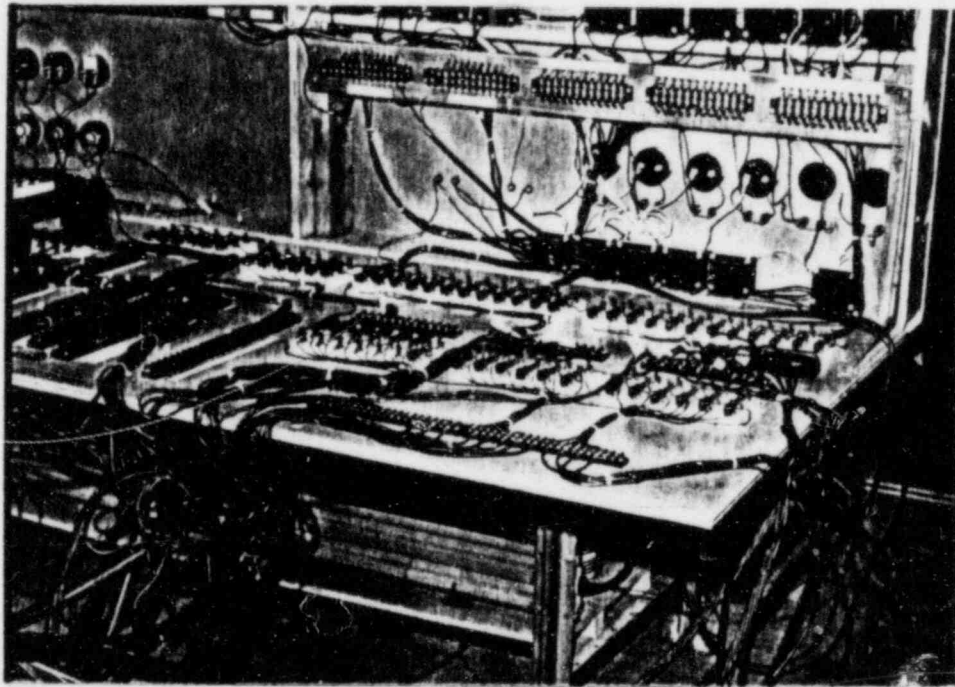


FIGURE F

INSTRUMENTATION SET UP

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7.6.1.1.2 The results are recorded on Data Sheet D.

7.6.1.2 LOCA Exposure.

7.6.1.2.1 The terminal points were energized as shown in Figure A and Figure B.

7.6.1.2.2 The specified chemical spray was initiated at $t = 5$ minutes and continued until $t = 24$ hours. Spray rate was maintained at 0.164 GPM/FT².

7.6.1.2.3 The actual test chamber temperatures are shown in Figure G.

7.6.1.2.4 Summary of LOCA Exposure (Data Sheets A, B & C).

$t = 0$

125°F chamber temperature

$t = 10$ seconds

245°F chamber temperature
32 psig chamber pressure

$t = 20$ seconds

278°F chamber temperature
50 psig chamber pressure

$t = 1$ minute

286°F chamber temperature
50 psig chamber pressure

$t = 5$ minutes

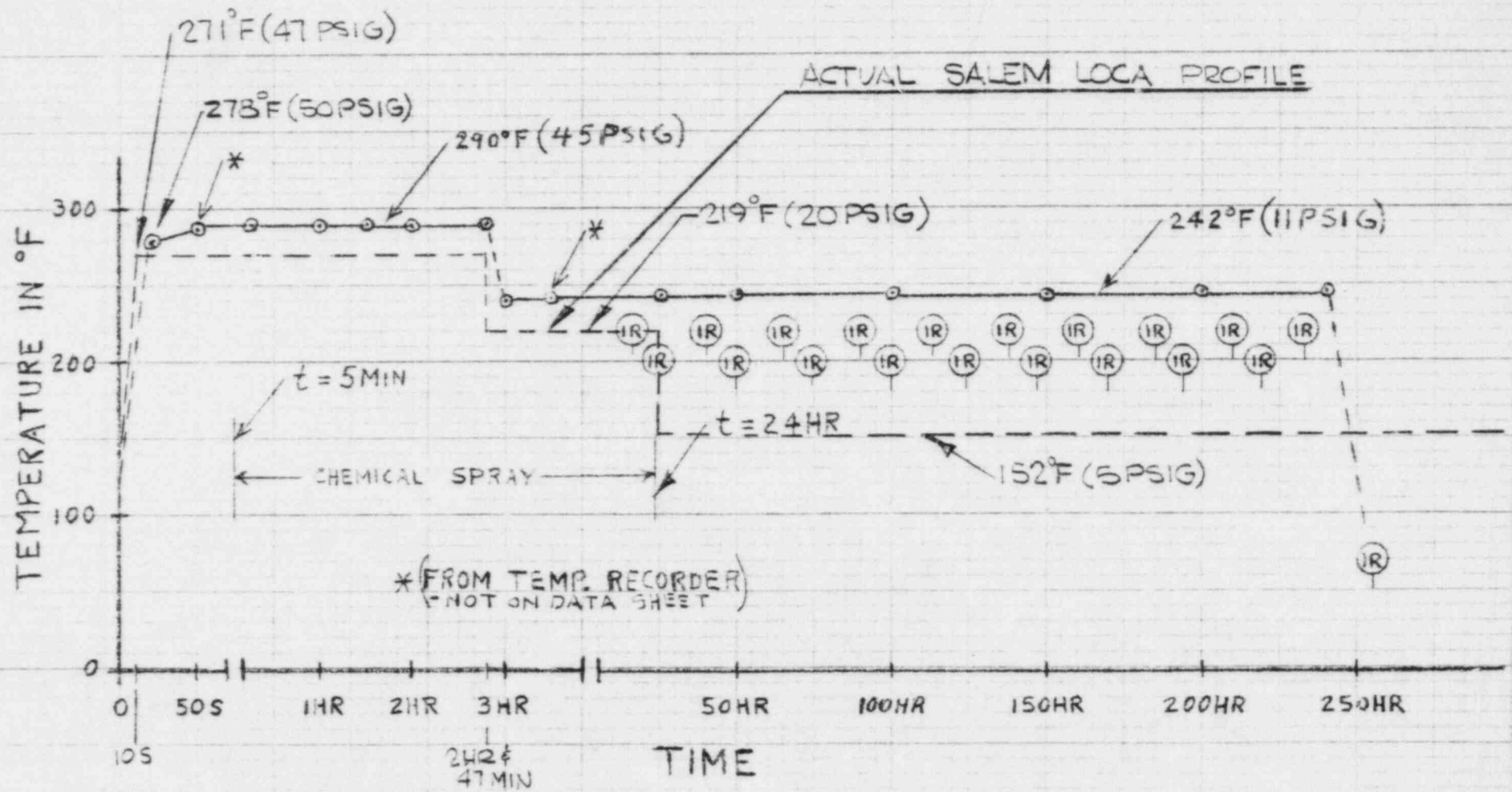
289°F chamber temperature
45 psig chamber pressure
All leakage currents @ 140 VAC measured 0.
AC line currents measured between 3.0
and 3.6 amperes.
Line currents @ 140 VDC measured 54
and 50 milliamperes for the Left Hand
and Right Hand assemblies respectively.

FIGURE G

LOCA TEST #1

IPS-400

ACTUAL TEST CHAMBER TEMPERATURES



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t = 1 hour

290°F chamber temperature
45 psig chamber pressure
All leakage currents @ 140 VAC measured 0.
AC line currents measured between 2.8 and
3.4 amperes.
Line currents @ 140 VDC measured 50
milliamperes

t = 2 hours 47 minutes

290°F chamber temperature
46 psig chamber pressure

t = 10 hours

243°F chamber temperature
11 psig chamber pressure
All leakage currents @ 140 VAC measured 0.
AC line currents measured between 3.1 and
3.6 amperes.
Line currents @ 140 VDC measured 50
milliamperes.

t = 50 hours

243°F chamber temperature
12 psig chamber pressure
Leakage currents @ 140 VAC measured
between 1.8 and 3.6 milliamperes
AC line currents measured between 2.9
and 3.4 amperes.
Line currents @ 140 VDC measured 50
milliamperes.

t = 100 hours

244°F chamber temperature
11 psig chamber pressure
Leakage currents @ 140 VAC measured
between 1.3 and 3.8 milliamperes.
AC line currents measured between 3.3
and 3.6 amperes.
Line currents @ 140 VDC measured 50
milliamperes.

t = 200 hours

245°F chamber temperature
12 psig chamber pressure

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Leakage currents @ 140 VAC measured between
<1.0 and 2.6 milliamperes.
AC line currents measured between 3.2
and 3.5 amperes.
Line currents @ 140 VDC measured 50
milliamperes

t = 240 hours (termination of test)

245^oF chamber temperature
11 psig chamber pressure
Leakage currents @ 140 VAC measured be-
tween 1.0 and 2.3 milliamperes.
AC line currents measured between 3.6
and 3.9 amperes.
Line currents @ 140 VDC measured 50
amperes.

7.6.1.2.5 Insulation Resistance was measured twice
daily between each terminal point and
ground, and between adjacent points.

Measurements ranged between 0.10 megohms
@ 30 V and 0.11 megohms @ 500 V.

The results are recorded on Data Sheet D.

7.6.1.3 Post Test Insulation Resistance Test at 500 VDC
between each point and ground, and between adjacent
points.

7.6.1.3.1 Measurements ranged between 0.6 and 80
megohms.

7.6.1.3.2 The results are recorded on Data Sheet D.

7.6.1.4 Post Test Inspection

7.6.1.4.1 Left Hand Assembly (no weep holes) -
Black sooty deposit (apparently from
rubber grommet on nipple) concentrated
at cable entrance -
Cable tie supports glued to box loosened but
cables remained in place -
Slight deposits, apparently from electrolytic
action, on Block F (D.C.) terminals -
Fine accumulation of condensed water on
inside back of box.

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- 7.6.1.4.2 Right Hand Assembly (2 weep holes) - Same as 7.6.1.4.1 except Block A (DC) terminals appear to have experienced more electrolytic activity than the AC terminal.
- 7.6.1.4.3 Figure H and Figure I show the Left Hand and Right Hand assemblies respectively.
- 7.6.1.5 Post Test Dielectric Strength Test @ 500 VDC for ten (10) seconds minimum between each terminal point and ground, and between adjacent terminal points.
- 7.6.1.5.1 All terminal points passed.
- 7.6.2 SLB Test #2.
- 7.6.2.1 Pretest Insulation Resistance Test at 500 VDC between each point and ground, and between adjacent points.
- 7.6.2.1.1 Measurements ranged between 38 and 6000 megohms.
- 7.6.2.1.2 The results are recorded on Data Sheet H.
- 7.6.2.2 SLB Exposure
- 7.6.2.2.1 The terminal points were energized as shown in Figure A and Figure B.
- 7.6.2.2.2 The specified chemical spray was initiated at $t = 11$ minutes and continued until $t = 24$ hours. Spray rate was maintained at 0.164 GPM/FT^2 .
- 7.6.2.2.3 The actual test chamber temperatures are shown in Figure J.
- 7.6.2.2.4 Summary of SLB Exposure (Data Sheets E, F & G).
- $t = 0$
125^oF chamber temperature
- $t = 30$ seconds
300^oF chamber temperature
72 psig chamber pressure

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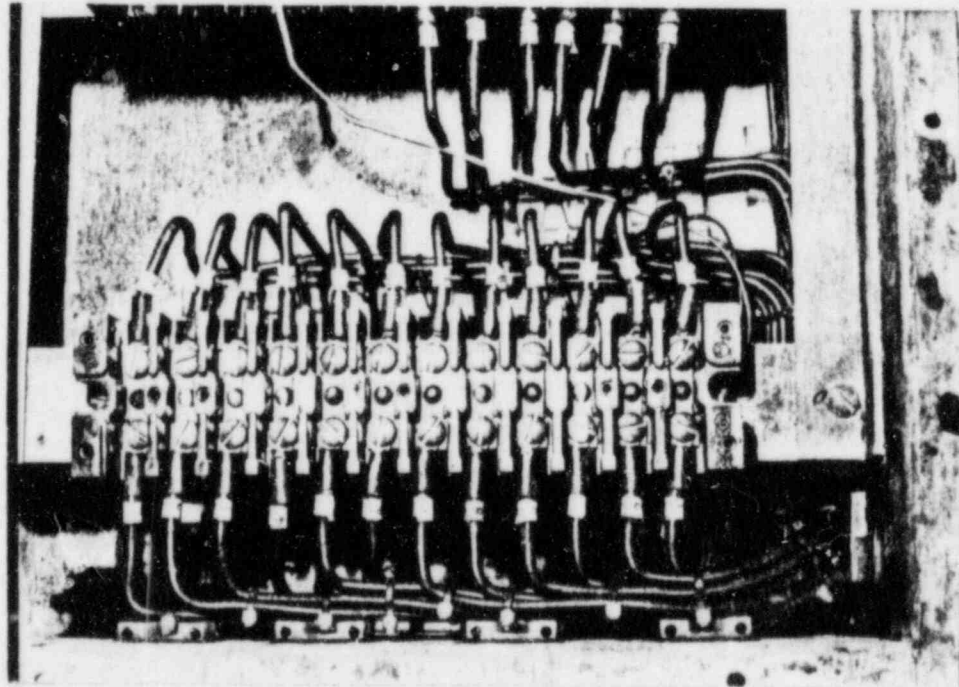
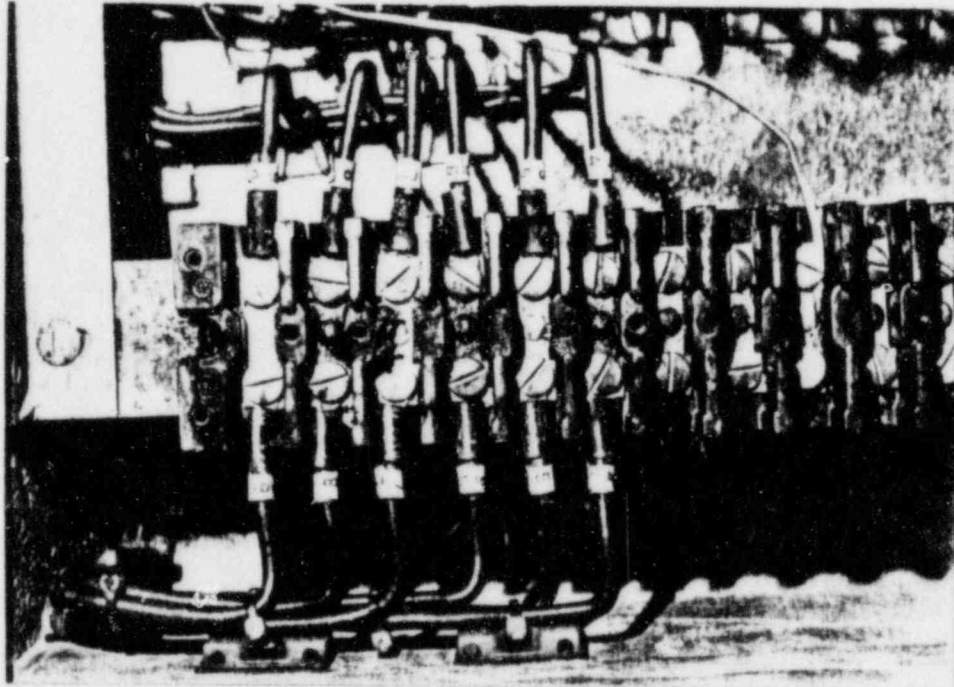


FIGURE H

LEFT HAND ASSEMBLY - POST LOCA TEST #1

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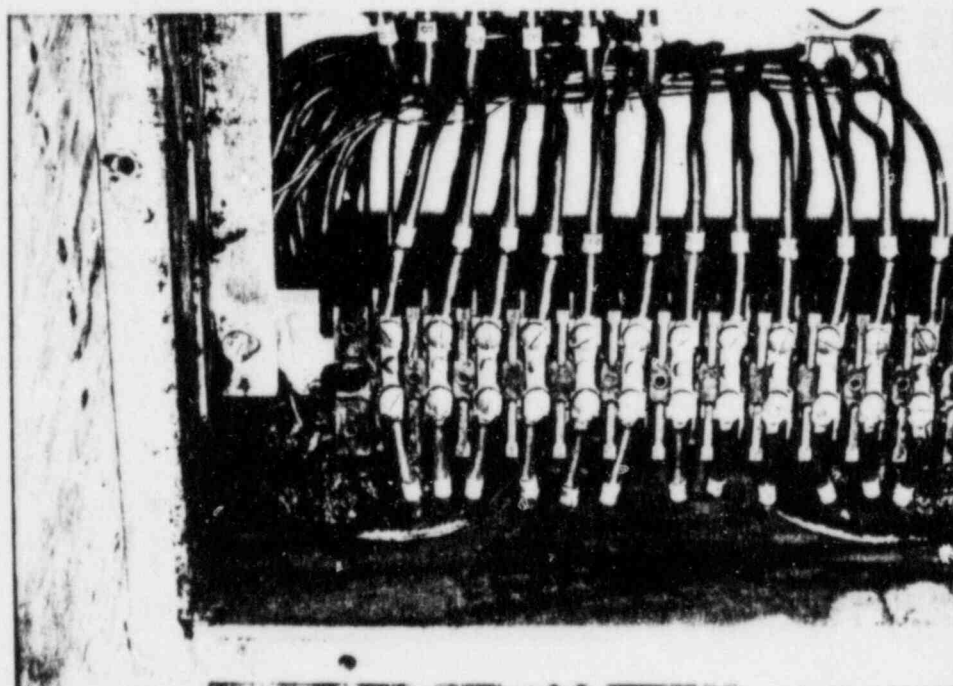
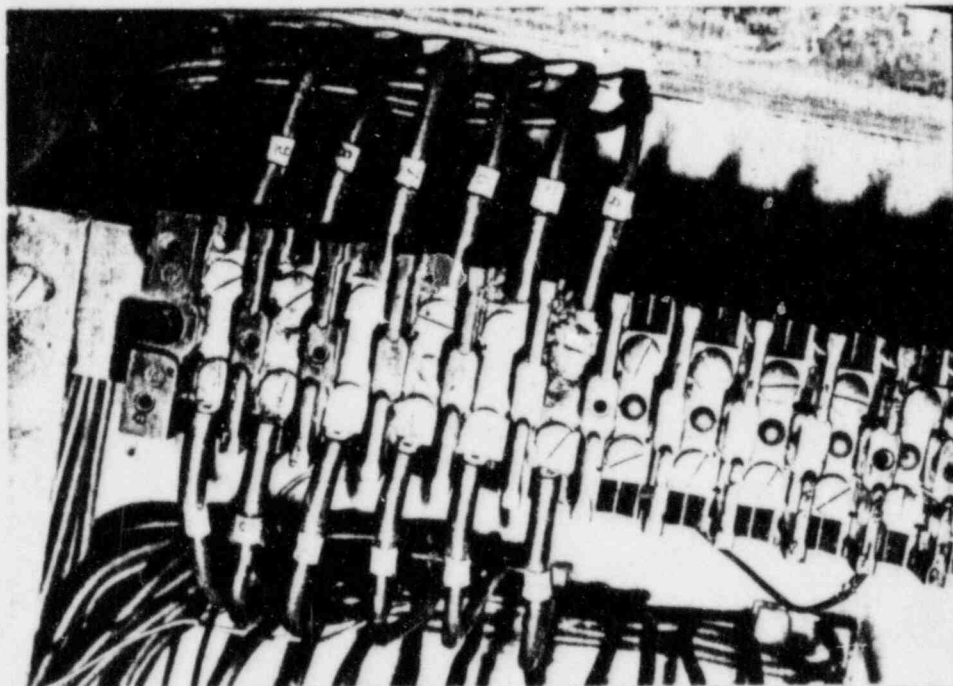


FIGURE I

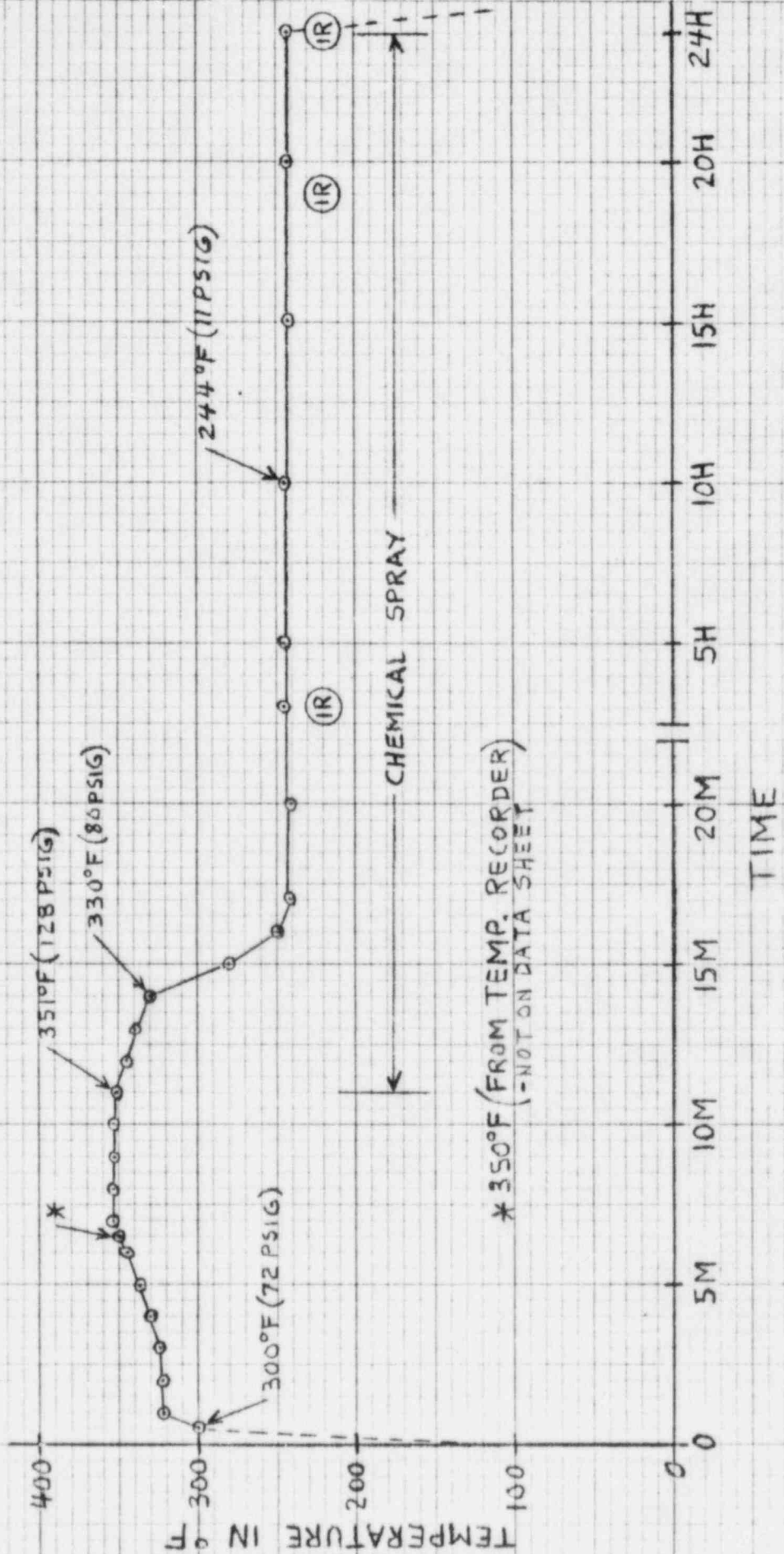
RIGHT HAND ASSEMBLY - POST LOCA TEST #1

FIGURE J

SLB TEST # 2

IPS-400

ACTUAL TEST CHAMBER TEMPERATURES



* 350°F (FROM TEMP. RECORDER)
(-NOT ON DATA SHEET)

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t = 5 minutes

338^oF chamber temperature
110 psig chamber pressure
All leakage currents @ 140 VAC measured
>10 milliamperes.
AC line currents measured between 2.6
and 3.4 amperes.
Line currents @ 75 VDC measured 100 and
40 milliamperes for the Left Hand and
Right Hand assemblies respectively.

NOTE

The DC Power Supply had tripped out on
overload just prior to t = 5 minutes (the
overload setting was 220 milliamperes)

t = 8 minutes

DC voltage restored to 150 volts with
90 ma in left hand assembly and 40 ma
in the right hand assembly.

t = 15 minutes

280^oF chamber temperature
35 psig chamber pressure
Leakage currents @ 140 VAC measured be-
tween 0 and 1.2 milliamperes.
AC line currents measured between 3.1 and
3.4 amperes.
Line currents @ 140 VDC measured 50
milliamperes

t = 1 hour

244^oF chamber temperature
12 psig chamber pressure
Leakage currents @ 140 VAC measured
between 0 and 2.4 milliamperes
AC line currents measured between 2.7
and 3.4 amperes.
Line currents @ 140 VDC measured 50
milliamperes.

t = 10 hours

244^oF chamber temperature
11 psig chamber pressure
Leakage currents @ 140 VAC measured
between 0 and 2.3 milliamperes.
AC line currents measured between 3.2
and 3.4 amperes.
Line currents @ 140 VDC measured 50
milliamperes.

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t = 24 hours

243⁰F chamber temperature
11 psig chamber pressure
Leakage currents @ 140 VAC measured between 1 and 2.8 milliamperes.
AC line currents measured between 3.1 and 3.4 amperes.
Line currents @ 140 VDC measured 50 milliamperes.

7.6.2.2.5 Insulation Resistance was measured three (3) times during the test between each terminal point and ground, and between adjacent points.

Measurements ranged between 0.10 megohms @ 50 V and 0.15 megohms @ 500 V.

The results are recorded on Data Sheet H.

7.6.2.3 Post Test Insulation Resistance at 500 VDC between each point and ground, and between adjacent points.

7.6.2.3.1 Measurements ranged between 58 and 5000 megohms.

7.6.2.3.2 The results are recorded on Data Sheet H.

7.6.2.4 Post Test Inspection.

7.6.2.4.1 Left Hand Assembly (no weep holes) -
Slight film deposits on entire block H
(AC) -
Whitish deposits, apparently from electrolytic action, on all terminal screws on block I
(DC) -

7.6.2.4.2 Right Hand Assembly (2 weep holes) -
Slight film deposits on entire block C
(AC) -
Whitish deposits, apparently from electrolytic action, on all terminal screws on block J (DC) -

7.6.3 SLB Test #3 - In order to verify that the leakage current on the terminal points during SLB Test #2 was minimal, it was necessary to show that the 220 milliamp power supply was the limiting factor in the test. The combined leakage current of two blocks with the 100 milliamp load had exceeded the 220 milliamp capacity of that power supply

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indicating at least 120 milliamps minimum was due to leakage current. SLB Test #3 was set up to measure, with a greater degree of accuracy, the individual leakage currents per terminal point. To accomplish this goal, the profile selected for this test was that of the transient period of the SLB conditions, as all data from SLB Test #2 and LOCA Test #1 supported the performance of the equipment in the post transient period. Further, once the actual leakage current per terminal is determined, all other data taken at post transient conditions would be the same as that determined in SLB Test #2.

7.6.3.1 Pretest Insulation Resistance Test at 500 VDC between each point and ground, and between adjacent points.

7.6.3.1.1 Measurements ranged between 1300 and 5000 megohms.

7.6.3.1.2 The results are recorded on Data Sheet K.

7.6.3.2 SLB Exposure.

7.6.3.2.1 The terminal points were energized as shown in Figure C.

7.6.3.2.2 The specified chemical spray was initiated at $t = 11$ minutes and continued until $t = 1$ hour. ²Spray rate was maintained 0.164 GPM/FT².

7.6.3.2.3 The actual test chamber temperatures are shown in Figure K.

7.6.3.2.4 Summary of SLB Exposure (Data Sheets I & J).

$t = 0$

126^oF chamber temperature

$t = 1$ minute

333^oF chamber temperature

110 psig chamber pressure

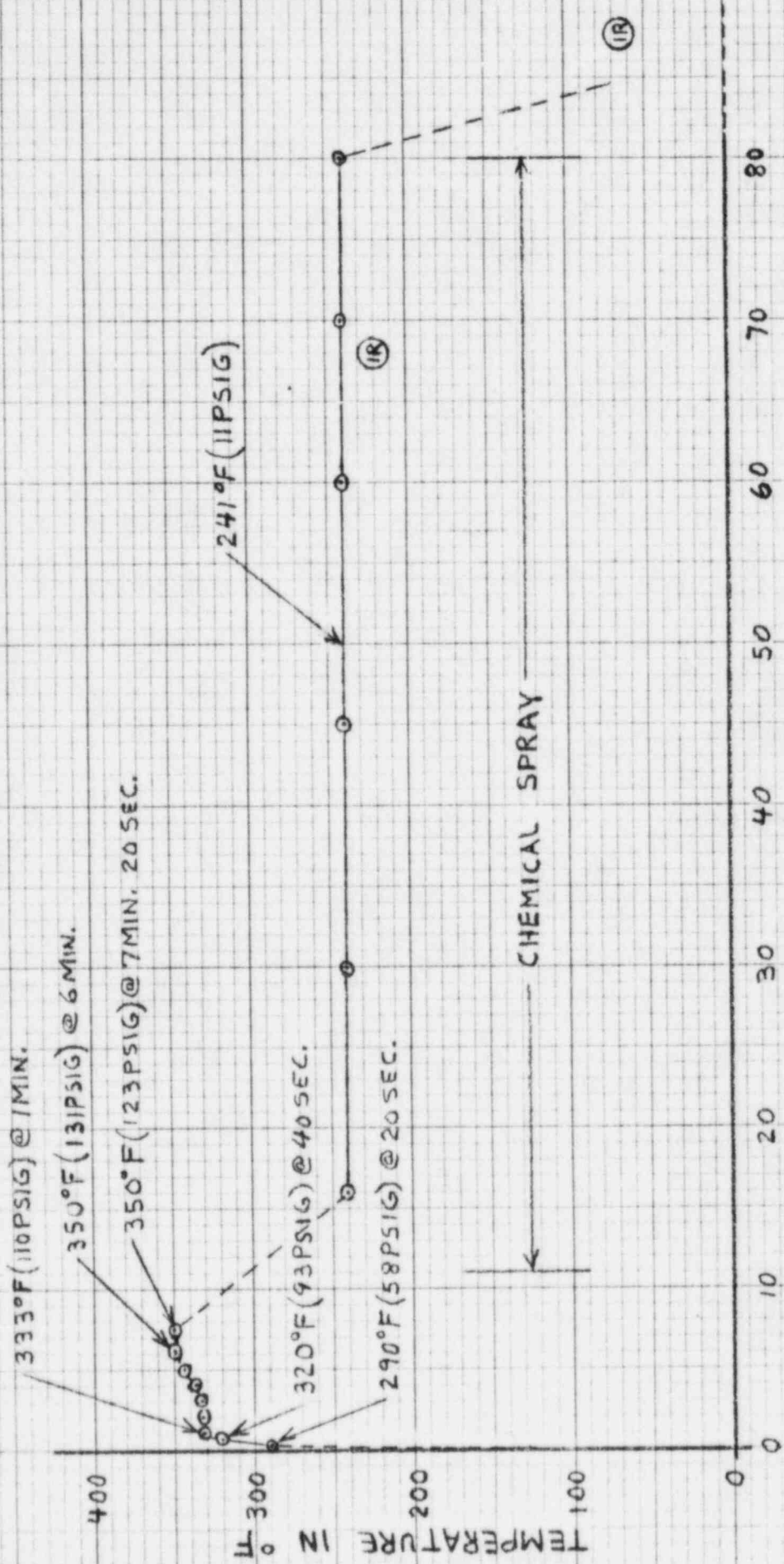
Leakage currents @ 140 VDC measured between 0 and 20 milliamperes.

FIGURE K

SLB TEST #3

IPS-400

ACTUAL TEST CHAMBER TEMPERATURES



TEMPERATURE IN °F

TIME IN MINUTES

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t = 2 minutes

333^oF chamber temperature
102 psig chamber pressure
Leakage currents @ 140 VDC measured between 0 and 30 milliamperes.

t = 3 minutes

334^oF chamber temperature
103 psig chamber pressure
Leakage currents @ 140 VDC measured between 0 and 30 milliamperes.

t = 4 minutes

338^oF chamber temperature
110 psig chamber pressure
Leakage currents @ 140 VDC measured between 0 and 30 milliamperes.

t = 5 minutes

344^oF chamber temperature
120 psig chamber pressure
Leakage currents @ 140 VDC measured between 0 and 30 milliamperes.

t = 6 minutes

350^oF chamber temperature
131 psig chamber pressure
Leakage currents @ 140 VDC measured between 0 and 40 milliamperes.

t = 10 minutes

330^oF chamber temperature
90 psig chamber pressure
Leakage currents @ 140 VDC measured between 0 and 20 milliamperes.

t = 30 minutes

241^oF chamber temperature
11 psig chamber pressure
Leakage currents @ 140 VDC measured 0

t = 1 hour

241^oF chamber temperature
11 psig chamber pressure
Leakage currents @ 140 VDC measured 0

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7.6.3.2.5 Insulation Resistance was measured immediately following $t = 1$ hour, @ 241°F and with chemical spray, between each point and ground, and between adjacent points.

Measurements ranged between 0.10 megohms @ 40 V and 0.21 megohms @ 550 V.

The results are recorded on Data Sheet K.

7.6.3.3 Post Test Insulation Resistance Test at 500 VDC between each point and ground, and between adjacent points.

7.6.3.3.1 Measurements ranged between 0.81 and 12.0 megohms.

7.6.3.3.2 The results are recorded on Data Sheet K.

7.6.3.4 Post Test Inspection.

7.6.3.4.1 Left Hand Assembly (no weep holes) -
Slight dullish discoloration of terminal screws -
Deposits on terminal screws -
Some condensation of water on side of box -

7.6.3.4.2 Right Hand Assembly (2 weep holes) -
Dullish discoloration of terminal screws -
Slight deposits on terminal screws -
Black deposits in bottom of box -
Whitish deposits on wires (possibly chemical spray entered box through cable jacket).

7.7 Discussion

During the SLB Test #2, prior to $t = 5$ minutes, the DC Power Supply had tripped out. As shown on Data Sheet F, the voltage was established @ 75 V at $t = 5$ minutes and @ 140 V at $t = 8$ minutes.

As shown in Figure B, the ammeter in each of the two DC circuits measured the sum of the current flowing through the load resistor and the leakage currents across terminal board points. The load current for both assemblies equalled 100 milliamperes.

The DC Power Supply was set to trip out at a total current flow of 220 milliamperes. When the power supply tripped, the only conclusion that could be reached is that the combined

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load current plus the leakage current had exceeded a minimum of 220 ma. When the power supply was re-established, the currents returned to the acceptable levels previously experienced in the LOCA Test.

During SLB Test #3, the maximum total leakage current for the six (6) paths tested measured 130 milliamperes. If this level of leakage current was added to a load current as used in SLB Test #2 the total current would be 230 ma. This explains why the DC power supply tripped out during SLB Test #2.

As shown on Data Sheet J, actual leakage currents measured during SLB Test #3 ranged between 0 and 40 ma which supports the above discussion. Further, the 40 ma maximum per circuit is an acceptable value as it would only cause a 0.412 volt drop at a device at the end of a 2000 foot run of #14 conductor, in fact, a 220 ma current would only cause a 2.266 volt drop at the device.

8.0 CONCLUSION

The testing demonstrated the ability of the Terminal Boards/Junction Boxes to perform throughout the duration of the LOCA and the two (2) SLB tests in accordance with the Acceptance Criteria prescribed in Section IX of the PSE & G Test Procedure, dated 11/30/78, Revision 1, 1/5/79.

APPENDIX A

TEST DATA

<u>DATA SHEET</u>	<u>TITLE</u>	<u>TEST</u>
A	Environmental Condition	LOCA Test #1
B	Electrical Conditions	LOCA Test #1
C	Electrical Conditions	LOCA Test #1
D	Insulation Resistance	LOCA Test #1
E	Environmental Conditions	SLB Test #2
F	Electrical Conditions	SLB Test #2
G	Electrical Conditions	SLB Test #2
H	Insulation Resistance	SLB Test #2
I	Environmental Conditions	SLB Test #3
J	Electrical Conditions	SLB Test #3
K	Insulation Resistance	SLB Test #3

ENVIRONMENTAL CONDITIONS - LUCA TEST #1

IPS-400

Sheet 1 of 12

START TIME 3:15 P.M.

Date 1-8-79

Temp. in °F	Chamber		Water Level in inches	pH Value	Spray Flow Rate in GPM	Enclosure Temperatures				Lapsed Time	Initials
	Pressure in psig	Terminal Block in °F				Inside Surface in °F		Terminal Block in °F			
						Left	Right		Left		
125	0	0	0	9.25	0	17	15			0	Q.D.
245	32									105	Q.D.
278	50									205	Q.D.
286	50									1M	Q.D.
289	45	0			1.0	290	285	287	280	5M	Q.D.
290	45	0			1.0	296	288	330	308	15M	Q.D.
290	45	0			1.0	298	294	328	298	30M	Q.D.
290	45	0			1.0	298	294	320	300	1H	Q.D.
290	45	0			1.0	297	293	306	304	1.5H	Q.D.
289	46	1/4			1.0	296	293	301	302	2H	Q.D.
290	46	0			1.0	296	293	302	310	2.5H	Q.D.
290	46	0			1.0	290	292	292	301	2H47M	Q.D.
245	12	0			1.0	254	258	246	268	2H54M	Q.D.
240	10	0			1.0	242	250	242	265	3H2M	?
242	10	0			1.0	246	248	247	248	4H	1
243	10	0			1.0	246	248	246	247	5H	RD
242	10	0			1.0	245	247	245	246	6H	Q.D.
243	11	0			1.0	246	248	246	247	7H	LD
244	11	0			1.0	245	249	246	247	8H	Q.D.
244	11	0		9.19	1.0	246	247	249	247	9H	Q.D.
243	11	0			1.0	245	247	245	247	10H	Q.D.
243	11	0			1.0	246	248	247	247	11H	Q.D.

Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	inside Surface in °F		Terminal Block in °F			
					Left	Right	Left	Right		
243	11	0		1.0	246	247	246	246	12 H	MR
243	11	0		1.0	245	247	245	246	13 H	MR
243	11	0		1.0	245	247	245	245	14 H	MR
243	11	0		1.0	246	247	246	246	15 H	MR
243	11	0		1.0	246	247	246	246	16 H	C.R.
243	11	0	9.34	1.0	245	246	245	245	17	MR
243	11	0		1.0	246	248	246	246	18	MR
243	11	0		1.0	246	247	246	246	19	MR
243	10	0		1.0	245	247	245	245	20	E.C.
243	10	0		1.0	244	247	244	244	21	R.C.
243	11	0		1.0	246	247	246	246	22	MR
243	11	0		1.0	246	247	246	246	23	MR
243	11	0		1.0	246	247	246	245	24	MR
243	12	0			247	249	247	247	25	MR
243	12	0			247	250	247	247	26	F.J.
243	12	0			248	251	248	248	27	F.J.
243	13	0			248	250	248	248	28	MR
243	13	0			247	252	249	248	29	MR
243	12	0			247	251	247	247	30	MR
243	13	0			249	252	249	248	31	F.J.
243	13	0			249	252	249	248	32	F.J.

ENVIRONMENTAL CONDITIONS - LUCA TEST #1
Sheet 3 of 12

IPS-400

Date 1/10/79

Temp. in °F	Chamber		Spray		Enclosure Temperatures				Lapsed Time	Initials
	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface 17 in °F		Terminal Block 15 in °F			
					Left	Right	Left	Right		
243	13	0			248	251	248	248	33	Jan
243	13	0			248	251	248	247	34	Jan
243	13	0			248	251	248	247	35	Jan
243	13	0			249	251	249	248	36	Jan
243	13	0			248	251	248	247	37	Jan
243	13	0			248	251	248	247	38	C.Z.
243	13	0			248	251	248	247	39	Jan
243	13	0			248	251	248	247	40	Jan
243	13	0			248	251	248	247	41	C.Z.
242	13	0			247	249	247	247	42	MR
242	13	0			247	250	247	247	43	MR
242	12	0			247	250	247	247	44	MR
243	12	0			246	249	246	246	45	MR
243	12	0			247	250	247	247	46	MR
243	12	0			246	249	246	246	47	MR
243	12	0			249	251	249	247	48	MR
243	12	0			248	251	248	248	49	MR
243	12	0			247	249	247	248	50	MR
243	12	0			248	250	248	246	51	MR
243	12	0			247	251	247	246	52	MR
243	12	0			246	250	246	246	53	MR
243	12	0			247	251	247	246	54	MR

DATA SHEET A

CONAX CORPORATION

ENVIRONMENTAL CONDITIONS - LUCA TEST #1
Sheet 4 of 12

IPS-400

Date

1/11/79

Temp. in °F	Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface		Terminal Block				
					17 in °F Left	13 Right	15 in °F Left	21 Right			
242	11	0	-	-	246	250	247	246	246	55	KD
247	12	0	-	-	246	249	246	246	246	56	MR
242	12	0	-	-	247	251	247	246	246	57	C.Z.
242	12	0	-	-	247	249	247	246	246	58	MR
242	12	0	-	-	246	251	246	246	246	59	C.Z.
242	12	0	-	-	247	250	247	246	246	60	C.Z.
242	12	0	-	-	247	250	247	246	246	61	C.Z.
242	12	0	-	-	247	250	247	246	246	62	MR
242	12	0	-	-	248	251	248	247	247	63	MR
243	12	0	-	-	247	251	247	246	246	64	MR
245	12	0	-	-	247	251	247	246	246	65	R.C.
245	12	0	-	-	248	248	248	247	247	66	MR
245	12	0	-	-	247	250	247	247	247	67	MR
245	12	0	-	-	247	249	247	247	247	68	MR
245	12	0	-	-	247	249	247	247	247	69	MR
245	12	0	-	-	248	249	248	247	247	70	MR
245	12	0	-	-	247	249	248	247	247	71	MR
245	12	0	-	-	247	250	248	247	247	72	R.C.
245	12	0	-	-	247	250	248	247	247	73	MR
245	12	0	-	-	247	249	248	247	247	74	MR
244	12	0	-	-	248	250	248	247	247	75	MR
245	12	0	-	-	248	215	248	247	247	76	MR

DATA SHEET A

CONAX CORPORATION

ENVIRONMENTAL CONDITIONS - LOCA TEST #1
Sheet 5 of 12

IPS-400

Date

1/12/79

Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface 17 in °F		Terminal Block 15 in °F			
					Left	Right	Left	Right		
243	12	0	-	-	247	249	248	246	77	RP
244	12	0	-	-	248	250	248	247	78	RP
245	12	0	-	-	247	249	247	247	79	RP
245	12	0	-	-	248	252	248	247	80	RP
245	12	0	-	-	248	249	248	247	81	RP
245	12	0	-	-	248	249	248	247	82	RP
245	12	0	-	-	248	251	248	247	83	RP
245	12	0	-	-	248	252	248	247	84	RP
245	12	0	-	-	248	251	248	247	85	RP
245	12	0	-	-	248	251	249	247	86	RP
245	12	0	-	-	247	249	248	247	87	RP
245	12	0	-	-	247	249	247	247	88	RP
245	12	0	-	-	246	248	247	246	89	R.C.
244	12	0	-	-	246	248	246	246	90	R.C.
244	12	0	-	-	246	248	246	246	91	R.C.
244	12	0	-	-	247	249	247	246	92	RC
244	12	0	-	-	247	249	247	246	93	RC
244	11	0	-	-	247	249	247	247	94	RC
244	11	0	-	-	247	249	247	248	95	RC
244	12	0	-	-	246	249	246	246	96	RC
244	12	0	-	-	246	250	247	246	97	RC
245	12	0	-	-	246	250	246	247	98	RC

ENVIRONMENTAL CONDITIONS - LUCA TEST #1

IPS-400

Sheet 6 of 12

Date 1/12/79

Temp. in °F	Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials	
	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface		Terminal Block					
					Left	Right	Left	Right				
235*	8	0	-	-	248	252	248	248	15	22	99	RFJ
244	11	0	-	-	247	249	247	247	247	247	100	RFJ
244	11	0	-	-	247	249	247	247	247	247	101	RFJ
244	11	0	-	-	247	249	247	247	247	247	102	RFJ
245	12	0	-	-	246	250	247	246	247	246	103	RFJ
244	12	0	-	-	248	251	249	246	249	246	104	RFJ
242	12	0	-	-	247	249	247	247	247	247	105	RFJ
242	12	0	-	-	247	249	247	247	247	247	106	RFJ
242	12	0	-	-	246	249	246	246	246	246	107	RFJ
242	12	0	-	-	247	249	247	246	247	246	108	RFJ
242	12	0	-	-	247	249	247	247	247	247	109	RFJ
242	12	0	-	-	247	249	247	247	247	247	110	RFJ
242	12	0	-	-	248	251	248	248	248	247	111	RFJ
242	12	0	-	-	250	253	250	247	250	247	112	RFJ
244	12	0	-	-	247	250	248	247	248	247	113	RC
243	12	0	-	-	247	249	247	247	247	247	114	RC
244	12	0	-	-	247	250	247	247	247	247	115	RC
244	12	0	-	-	247	250	248	247	248	247	116	RC
244	13	0	-	-	247	250	248	247	248	247	117	RC
244	13	0	-	-	247	251	248	247	248	247	118	RC
244	13	0	-	-	247	249	247	247	247	247	119	RC
243	12	0	-	-	247	250	247	247	247	247	120	RC

* 15 MIN. LOSS OF POWER ON BOILER

DATA SHEET A

CONAX CORPORATION

ENVIRONMENTAL CONDITIONS - LOCA TEST #1
Sheet 7 of 12

IPS-400

Date 1/13/79

Chamber		Spray		Enclosure Temperatures				Lapsed Time	Initials	
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface	Terminal Block				
					17 in °F	Left	Right			
243	13	0			17	247	250	247	121	M.R.
242	12	0			14	247	249	247	122	M.R.
242	12	0			13	247	249	247	123	M.R.
243	12	0				248	250	247	124	M.R.
242	12	0				247	249	247	125	M.R.
243	12	0				247	249	247	126	M.R.
243	12	0				247	249	247	127	M.R.
243	12	0				246	249	246	128	M.R.
243	12	0				247	249	247	129	M.R.
243	12	0				247	249	247	130	M.R.
243	12	0				247	249	247	131	M.R.
243	12	0				247	249	247	132	M.R.
243	12	0				247	249	247	133	M.R.
243	12	0				246	251	246	134	M.R.
243	12	0				248	251	246	135	M.R.
243	12	0				246	249	246	136	M.R.
243	12	0				247	249	247	137	M.R.
243	12	0				247	249	247	138	M.R.
243	12	0				246	249	246	139	M.R.
243	12	0				247	249	247	140	M.R.
243	12	0				247	249	247	141	M.R.
243	12	0				247	249	247	142	M.R.

ENVIRONMENTAL CONDITIONS - LUCA TEST #1

IPS-400

Date 1/14/79

Sheet 2 of 12

Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface 17 in °F		Terminal Block 14 in °F			
					Left	Right	Left	Right		
243	12	0			249	250	249	246	143	RC
243	12	0			248	250	248	248	144	MR.
243	12	0			248	249	249	248	145	MR.
243	12	0			249	252	249	246	146	
243	12	0			247	251	249	247	147	
242	12	0			248	250	249	248	148	
242	12	0			248	250	249	248	149	
242	12	0			248	249	248	248	150	
242	12	0			248	250	249	248	151	
242	12	0			249	252	250	248	152	
241	12	0			248	250	250	248	153	
242	12	0			248	252	252	248	154	
242	12	0			248	250	249	248	155	
242	12	0			248	250	249	248	156	
242	12	0			248	250	248	248	157	
242	12	0			248	250	249	248	158	
242	12	0			248	250	249	248	159	
243	12	0			248	250	249	248	160	
243	12	0			248	250	250	248	161	
243	12	0			249	251	250	249	162	
243	12	0			248	250	250	248	163	
243	12	0			247	248	247	246	164	RC

DATA SHEET A

CONIAX CORPORATION

ENVIRONMENTAL CONDITIONS - LUCA TEST #1
Sheet 9 of 12

IPS-400

Date 1/15/79

Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	inside Surface		Terminal Block			
					Left	Right	Left	Right		
245	12	0			17	13	14	14	165	RC
245	12	0			246	248	248	246	166	RC
244	13	0			248	250	249	248	167	RC
244	12	0			246	248	248	246	168	RC
244	12	0			248	249	249	248	169	RC
245	12	0			247	250	249	246	170	RC
245	12	0			248	250	249	247	171	RC
245	12	0			247	248	248	246	172	RC
245	12	0			248	251	249	247	173	RC
246	12	0			247	249	248	246	174	RC
245	12	0			246	250	248	246	175	RC
245	12	0			246	248	248	246	176	RC
245	11	0			247	249	248	246	177	RC
243	11	0			248	250	249	247	178	RC
243	11	0			248	249	248	247	179	RC
242	11	0			247	249	248	247	180	RC
242	11	0			248	250	249	248	181	RC
242	11	0			247	249	248	247	182	RC
242	11	0			247	248	248	247	183	RC
242	11	0			247	248	248	247	184	RC
242	11	0			247	249	248	247	185	RC
242	11	0			248	250	248	248	186	M.R.

ENVIRONMENTAL CONDITIONS - LUCA TEST #1
 Sheet 10 of 12

IPS-400

Date 1/16/79

Temp. in °F	Chamber		Water Level in inches	pH Value	Spray		Enclosure Temperatures				Lapsed Time	Initials
	Pressure in psig	Flow Rate in GPM			Inside Surface		Terminal Block					
					Left	Right	Left	Right				
244	12		0			246	249	248	246	187	RC	
244	12		0			247	249	249	247	188	MR	
244	12		0			247	249	247	247	189	MR	
244	12		0			246	248	248	246	190	RC	
244	12		0			246	247	246	246	191	MR	
245	12		0			246	247	247	246	192	MR	
245	12		0			246	247	247	246	193	J.D.	
244	12		0			246	246	246	246	194	MR	
244	12		0			246	247	246	245	195	RO	
245	12		0			245	247	246	245	196	MR	
245	12		0			246	248	247	246	197	MR	
245	12		0			247	248	247	246	198	MR	
245	12		0			246	247	246	246	199	MR	
245	12		0			246	248	247	246	200	MR	
243	11		0			246	247	247	246	201	MR	
243	11		0			246	248	247	246	202	MR	
243	11		0			247	248	247	246	203	MR	
243	11		0			246	248	247	246	204	MR	
243	11		0			246	247	247	246	205	MR	
242	11		0			246	247	247	246	206	MR	
242	11		0			246	247	247	246	207	MR	

ENVIRONMENTAL CONDITIONS - LUCA TEST #1

IPS-400

Date 1-17-79

Sheet 11 of 12

Chamber		Spray			Enclosure Temperatures			Lapsed Time	Initials	
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface in °F	Terminal Block in °F				
					Left	Right	Left	Right		
242	11	0			246	247	247	246	208	MR
243	12	0			246	247	247	246	209	MR
243	12	0			246	247	247	246	210	J.D.
243	12	0			246	246	246	246	211	MR
243	12	0			246	247	246	246	212	MR
243	12	0			246	247	246	246	213	J.D.
243	12	0			245	247	246	245	214	MR
243	11	0			246	247	247	246	215	MR
244	12	0			246	247	247	246	216	MR
244	12	0			246	247	247	245	217	MR
244	12	0			246	247	246	245	218	MR
244	12	0			246	247	247	246	219	J.D.
243	12	0			246	249	247	245	220	J.D.
244	12	0			246	248	247	246	221	MR
243	12	0			246	247	246	245	222	MR
244	12	0			246	247	246	245	223	MR
244	11	0			244	244	244	244	224	J.D.
242	12	0			246	247	247	246	225	MR
242	11	0			246	248	247	246	226	MR
244	11	0			246	246	247	246	227	MR
243	11	0			247	247	247	246	228	MR
244	11	0			246	247	246	246	229	J.D.

ENVIRONMENTAL CONDITIONS - LUCA TEST #1
 Sheet 12 of 12

IPS-400

Date/18/79

Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface		Terminal Block			
					Left	Right	Left	Right		
243	11	0			246	247	246	246	230	DAS
244	11	0			246	247	246	246	231	DAS
242	11	0			246	247	246	246	232	DAS
243	11	0			246	250	247	246	233	DAS
244	11	0			246	247	246	246	234	RC
244	11	0			246	247	247	246	235	RC
244	11	0			246	248	248	246	236	RC
244	11	0			247	248	248	247	237	RC
245	11	0			246	248	248	246	238	RC
245	11	0			246	248	247	246	239	RC
245	11	0			246	248	247	246	240	RC

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Sheet 1 of 11

START TIME 3:15 P.M. Date 1-8-79

DC Voltage in Volts	DC Line Current L in ma R	AC Line Currents in amps.														Lapsed Time	Initials				
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2								
140	50	3.4	3.7	3.6	3.8	3.8	3.7	3.6	3.6	3.5	3.4	3.4	3.6	3.5	3.4	3.2	3.4	3.2	3.4	0	F.D.
140	54	3.2	3.4	3.4	3.4	3.4	3.6	3.5	3.6	3.4	3.4	3.4	3.5	3.4	3.2	3.3	3.3	3.0	3.3	5M	F.D.
140	54	3.2	3.4	3.3	3.4	3.4	3.6	3.5	3.6	3.4	3.4	3.4	3.5	3.4	3.2	3.4	3.4	3.2	3.4	15M	F.D.
140	70	3.0	3.2	3.2	3.3	3.3	3.4	3.4	3.4	3.3	3.4	3.4	3.4	3.4	3.2	3.0	3.0	3.0	3.0	30M	F.D.
140	50	3.2	3.2	3.2	3.4	3.4	3.4	3.3	3.4	3.3	3.4	3.4	3.4	3.2	3.2	2.8	3.0	3.0	3.0	1H	F.D.
140	50	3.4	3.5	3.5	3.6	3.6	3.6	3.5	3.6	3.6	3.5	3.4	3.4	3.4	3.3	3.1	3.3	3.3	3.3	2H	F.D.
140	50	3.4	3.5	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	3H	F.D.
140	50	3.4	3.5	3.5	3.4	3.4	3.6	3.5	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.2	3.3	3.3	3.3	4H	F.D.
140	50	3.3	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	5	F.D.
140	50	3.3	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	6	F.D.
140	50	3.3	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	7	F.D.
140	50	3.3	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	8	F.D.
140	50	3.3	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	9	F.D.
140	50	3.3	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	10	F.D.
140	50	3.3	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	11	F.D.
140	50	3.3	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	12	F.D.
140	50	3.3	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	13	F.D.
140	50	3.2	3.4	3.4	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	14	F.D.
140	50	3.1	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	15	F.D.
140	50	3.0	3.4	3.3	3.4	3.4	3.4	3.5	3.5	3.4	3.4	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	16	F.D.
140	50	3.1	3.4	3.4	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.1	3.3	3.3	3.3	17	F.D.
140	50	3.2	3.6	3.4	3.6	3.6	3.6	3.4	3.4	3.4	3.4	3.6	3.5	3.4	3.4	3.2	3.3	3.3	3.3	18	F.D.
140	50	3.2	3.6	3.4	3.6	3.6	3.6	3.4	3.4	3.4	3.4	3.6	3.5	3.4	3.4	3.2	3.3	3.3	3.3		F.D.

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Date 1-9-79

Sheet 2 of 11

DC Voltage in Volts	DC Line Current in ma	AC Line Currents in amps.												Lapsed Time	Initials	
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2			
140	50	3.0	3.2	3.0	3.3	3.2	3.1	3.2	3.2	3.1	3.0	3.0	3.0	3.0	20.0	R.C
140	50	3.0	3.0	3.0	3.3	3.2	3.1	3.2	3.2	3.1	3.0	3.0	3.0	3.0	21.0	R.C
140	50	3.0	3.2	3.1	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.0	3.0	3.0	22.0	M.R
140	50	3.0	3.2	3.0	3.2	3.2	3.0	3.1	3.2	3.0	3.0	3.0	2.9	3.0	23.0	M.R
140	50	3.0	3.2	3.1	3.2	3.2	3.1	3.2	3.2	3.1	3.0	3.0	2.9	3.0	24.0	M.R
140	50	3.2	3.3	3.2	3.5	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.2	3.2	25.0	F.Y
140	50	3.2	3.2	3.2	3.4	3.2	3.3	3.3	3.2	3.3	3.3	3.3	3.1	3.2	26.0	F.Y
140	50	3.2	3.2	3.2	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.1	27.0	F.Y
140	50	3.2	3.4	3.2	3.6	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.2	28.0	M.R
140	50	3.3	3.4	3.3	3.3	3.3	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.2	29.0	F.Y
140	50	3.1	3.5	3.2	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.1	30.0	F.Y
140	50	3.2	3.3	3.3	3.5	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.1	31.0	F.Y
140	50	3.2	3.3	3.2	3.5	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.1	32.0	F.Y
140	50	3.2	3.3	3.2	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.2	33.0	F.Y
140	50	3.2	3.4	3.2	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.1	34.0	F.Y
140	50	3.2	3.4	3.1	3.4	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.1	3.1	35.0	F.Y
140	50	3.4	3.6	3.3	3.6	3.3	3.4	3.4	3.4	3.4	3.5	3.5	3.2	3.3	36.0	F.Y
140	50	3.0	3.1	2.8	3.1	2.8	2.9	2.9	2.9	2.9	2.9	3.0	2.8	2.8	37.0	F.Y
140	50	3.0	3.2	2.9	3.1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.7	2.7	38.0	F.Y
140	50	2.9	3.1	2.9	3.1	2.9	2.8	2.9	2.9	2.9	2.9	2.9	2.7	2.7	39.0	F.Y
140	50	2.9	3.1	2.9	3.1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.7	2.7	40.0	F.Y
140	50	2.9	3.1	3.0	3.1	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.7	2.7	41.0	F.Y
140	50	3.2	3.4	3.2	3.2	3.2	3.2	3.3	3.3	3.2	3.2	3.2	3.1	3.1	42.0	M.R

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Date 1/10/79

Sheet 3 of 11

DC Voltage in Volts	DC Line Current L in ma	AC Line Currents in amps.												Lapsed Time	Initials		
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2				
140	50	3.2	3.3	3.2	3.2	3.3	3.1	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	43	MR
140	50	3.1	3.5	3.2	3.2	3.2	3.1	3.1	3.2	3.0	3.0	3.0	3.0	3.0	3.0	44	MR
140	50	3.2	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	45	MR
140	50	3.2	3.3	3.2	3.2	3.2	3.1	3.1	3.2	3.0	3.0	3.0	3.0	3.0	3.0	46	MR
140	50	3.1	3.2	3.2	3.2	3.2	3.1	3.1	3.2	3.0	3.0	3.0	3.0	3.0	3.0	47	MR
140	50	3.2	3.3	3.2	3.2	3.2	3.1	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	48	MR
140	50	3.2	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.1	3.1	3.1	3.0	3.0	3.0	49	MR
140	50	3.2	3.3	3.3	3.3	3.4	3.2	3.3	3.3	3.2	3.2	2.9	3.0	3.0	3.0	50	LY
140	50	3.2	3.4	3.3	3.4	3.3	3.2	3.3	3.2	3.2	3.2	3.2	3.0	3.0	3.0	51	PH
140	50	3.2	3.4	3.2	3.4	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.0	3.0	3.0	52	PH
140	50	3.3	3.4	3.4	3.4	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.0	3.1	3.1	53	KD
140	50	3.2	3.3	3.2	3.4	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.0	3.0	3.0	54	PH
140	50	3.2	3.4	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.1	3.1	3.0	3.0	3.0	55	LD
140	50	3.2	3.4	3.3	3.4	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.0	3.0	3.0	56	PH
140	50	3.2	3.4	3.2	3.3	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.0	3.0	3.0	57	C.Z.
140	50	3.2	3.5	3.2	3.4	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	58	PH
140	50	3.2	3.4	3.3	3.3	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.1	3.1	3.1	59	C.Z.
140	50	3.2	3.4	3.2	3.3	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.1	3.0	3.0	60	C.Z.
140	50	3.2	3.4	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.1	61	C.Z.
140	50	3.2	3.5	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.0	3.0	3.0	62	PH
140	50	3.2	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.0	3.0	3.0	63	PH
140	50	3.2	3.3	3.2	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.1	3.0	3.0	3.0	64	PH

DATA SHEET B

ELECTRICAL CONDITIONS - LOCA TEST #1

Sheet # of 11

IPS-400

Date 1/11/79

DC Voltage in Volts	DC Line Current in ma	AC Line Currents in amps.											Lapsed Time	Initials		
		E1A1	E3A3	ESAS	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9			G11C2	
149	50	3.2	3.4	3.3	3.4	3.3	3.2	3.3	3.3	3.3	3.2	3.2	3.1	3.1	65	K.C.
140	50	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	66	M.R.
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.1	3.1	67	M.R.
140	50	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.1	3.1	68	M.R.
140	50	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.1	3.1	69	M.R.
140	50	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	70	M.R.
140	50	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	71	M.R.
140	50	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	72	K.C.
140	50	3.3	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	73	R.D.
140	50	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	74	D.C.
140	50	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	75	M.R.
140	50	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	76	M.R.
140	50	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	77	H.D.
140	50	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	78	D.D.
140	50	3.1	3.1	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	79	J.F.
140	50	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	80	J.F.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	81	D.M.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	82	D.M.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	83	D.M.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	84	D.M.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	85	J.M.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	86	M.R.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	87	J.M.

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Date 1/12/79

Sheet 5 of 11

DC Voltage in Volts	DC Line Current I in ma	AC Line Currents in amps.														Lapsed Time	Initials			
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2							
140	50	3.4	3.4	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	3.2	RML	88	R.C.
140	50	3.4	3.3	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.2	3.2	R.C.	89	R.C.
140	50	3.2	2.8	3.2	3.2	3.3	3.3	3.2	3.3	3.1	3.2	3.3	3.3	3.4	3.2	3.0	3.0	R.C.	90	R.C.
140	50	3.5	3.1	3.4	3.6	3.6	3.5	3.6	3.5	3.4	3.4	3.6	3.3	3.4	3.4	3.3	3.3	R.C.	91	R.C.
140	50	3.5	3.1	3.5	3.6	3.6	3.6	3.6	3.5	3.5	3.6	3.6	3.6	3.5	3.4	3.3	3.3	R.C.	92	R.C.
140	50	3.5	3.1	3.5	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.6	3.6	3.5	3.4	3.3	3.3	R.C.	93	R.C.
140	50	3.4	3.5	3.4	3.4	3.6	3.6	3.5	3.4	3.4	3.4	3.6	3.6	3.4	3.3	3.3	3.3	R.C.	94	R.C.
140	50	3.5	3.6	3.5	3.6	3.5	3.6	3.5	3.5	3.4	3.4	3.5	3.5	3.4	3.3	3.3	3.3	R.C.	95	R.C.
140	50	3.4	3.5	3.4	3.4	3.5	3.5	3.5	3.5	3.4	3.4	3.5	3.5	3.4	3.3	3.2	3.2	R.C.	96	R.C.
140	50	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.5	3.4	3.3	3.3	3.3	R.C.	97	R.C.
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.5	3.5	3.4	3.2	3.2	3.2	R.C.	98	R.C.
140	50-50	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.5	3.5	3.4	3.3	3.3	3.3	R.C.	99	R.C.
140	50-50	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.5	3.3	3.3	3.3	R.C.	100	R.C.
140	50-50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.6	3.6	3.4	3.3	3.3	3.3	R.C.	101	R.C.
140	50-50	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.5	3.5	3.6	3.6	3.5	3.3	3.3	3.3	R.C.	102	R.C.
140	50-50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.6	3.6	3.4	3.3	3.3	3.3	R.C.	103	R.C.
140	50-50	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.5	3.4	3.6	3.6	3.5	3.3	3.3	3.3	R.C.	104	R.C.
140	50	3.4	3.5	3.4	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.6	3.6	3.4	3.3	3.3	3.3	R.C.	105	R.C.
140	50	3.4	3.6	3.4	3.5	3.6	3.5	3.6	3.5	3.4	3.4	3.6	3.5	3.4	3.3	3.2	3.2	R.C.	106	R.C.
140	50	3.4	3.4	3.4	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.6	3.6	3.4	3.3	3.2	3.2	R.C.	107	R.C.
140	50	3.4	3.5	3.4	3.4	3.5	3.5	3.4	3.5	3.4	3.4	3.6	3.5	3.4	3.3	3.2	3.2	R.C.	108	R.C.
140	50	3.4	3.5	3.4	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.6	3.5	3.4	3.3	3.2	3.2	R.C.	109	R.C.
140	50	3.4	3.5	3.4	3.5	3.5	3.5	3.4	3.5	3.4	3.4	3.6	3.5	3.4	3.3	3.2	3.2	R.C.	110	R.C.

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Date

1/13/79

Sheet 6 of 11

DC Voltage in Volts	DC Line Current L in ma R	AC Line Currents in amps.													Lapsed Time	Initials			
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2						
140	50	3.4	3.4	3.5	3.5	3.6	3.5	3.5	3.6	3.5	3.5	3.6	3.4	3.4	3.3	3.3	3.3	111	RC
140	50	3.4	3.5	3.4	3.4	3.6	3.5	3.5	3.6	3.5	3.5	3.6	3.4	3.4	3.2	3.2	3.2	112	RC
140	50	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.3	3.3	3.3	113	RC
140	50	3.5	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.2	3.2	114	RC
140	50	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.2	3.2	115	RC
140	50	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.4	3.2	3.2	3.2	116	RC
140	50	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.4	3.3	3.3	3.3	117	RC
140	50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.2	3.2	118	RC
140	50	3.4	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.4	3.2	3.2	3.2	119	RC
140	50	3.5	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.2	3.2	120	RC
140	50	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.4	3.2	3.2	3.2	121	RC
140	50	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	122	RC
140	50	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	123	RC
140	50	3.4	3.4	3.4	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	124	RC
140	50	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	125	RC
140	50	3.3	3.4	3.4	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	126	RC
140	50	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	127	RC
140	50	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	128	RC
140	50	3.3	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.2	3.2	129	RC
140	50	3.4	3.4	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	130	RC
140	50	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	131	RC
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	132	RC
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	3.2	133	RC

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Sheet 7 of 11

Date 1-14-74

DC Voltage in Volts	DC Line Current L in ma	AC Line Currents in amps.											Lapsed Time	Initials					
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9			G11C2				
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	134	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	135	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	136	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	137	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	138	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	139	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	140	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	141	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	142	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	143	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	144	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	145	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	146	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	147	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	148	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	149	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	150	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	151	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	152	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	153	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	154	AK
140	50	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	155	AK

ELECTRICAL CONDITIONS - LUCA TEST #1

IPS-400

Date 1/15/79

Sheet X of II

DC Voltage in Volts	DC Line Current L in ma	AC Line Currents in amps.												Lapsed Time	Initials	
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2			
140	50-50	3.2	3.2	3.3	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.0	3.0	3.0	156	DAH
170	50-50	3.2	3.2	3.3	3.4	3.3	3.3	3.2	3.3	3.2	3.2	3.0	3.0	3.0	157	DAH
140	50-50	3.3	3.2	3.3	3.4	3.3	3.4	3.3	3.3	3.2	3.2	3.0	3.0	3.0	158	DAH
140	50-50	3.3	3.2	3.3	3.4	3.3	3.4	3.3	3.3	3.2	3.2	3.0	3.0	3.0	159	DAH
140	50-50	3.2	3.3	3.3	3.4	3.3	3.4	3.3	3.3	3.2	3.2	3.0	3.0	3.0	160	DAH
140	50-50	3.2	3.2	3.2	3.3	3.3	3.3	3.2	3.3	3.2	3.2	3.0	3.0	3.0	161	DAH
140	50-50	3.4	3.4	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	3.2	3.2	162	RC
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	163	RC
140	50-50	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	164	RC
140	50-50	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	165	RC
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	166	RC
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	167	RC
140	50-50	3.3	3.3	3.3	3.4	3.3	3.4	3.3	3.4	3.3	3.3	3.2	3.2	3.2	168	RC
140	50-50	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3.2	169	RC
140	50-50	3.5	3.4	3.5	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	170	RC
140	50-50	3.5	3.4	3.5	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.3	3.3	171	RC
140	50-50	3.4	3.4	3.5	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.2	3.2	3.2	172	RC
140	50-50	3.4	3.4	3.5	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.2	3.2	3.2	173	RC
140	50-50	3.5	3.4	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.4	3.3	3.3	3.3	174	RC
140	50-50	3.4	3.4	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.0	3.0	3.0	175	RC
140	50-50	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.4	3.3	3.3	3.3	176	RC
140	50-50	3.4	3.4	3.3	3.4	3.3	3.4	3.3	3.4	3.3	3.3	3.2	3.2	3.2	177	RC

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400

Date 1/16/77

Sheet 9 of 11

DC Voltage in Volts	DC Line Current L in ma R	AC Line Currents in amps.													Lapsed Time	Initials							
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2										
140	50-50	3.5	3.5	3.6	3.5	3.6	3.5	3.6	3.5	3.5	3.4	3.5	3.5	3.4	3.4	3.3	3.4	3.3	3.3	3.3	3.3	178	JL
140	50-50	3.3	3.2	3.4	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.3	3.2	3.3	3.4	3.3	3.0	3.1	3.1	179	DRS
140	50-50	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.3	3.2	3.3	3.4	3.1	3.1	3.1	3.1	180	JL
140	50-50	3.4	3.3	3.4	3.5	3.5	3.4	3.5	3.4	3.4	3.5	3.3	3.4	3.3	3.2	3.3	3.4	3.1	3.1	3.2	3.2	181	JL
140	50-50	3.3	3.2	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.4	3.3	3.2	3.3	3.4	3.1	3.1	3.1	3.1	182	JL
140	50-50	3.3	3.2	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.4	3.3	3.4	3.3	3.2	3.3	3.4	3.0	3.0	3.1	3.1	183	DRS
140	50-50	3.2	3.2	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.4	3.3	3.3	3.2	3.2	3.1	3.2	3.1	3.1	3.1	3.1	184	JL
140	50-50	3.3	3.2	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.3	3.2	3.2	3.0	3.2	3.0	3.0	3.0	3.0	185	DRS
140	50-50	3.4	3.3	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.2	3.4	3.2	3.2	3.2	3.2	186	MR
140	50-50	3.4	3.0	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.7	3.4	3.3	3.4	3.3	3.3	3.3	3.3	187	RC
140	50-50	3.5	3.0	3.3	3.6	3.6	3.6	3.6	3.5	3.5	3.6	3.5	3.6	5.4	3.4	3.3	3.4	3.3	3.3	3.3	3.3	188	MR
140	50-50	3.4	3.0	3.5	3.6	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.4	3.4	3.4	3.2	3.4	3.2	3.2	3.2	3.2	189	RC
140	50-50	3.4	3.0	3.5	3.6	3.6	3.6	3.6	3.5	3.5	3.6	3.5	3.5	3.4	3.4	3.2	3.4	3.2	3.2	3.2	3.2	190	RC
140	50-50	3.5	3.2	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.5	3.4	3.3	3.4	3.3	3.3	3.3	3.3	191	MR
140	50-50	3.4	3.1	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.6	3.4	3.4	3.2	3.4	3.2	3.3	3.3	3.3	192	MR
140	50-50	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.5	3.4	3.4	3.3	3.4	3.3	3.2	3.2	3.2	193	Q.D.
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.4	3.4	3.5	3.4	3.4	3.3	3.4	3.3	3.2	3.2	3.2	194	MR
140	50-50	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.4	3.4	7.3	3.3	3.1	3.4	3.2	3.2	3.2	3.2	195	Q.D.
140	50-50	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.4	3.4	3.5	3.4	3.4	3.2	3.4	3.2	3.2	3.2	3.2	196	JL
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.5	3.4	3.4	3.5	3.4	3.4	3.2	3.4	3.2	3.2	3.2	3.2	197	JL
140	50-50	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.4	3.2	3.2	3.2	3.2	198	JL
140	50-50	3.3	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.4	3.2	3.1	3.1	3.1	199	DR
140	50-50	3.3	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.2	3.4	3.2	3.2	3.2	3.2	200	JL

DC Voltage in Volts	DC Line Current I in ma	E1A1	E3A3	ESAS	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7	G9A9	G11C2
		AC Line Currents in amps.											

140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	201	JL
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	202	DH
140	50-50	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.4	3.3	3.1	203	JL
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	204	DH
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	205	HT
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	206	DH
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.1	207	JL
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	208	DH
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	209	HT
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	210	QD
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	211	HT
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	212	HT
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	213	QD
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	214	HT
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	215	HT
140	50-50	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	216	HT
140	50-50	3.4	3.4	3.3	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	217	HT
140	50-50	3.4	3.4	3.0	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	218	QD
140	50-50	3.4	3.4	3.1	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	219	JL
140	50-50	3.5	3.4	3.1	3.4	3.4	3.4	3.3	3.4	3.4	3.4	3.3	3.2	220	HT
140	50-50	3.5	3.4	3.1	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	221	HT
140	50-50	3.4	3.4	3.1	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.2	3.2	222	HT
140	50-50	3.4	3.4	3.2	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.2	223	HT

ELECTRICAL CONDITIONS - LOCA TEST #1

IPS-400
Date

Sheet 11 of 11

17/19

DC Voltage in Volts	DC Line Current in ma	AC Line Currents in amps.										Lapsed Time	Initials				
		E1A1	E3A3	E5A5	E7A7	E9A9	E11C2	G1A1	G3A3	G5A5	G7A7			G9A9	G11C2		
140	50-50	3.4	3.2	3.4	3.5	3.5	3.4	3.5	3.2	3.4	3.2	3.2	3.2	3.2	3.2	224	DAS
140	50-50	3.4	3.2	3.4	3.6	3.5	3.4	3.5	3.4	3.4	3.3	3.3	3.2	3.2	3.2	225	DAS
140	50-50	3.5	3.1	3.5	3.6	3.5	3.5	3.5	3.4	3.5	3.4	3.2	3.2	3.2	3.2	226	DAS
140	50-50	3.4	3.2	3.5	3.6	3.5	3.4	3.5	3.3	3.4	3.3	3.2	3.2	3.2	3.2	227	DAS
140	50-50	3.5	3.2	3.5	3.6	3.5	3.4	3.5	3.3	3.4	3.3	3.2	3.2	3.2	3.2	228	DAS
140	50-50	3.5	3.0	3.5	3.6	3.5	3.4	3.5	3.4	3.4	3.3	3.2	3.2	3.2	3.2	229	DAS
140	50-50	3.5	3.2	3.5	3.6	3.5	3.4	3.5	3.3	3.4	3.3	3.2	3.2	3.2	3.2	230	DAS
140	50-50	3.3	3.1	3.3	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.1	3.1	3.1	3.1	231	DAS
140	50-50	3.4	2.9	3.4	3.4	3.4	3.4	3.3	3.4	3.3	3.2	3.1	3.1	3.1	3.1	232	DAS
140	50-50	3.3	3.0	3.3	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.0	3.0	3.0	3.0	233	DAS
140	50-50	3.2	3.0	3.2	3.2	3.3	3.2	3.3	3.2	3.2	3.1	3.0	3.0	3.0	3.0	234	RC
140	50-50	3.3	3.3	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.5	3.3	3.3	3.3	3.3	235	RC
140	50-50	3.3	3.3	3.6	3.6	3.5	3.6	3.5	3.4	3.4	3.4	3.3	3.3	3.3	3.3	236	RC
140	50-50	3.2	3.2	3.6	3.6	3.5	3.6	3.5	3.5	3.6	3.5	3.3	3.3	3.3	3.3	237	RC
140	50-50	3.4	3.5	3.8	3.8	3.8	3.8	3.8	3.8	3.9	3.8	3.6	3.6	3.6	3.6	238	RC
140	50-50	3.6	3.7	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.8	3.6	3.6	3.6	3.6	239	RC
140	50-50	3.6	3.7	3.9	3.8	3.9	3.8	3.8	3.8	3.9	3.8	3.6	3.6	3.6	3.6	240	RC

DATA SHEET C

CONAX CORPORATION

ELECTRICAL CONDITIONS - LUCA TEST #1

IPS-400

Sheet 1 of 11

Date 1-8-79

START TIME 3:15 P.M.

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma										G11D2	Lapsed Time	Initial			
	E121	E383	E535	E737	E989	E11D2	G1B1	G3B3	G5B5	G7B7				G9B9		
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5M	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15M	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30M	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2H	S.D.
140	0	0	0	0	0	0	0	1.0	0	0	0	0	0	0	3H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16H	S.D.
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17	MMR
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18	MMR
140	8.0	5.8	4.8	6.2	2.6	4.6	5.4	5.0	4.2	3.1	3.8	3.2			19	R.C.

ELECTRICAL CONDITIONS - LUCA TEST #1
 Sheet 2 of 11

IPS-400
 Date 1-9-79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma													Lapsed Time	Initial
	E121	E383	E535	E737	E989	E11D2	G181	G383	G585	G787	G989	G11D2			
140.1	5.1	5.0	3.8	5.5	5.7	4.1	4.6	3.7	3.3	2.7	3.0	2.7	20	R.C.	
140.3	5.2	4.3	3.3	4.9	4.8	3.6	4.4	3.2	2.9	2.3	2.8	2.7	21	R.C.	
140.7	6.0	4.7	3.2	4.7	4.4	3.4	4.3	2.9	2.7	2.1	2.7	2.6	22	M.R.	
140.0	5.8	4.8	3.1	4.6	4.2	3.0	3.8	2.6	2.6	2.0	2.6	2.4	23	M.R.	
140.2	5.4	4.6	3.0	4.4	4.0	2.8	4.0	2.6	2.4	1.8	2.5	2.3	24	M.R.	
140.2	6.4	4.8	3.2	4.7	4.6	3.4	4.7	3.6	3.3	3.0	3.2	3.3	25	M.R.	
140.6	4.7	3.7	2.7	4.1	3.9	2.9	3.9	2.8	2.7	2.2	2.7	2.9	26	R.C.	
140.9	4.4	3.5	2.6	3.9	3.7	2.6	3.6	2.6	2.5	2.0	2.6	2.7	27	R.C.	
140.7	4.2	3.4	2.5	3.8	3.6	2.7	3.6	2.5	2.4	2.0	2.5	2.5	28	M.R.	
140.3	4.0	3.3	2.5	3.6	3.5	2.6	3.5	2.4	2.3	1.9	2.4	2.4	29	M.R.	
140.5	4.0	3.3	2.5	3.7	3.4	2.7	3.3	2.4	2.3	1.8	2.4	2.4	30	M.R.	
140.6	4.0	3.2	2.4	3.7	3.5	2.6	3.1	2.3	2.3	2.0	2.4	2.4	31	M.R.	
140.2	3.9	3.2	2.4	3.6	3.4	2.5	3.1	2.3	2.2	1.9	2.4	2.3	32	M.R.	
140.3	3.9	3.2	2.5	3.6	3.4	2.7	3.1	2.3	2.2	1.8	2.3	2.2	33	M.R.	
141.0	3.9	3.2	2.5	3.6	3.4	2.5	3.0	2.2	2.2	1.7	2.3	2.2	34	M.R.	
140.7	3.8	3.1	2.4	3.7	3.5	2.5	2.9	2.2	2.2	1.6	2.2	2.1	35	M.R.	
142.5	3.7	3.1	2.4	3.6	3.4	2.4	2.9	1.9	2.1	1.6	2.1	2.0	36	M.R.	
140.6	3.9	3.2	2.5	3.7	3.5	2.5	2.9	2.0	2.2	1.5	2.2	2.0	37	M.R.	
140.6	3.8	3.1	2.4	3.6	3.4	2.5	2.9	1.9	2.1	1.6	2.2	2.2	38	M.R.	
140.3	3.7	3.0	2.3	3.6	3.4	2.4	3.0	1.9	2.1	1.7	2.2	2.2	39	M.R.	
140.5	3.6	3.1	2.4	3.6	3.3	2.3	2.9	1.9	2.1	1.5	2.2	2.1	40	M.R.	
140.3	5.3	4.5	3.3	4.9	4.5	5.2	4.5	4.6	3.2	3.8	4.2	5.0	41	M.R.	
140.5	5.0	4.1	3.0	4.3	4.1	4.6	4.3	3.6	3.2	2.7	2.8	2.8	42	M.R.	

ELECTRICAL CONDITIONS - LUCA TEST #1

Sheet 3 of 11

IPS-400

Date 1/10/79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma													Lapsed Time	Initials
	E121	E383	E535	E737	E989	E11D2	G181	G383	G535	G787	G989	G11D2			
140	3.9	3.2	2.4	3.6	3.6	3.8	3.1	2.2	2.4	2.0	2.3	2.2	43	MR	
140	3.5	3.0	2.3	3.3	3.2	2.6	2.6	2.0	2.2	1.6	2.3	2.2	44	MR	
140	3.6	3.0	2.2	3.3	3.4	2.6	2.8	2.0	2.1	1.6	2.3	2.2	45	MR	
140	3.5	3.0	2.3	3.2	3.3	2.6	2.6	1.8	2.1	1.6	2.2	2.2	46	MR	
140	3.5	3.0	2.2	3.2	3.3	2.6	2.6	1.9	2.1	1.6	2.2	2.2	47	MR	
140	3.5	3.0	2.2	3.2	3.2	2.5	2.6	1.8	2.1	1.6	2.2	2.1	48	MR	
140	3.6	3.0	2.2	3.2	3.3	2.5	2.4	1.8	2.1	1.5	2.1	2.0	49	MR	
140.5	4.0	3.2	2.2	3.4	3.2	3.6	2.8	2.2	2.2	1.8	2.4	2.4	50	MS	
140.3	3.8	3.0	2.0	3.2	3.2	3.2	2.6	2.0	2.1	1.8	2.4	2.2	51	MS	
140.3	3.6	3.0	2.0	3.2	3.2	3.1	2.4	1.8	2.0	1.6	2.2	2.2	52	MS	
140.8	3.6	3.0	2.0	3.2	3.1	3.0	2.4	1.8	2.1	1.6	2.2	2.2	53	MS	
140.5	3.6	3.0	2.0	3.1	3.1	3.0	2.4	1.8	2.0	1.6	2.2	2.2	54	MS	
140.7	3.6	3.0	2.0	3.1	3.1	2.9	2.4	1.8	2.0	1.6	2.2	2.2	55	MS	
140.6	3.5	2.9	2.0	3.1	3.1	2.8	2.3	1.8	2.0	1.4	2.1	2.2	56	MS	
140.4	3.5	2.9	2.0	3.1	3.1	2.9	2.3	1.8	2.0	1.5	2.1	2.2	57	C.Z.	
140.3	3.5	2.9	2.0	3.1	3.1	2.9	2.4	1.8	2.0	1.5	2.1	2.1	58	MS	
140.7	3.5	2.9	2.0	3.1	3.1	2.9	2.4	1.8	2.0	1.5	2.1	2.1	59	C.Z.	
140.1	3.5	2.9	2.0	3.1	3.1	2.9	2.3	1.8	2.0	1.4	2.1	2.1	60	C.Z.	
140.5	3.5	2.9	2.0	3.0	3.0	2.9	2.3	1.8	2.0	1.3	2.1	2.0	61	C.Z.	
140.4	3.5	2.9	2.0	3.0	3.0	2.9	2.3	1.8	2.0	1.3	2.1	2.0	62	MS	
140.3	3.4	2.9	1.9	3.0	3.0	2.9	2.2	1.7	2.0	1.4	2.1	2.0	63	MS	
140.6	3.4	2.9	2.0	3.0	3.0	2.9	2.3	1.8	2.0	1.4	2.1	2.0	64	MS	

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma											Lapsed Time	Initials	
	E131	E383	E555	E737	E989	E11D2	G181	G383	G585	G737	G989			G11D2
140.1	3.4	2.9	2.0	3.0	3.0	2.9	2.3	1.7	2.1	1.4	2.1	2.0	65	A.C.
140	5.6	4.5	2.6	4.3	3.8	5.4	4.5	3.4	2.7	2.9	3.6	3.9	66	M.R.
140	3.8	3.1	1.9	3.1	3.1	3.3	2.7	2.0	2.1	1.6	2.2	2.4	67	M.R.
140	3.6	3.0	1.9	3.0	3.0	3.2	2.4	1.9	2.0	1.5	2.1	2.2	68	M.R.
140	3.6	3.0	1.8	3.0	3.0	3.1	2.4	1.8	2.0	1.4	2.1	2.2	69	M.R.
140	3.5	3.0	1.8	3.0	3.0	3.1	2.4	1.8	2.0	1.4	2.0	2.2	70	M.R.
140	3.5	3.0	1.9	3.0	3.0	3.1	2.4	1.7	2.1	1.4	2.1	2.2	71	M.R.
140	3.5	2.9	1.8	2.9	3.0	3.1	2.4	1.8	2.0	1.4	2.0	2.2	72	R.C.
140	3.5	2.9	1.8	2.8	2.9	3.0	2.4	1.8	2.0	1.4	2.0	2.1	73	M.R.
140.3	3.5	2.9	1.9	2.9	2.9	3.1	2.5	1.9	2.0	1.4	2.0	2.2	74	M.R.
140	3.2	2.9	1.7	2.9	2.8	3.0	2.4	1.7	2.0	1.2	2.0	2.1	75	M.R.
140.4	3.3	2.9	1.9	2.9	2.9	3.1	2.4	1.7	2.0	1.2	2.0	2.1	76	M.R.
140.4	3.3	2.8	1.8	2.9	2.9	3.0	2.4	1.7	2.0	1.4	2.0	2.0	77	M.R.
140.8	3.3	2.8	1.8	2.9	2.9	3.0	2.3	1.5	2.0	1.3	1.9	2.1	78	M.R.
140.7	3.3	2.8	1.7	2.9	2.9	3.0	2.3	1.5	2.0	1.3	1.8	2.1	79	M.R.
140.6	3.3	2.8	1.7	2.9	2.9	2.9	2.3	1.5	1.9	1.3	1.8	2.0	80	M.R.
140.5	3.3	2.7	1.8	2.9	2.9	3.0	2.3	1.6	2.0	1.3	1.8	2.0	81	M.R.
141.2	3.3	2.8	1.8	2.9	2.9	2.9	2.3	1.6	1.9	1.2	1.8	2.0	82	M.R.
140.7	3.3	2.8	1.8	2.9	2.9	3.0	2.3	1.5	1.9	1.2	1.9	2.0	83	M.R.
141.0	3.3	2.8	1.8	2.9	2.9	2.8	2.3	1.5	2.0	1.1	1.8	2.0	84	M.R.
140.5	3.3	2.8	1.8	2.8	2.8	2.7	2.3	1.5	1.9	1.2	1.8	2.0	85	M.R.
140.6	3.3	2.8	1.8	2.8	2.8	2.7	2.3	1.5	2.0	1.1	1.7	2.0	86	M.R.
140.7	3.3	2.9	1.8	2.8	2.8	2.5	2.3	1.5	1.9	1.1	1.8	1.9	87	M.R.

ELECTRICAL CONDITIONS - LUCA TEST #1

Sheet 5 of 11

IPS-400

Date 1/12/79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma													Lapsed Time	Initials
	E121	E383	E555	E737	E989	E11D2	G1B1	G3B3	G5B5	G7B7	G989	G11D2			
140.2	3.3	2.8	1.9	2.8	2.8	2.6	2.2	1.5	1.9	1.0	1.8	1.7	88	R.C.	
140.4	3.3	2.8	1.9	2.8	2.8	2.6	2.2	1.5	2.0	1.1	1.8	1.9	89	R.C.	
140.1	3.8	3.0	1.9	3.1	2.9	3.2	2.6	1.8	2.0	1.5	2.2	2.2	90	R.C.	
140.6	3.6	3.0	1.8	3.0	2.8	3.0	2.4	1.6	2.0	1.2	1.8	2.0	91	R.C.	
140.1	3.6	2.9	1.9	2.9	2.8	3.0	2.4	1.5	2.0	1.2	1.9	2.1	92	R.C.	
140.0	3.5	2.8	1.8	2.8	2.7	2.9	2.3	1.4	1.9	1.2	1.8	2.1	93	R.C.	
140.7	3.4	2.8	1.6	2.8	2.6	2.8	2.2	1.4	1.8	1.0	1.8	2.0	94	R.C.	
140.0	3.3	2.7	1.7	2.7	2.6	2.8	2.2	1.4	1.9	1.1	1.8	2.0	95	R.C.	
141.2	3.3	2.6	1.6	2.6	2.5	2.7	2.2	1.4	1.9	1.0	1.7	2.0	96	R.C.	
140.4	4.0	3.2	2.0	3.1	2.8	3.3	3.0	2.1	2.1	1.6	2.2	2.2	97	R.C.	
140.6	3.7	3.0	1.8	2.9	2.6	3.0	2.8	1.8	2.0	1.4	2.0	2.0	98	R.C.	
140.4	1.5	1.4	0	1.2	1.4	1.2	1.0	0	1.0	0	0	0	99	R.C.	
140.7	3.6	3.0	1.6	2.9	2.5	3.9	2.5	2.5	1.9	1.3	1.8	2.0	100	R.C.	
140.8	3.6	3.0	1.6	2.9	2.5	2.7	2.4	1.4	1.8	1.2	1.8	2.0	101	R.C.	
140.0	3.5	2.9	1.6	2.9	2.4	2.6	2.4	1.4	1.8	1.2	1.7	1.9	102	R.C.	
140.1	3.5	2.9	1.6	2.7	2.5	2.7	2.5	1.5	1.8	1.2	1.7	1.9	103	R.C.	
140.3	3.4	2.8	1.5	2.7	2.4	2.6	2.4	1.4	1.8	1.2	1.6	1.8	104	R.C.	
140.2	3.4	2.9	1.6	2.7	2.4	2.6	2.5	1.5	1.8	1.1	1.7	1.9	105	R.C.	
140.7	3.4	2.8	1.6	2.7	2.4	2.6	2.4	1.5	1.8	1.1	1.7	1.9	106	R.C.	
140.0	3.4	2.7	1.5	2.7	2.4	2.6	2.4	1.5	1.7	1.1	1.6	1.8	107	R.C.	
140.8	3.4	2.7	1.6	2.7	2.4	2.6	2.4	1.3	1.7	1.0	1.7	1.8	108	R.C.	
140.8	3.4	2.7	1.6	2.7	2.4	2.7	2.4	1.4	1.8	1.0	1.6	1.8	109	R.C.	
140.3	3.4	2.7	1.5	2.6	2.4	2.5	2.4	1.3	1.7	1.0	1.8	1.8	110	R.C.	

DATA SHEET C

ELECTRICAL CONDITIONS - LUCA TEST #1

Sheet 6 of 11

IPS-400

Date 1/13/79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma												Lapsed Time	Initials
	E121	E3B3	E5B5	E7B7	E9B9	E11D2	G1B1	G3B3	G5B5	G7B7	G9B9	G11D2		
140.6	3.4	2.7	1.6	2.7	2.4	2.5	2.5	1.5	1.7	1.0	1.6	1.8	111	
140.6	3.4	2.7	1.6	2.7	2.4	2.5	2.4	1.4	1.7	1.1	1.6	1.8	112	
140	3.4	2.8	1.6	2.6	2.4	2.5	2.4	1.4	1.8	1.3	1.7	1.8	113	M.R.
140.3	3.8	3.0	1.7	2.8	2.5	2.9	2.8	1.7	3.0	1.2	1.8	1.9	114	RC
140.9	3.6	2.8	1.6	2.7	2.4	2.7	2.6	1.5	1.8	1.1	1.7	1.8	115	RC
140.0	3.5	2.8	1.5	2.6	2.3	2.6	2.5	1.4	1.7	1.1	1.6	1.8	116	RC
140.3	3.5	2.7	1.5	2.6	2.3	2.6	2.5	1.4	1.7	1.1	1.6	1.8	117	RC
140.1	2.5	2.7	1.5	2.6	2.3	2.6	2.4	1.4	1.7	1.0	1.6	1.7	118	RC
140.5	3.4	2.6	1.4	2.6	2.2	2.6	2.4	1.2	1.7	1.1	1.6	1.7	119	RC
140.0	3.4	2.7	1.5	2.6	2.3	2.5	2.4	1.4	1.7	1.0	1.6	1.7	120	R.C.
140	3.4	2.6	1.4	2.5	2.3	2.5	2.4	1.4	1.6	<1.0	1.5	1.7	121	M.R.
140.3	3.5	2.7	1.4	2.6	2.2	2.5	2.5	1.4	1.6	<1.0	1.6	1.7	122	F
140.0	3.4	2.6	1.4	2.5	2.2	2.4	2.5	1.3	1.6	<1.0	1.6	1.7	123	F
140.7	3.4	2.6	1.4	2.5	2.2	2.4	2.4	1.3	1.6	<1.0	1.5	1.6	124	F
140.2	3.4	2.6	1.4	2.5	2.2	2.4	2.4	1.2	1.6	2.0	1.6	1.6	125	(S)
140.2	3.4	2.6	1.4	2.5	2.2	2.3	2.4	1.3	1.6	1.0	1.5	1.7	126	2
140.0	3.4	2.6	1.4	2.5	2.1	2.3	2.4	1.3	1.5	1.1	1.5	1.7	127	(S)
140.5	3.4	2.6	1.4	2.5	2.2	2.4	2.4	1.3	1.5	1.1	1.5	1.7	128	(S)
140.2	3.4	2.6	1.5	2.5	2.2	2.4	2.4	1.3	1.6	1.1	1.6	1.7	129	CW
140.4	3.4	2.5	1.4	2.4	2.2	2.4	2.4	1.4	1.6	1.1	1.5	1.6	130	CW
140.5	3.4	2.5	1.4	2.5	2.2	2.4	2.4	1.3	1.5	1.1	1.5	1.7	131	CW
140.5	3.4	2.4	1.4	2.4	2.2	2.4	2.4	1.2	1.6	1.1	1.5	1.7	132	CW
140.6	3.3	2.4	1.4	2.4	2.2	2.4	2.4	1.2	1.6	1.1	1.5	1.7	133	CW

ELECTRICAL CONDITIONS - LUCA TEST #1

Sheet 7 of 11

IPS-400

Date 1-14-79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma														Lapsed Time	initials
	E121	E3B3	E535	E7B7	E9B9	E11D2	G1B1	G3B3	G5B5	G7B7	G9B9	G11D2				
140.2	3.4	2.5	1.2	2.4	2.2	2.3	2.4	1.3	1.6	1.0	1.5	1.7	1.34	CW		
140.2	3.4	2.5	1.4	2.4	2.2	2.3	2.4	1.3	1.6	1.0	1.5	1.7	1.35	CW		
140.2	3.3	2.5	1.4	2.4	2.2	2.3	2.4	1.3	1.6	1.0	1.4	1.7	1.36	CW		
140.5	3.3	2.5	1.4	2.4	2.2	2.3	2.4	1.2	1.5	1.0	1.4	1.6	1.37	MR		
140.3	3.5	2.6	1.5	2.6	2.2	2.7	2.7	1.4	1.7	1.2	1.6	1.9	1.38	MR		
140.4	3.4	2.4	1.4	2.4	2.1	2.5	2.5	1.2	1.6	1.1	1.6	1.7	1.39	MR		
140.5	3.4	2.5	1.4	2.4	2.1	2.5	2.5	1.2	1.6	1.0	1.5	1.6	1.40	RC		
140.2	3.3	2.4	1.3	2.4	2.1	2.4	2.5	1.2	1.6	1.1	1.5	1.7	1.41	MR		
140.3	3.3	2.5	1.4	2.4	2.1	2.4	2.4	1.2	1.6	1.0	1.5	1.6	1.42	RC		
140.5	3.4	2.5	1.5	2.4	2.1	2.4	2.5	1.2	1.6	1.0	1.4	1.6	1.43	RC		
140.2	3.3	2.5	1.3	2.3	2.1	2.4	2.4	1.1	1.5	1.0	1.5	1.6	1.44	MR		
140.6	3.3	2.4	1.4	2.4	2.1	2.4	2.4	1.1	1.5	1.0	1.5	1.6	1.45	MR		
140.6	3.4	2.5	1.4	2.4	2.0	2.4	2.5	1.0	1.6	1.0	1.6	1.8	1.46	MR		
140.6	3.4	2.5	1.4	2.4	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.47	MR		
140.0	3.3	2.5	1.3	2.4	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.48	MR		
140.2	3.3	2.4	1.4	2.4	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.49	MR		
140.8	3.3	2.4	1.3	2.4	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.50	MR		
140.3	3.2	2.4	1.3	2.3	2.0	2.4	2.4	1.0	1.4	1.0	1.4	1.6	1.51	MR		
140.5	3.2	2.4	1.3	2.4	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.52	MR		
140.4	3.2	2.4	1.4	2.4	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.53	MR		
140.3	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.5	1.0	1.4	1.6	1.54	MR		
140.1	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.4	1.0	1.4	1.6	1.55	MR		
140.0	3.2	2.4	1.4	2.3	2.0	2.3	2.4	1.0	1.5	1.0	1.4	1.6	1.56	MR		

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma												Lapsed Time	initials
	E1B1	E3B3	E5B5	E7B7	E9B9	E11D2	G1B1	G3B3	G5B5	G7B7	G9B9	G11D2		
140.1	3.2	2.4	1.3	2.3	2.0	2.3	2.4	1.0	1.5	<1.0	1.4	1.6	157	DAS
140.1	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.4	<1.0	1.4	1.6	158	JLJ
140.3	3.2	2.3	1.4	2.3	2.0	2.4	2.4	1.0	1.5	<1.0	1.4	1.6	159	DAS
140.2	3.1	2.3	1.3	2.3	2.0	2.4	2.4	1.0	1.4	<1.0	1.4	1.6	160	DAS
140.0	3.2	2.3	1.4	2.3	2.0	2.4	2.4	1.0	1.5	<1.0	1.4	1.6	161	LJL
140.1	3.3	2.4	1.4	2.4	2.1	2.5	2.5	1.2	1.6	<1.0	1.5	1.7	162	RC
140.1	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.5	<1.0	1.4	1.7	163	MR
140.3	3.3	2.4	1.4	2.4	2.0	2.4	2.4	1.1	1.5	1.0	1.4	1.7	164	RC
140.5	3.2	2.4	1.4	2.3	2.0	2.4	2.3	1.0	1.4	<1.0	1.4	1.6	165	RC
140.1	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.5	<1.0	1.4	1.6	166	RC
140.6	3.4	2.6	1.4	2.6	2.2	2.6	2.4	1.2	1.6	1.0	1.6	1.8	167	RC
140.2	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.4	<1.0	1.4	1.6	168	RC
140.5	3.2	2.4	1.4	2.3	2.0	2.4	2.4	1.0	1.5	<1.0	1.4	1.6	169	RC
140.6	3.2	2.3	1.2	2.3	2.0	2.4	2.4	1.0	1.4	<1.0	1.4	1.6	170	(D)
140.4	3.2	2.2	1.3	2.2	2.0	2.3	2.3	<1.0	1.4	<1.0	1.4	1.6	171	Z
140.1	3.2	2.3	1.3	2.3	2.0	2.3	2.3	<1.0	1.4	<1.0	1.4	1.7	172	(16) (D)
140.6	3.2	2.3	1.3	2.3	2.0	2.3	2.3	<1.0	1.5	<1.0	1.3	1.6	173	(D)
140.5	3.2	2.3	1.3	2.3	2.0	2.3	2.3	<1.0	1.4	<1.0	1.3	1.6	174	(D)
140.7	3.2	2.2	1.3	2.2	2.0	2.3	2.3	<1.0	1.4	<1.0	1.3	1.7	175	MP
140.7	3.1	2.2	1.3	2.2	1.9	2.3	2.3	<1.0	1.4	<1.0	1.3	1.5	176	(D)
140.8	3.0	2.2	1.2	2.2	1.9	2.2	2.2	<1.0	1.4	<1.0	1.3	1.6	177	(D)
140.6	3.0	2.2	1.2	2.2	1.9	2.2	2.3	<1.0	1.4	<1.0	1.3	1.6	178	(D)
140.8	3.0	2.2	1.3	2.2	2.0	2.2	2.3	<1.0	1.4	<1.0	1.2	1.5	179	DAS

DATA SHEET C

ELECTRICAL CONDITIONS - LUCA TEST #1

Sheet 9 of 11

IPS-400

Date 116-79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma												Lapsed Time	initials
	E1B1	E3B3	E5B5	E7B7	E9B9	E11D2	G1B1	G3B3	G5B5	G7B7	G9B9	G11D2		
141.0	3.0	2.2	1.2	2.2	1.9	2.2	2.3	<1.0	1.4	<1.0	1.3	1.5	180	JLJ
141.1	3.0	2.2	1.3	2.2	1.9	2.2	2.2	<1.0	1.4	<1.0	1.3	1.6	181	DAS
140.8	3.0	2.2	1.2	2.2	1.9	2.2	2.3	<1.0	1.4	<1.0	1.2	1.5	182	JLJ
141.4	3.0	2.2	1.3	2.2	2.0	2.2	2.2	<1.0	1.4	<1.0	1.3	1.5	183	DAS
141.0	3.0	2.2	1.2	2.2	1.9	2.2	2.2	<1.0	1.4	<1.0	1.2	1.5	184	JLJ
140.0	3.0	2.2	1.2	2.2	1.9	2.2	2.2	<1.0	1.4	<1.0	1.3	1.6	185	DAS
140.6	3.1	2.4	1.3	2.3	2.0	2.4	2.4	1.0	1.4	<1.0	1.4	1.6	186	M.R.
140.0	2.7	2.2	1.3	2.2	1.9	2.2	2.2	<1.0	1.4	<1.0	1.2	1.5	187	RC
140.4	2.7	2.2	1.2	2.2	1.9	2.1	2.1	<1.0	1.4	<1.0	1.3	1.5	188	M.R.
140.3	2.6	2.2	1.3	2.2	1.8	2.1	2.2	<1.0	1.4	<1.0	1.2	1.5	189	RC
140.1	2.6	2.2	1.3	2.2	1.8	2.1	2.2	<1.0	1.4	<1.0	1.3	1.5	190	RC
140.2	2.6	2.2	1.2	2.1	1.9	2.1	2.1	<1.0	1.4	<1.0	1.3	1.5	191	M.R.
140.2	2.6	2.2	1.2	2.1	1.8	2.0	2.1	<1.0	1.4	<1.0	1.2	1.5	192	M.R.
140.3	2.3	2.8	1.8	2.8	2.4	2.8	2.8	1.3	1.8	1.2	1.9	2.3	193	J.D.
140.7	2.9	2.4	1.4	2.4	2.4	2.3	2.4	1.0	1.6	1.0	1.5	1.8	194	M.R.
140.5	2.8	2.2	1.3	2.3	1.9	2.1	2.2	<1.0	1.4	<1.0	1.3	1.6	195	A.P.
140.3	2.7	2.1	1.2	2.2	1.8	2.1	2.1	<1.0	1.4	<1.0	1.3	1.6	196	JLJ
140.0	2.6	2.2	1.2	2.2	1.8	2.1	2.1	<1.0	1.4	<1.0	1.2	1.6	197	JLJ
140.5	2.6	2.1	1.3	2.2	1.8	2.1	2.1	<1.0	1.3	<1.0	1.2	1.5	198	JLJ
140.6	2.6	2.1	1.2	2.1	1.8	2.1	2.1	<1.0	1.4	<1.0	1.2	1.6	199	JLJ
140.7	2.6	2.1	1.2	2.2	1.8	2.1	2.1	<1.0	1.3	<1.0	1.2	1.6	200	JLJ
140.6	2.6	2.1	1.2	2.2	1.8	2.2	2.1	<1.0	1.4	<1.0	1.2	1.5	201	JLJ

ELECTRICAL CONDITIONS - LUCA TEST #1

Sheet 10 of 11

IPS-400

Date 1-17-79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma											Lapsed Time	initials	
	E121	E3B3	E555	E737	E989	E11D2	G1B1	G3B3	G5B5	G7B7	G9B9			G11D2
140.7	2.6	2.1	1.2	2.2	1.8	2.2	2.0	<1.0	1.4	<1.0	1.2	1.6	202	DJ
141.2	2.6	2.1	1.2	2.2	1.8	2.2	2.1	<1.0	1.4	<1.0	1.2	1.5	203	DJ
141.5	2.5	2.0	1.2	2.2	1.8	2.2	2.1	<1.0	1.4	<1.0	1.2	1.5	204	DJ
141.5	2.5	2.1	1.2	2.2	1.8	2.2	2.1	<1.0	1.3	<1.0	1.2	1.5	205	DJ
140.8	2.4	2.0	1.2	2.1	1.8	2.1	2.0	<1.0	1.3	<1.0	1.1	1.5	206	DJ
140.9	2.5	2.0	1.2	2.2	1.8	2.1	2.1	<1.0	1.3	<1.0	1.2	1.5	207	DJ
140.5	2.4	2.0	1.1	2.1	1.8	2.1	2.0	<1.0	1.3	<1.0	1.2	1.4	208	DJ
140.8	2.4	2.0	1.1	2.1	1.8	2.1	2.0	<1.0	1.3	<1.0	1.2	1.4	209	MR
140.2	2.6	2.2	1.2	2.2	1.8	2.3	2.2	<1.0	1.4	<1.0	1.4	1.8	210	D.D.
140.5	2.4	2.0	1.2	2.0	1.7	2.2	2.0	<1.0	1.3	<1.0	1.2	1.6	211	MR
140.6	2.4	2.0	1.1	2.1	1.8	2.2	2.0	<1.0	1.3	<1.0	1.2	1.5	212	MR
140.4	2.4	2.1	1.2	2.1	1.8	2.2	2.0	<1.0	1.3	<1.0	1.2	1.5	213	A.D.
140.1	2.4	2.0	1.1	2.0	1.8	2.1	2.0	<1.0	1.2	<1.0	1.1	1.4	214	MR
140.8	2.4	2.0	1.1	2.1	1.8	2.2	2.0	<1.0	1.3	<1.0	1.2	1.4	215	MR
140.3	2.4	2.0	1.0	2.0	1.7	2.2	2.0	<1.0	1.2	<1.0	1.2	1.4	216	MR
140.6	2.4	2.0	1.0	2.0	1.8	2.2	2.0	<1.0	1.3	<1.0	1.2	1.4	217	MR
140.2	2.7	2.3	1.4	2.5	2.1	2.7	2.3	<1.0	1.5	<1.0	1.5	1.9	218	RP
140.6	2.5	2.1	1.2	2.3	1.8	2.3	2.1	<1.0	1.3	<1.0	1.2	1.6	219	AY
140.3	2.5	2.0	1.1	2.2	1.8	2.3	2.1	<1.0	1.3	<1.0	1.2	1.5	220	AY
140.5	2.5	2.1	1.2	2.2	1.9	2.3	2.1	<1.0	1.3	<1.0	1.2	1.5	221	RP
140.5	2.4	2.0	1.1	2.2	1.8	2.2	2.1	<1.0	1.3	<1.0	1.1	1.6	222	AY
140.4	2.4	2.1	1.2	2.2	1.8	2.3	2.0	<1.0	1.3	<1.0	1.1	1.5	223	AY

DATA SHEET D

Sheet 1 of 21 @500V

INSULATION RESISTANCE - LOCA TEST #1

Pre-Test
R.C.

TIME 11:22 AM
Date: 1/8/79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	2000
E2B2	2000
E3A3	425
E4B4	2500
E5A5	2000
E6B6	2000
E7A7	2000
E8B8	1500
E9A9	2000
E10D1	2500
E11C2	2000
E12D3	2500
F7C4	2500
F8C5	3000
F9C6	5000
F10C7	75
F11C8	2500
F12C9	1500
G1A1	1200
G2B2	1300
G3A3	550
G4B4	1300
G5A5	1400
G6B6	1300
G7A7	900
G8B8	2000
G9A9	820
G10D1	600
G11C2	550
G12D3	1500
A7C4	2500
A8C5	2000
A9C6	1500
A10C7	1100
A11C8	2500
A12C9	1600

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	1500
E2B2-E3A3	1300
E3A3-E4B4	1400
E4B4-E5A5	1500
E5A5-E6B6	1200
E6B6-E7A7	1000
E7A7-E8B8	1200
E8B8-E9A9	1300
E9A9-E10D1	1700
E10D1-E11C2	1600
E11C2-E12D3	4000
F7C4-F8C5	5000
F8C5-F9C6	2500
F9C6-F10C7	2500
F10C7-F11C8	2500
F11C8-F12C9	2500
G1A1-G2B2	1500
G2B2-G3A3	1400
G3A3-G4B4	1500
G4B4-G5A5	1500
G5A5-G6B6	1500
G6B6-G7A7	1400
G7A7-G8B8	900
G8B8-G9A9	900
G9A9-G10D1	900
G10D1-G11C2	770
G11C2-G12D3	1500
A7C4-A8C5	2500
A8C5-A9C6	1600
A9C6-A10C7	1600
A10C7-A11C8	2300
A11C8-A12C9	2500

DATA SHEET D

Sheet 2 of 21

INSULATION RESISTANCE - LOCA TEST #1

R.C.




TIME 9:15 A.M.

Date: 1/9/79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.35 @ 50V
E2B2	.35 @ 50V
E3A3	.35 @ 50V
E4B4	.35 @ 50V
E5A5	.35 @ 50V
E6B6	.36 @ 50V
E7A7	.35 @ 50V
E8B8	.36 @ 50V
E9A9	.35 @ 50V
E10D1	.36 @ 50V
E11C2	.35 @ 50V
E12D3	.36 @ 50V
F7C4	.35 @ 50V
F8C5	.37 @ 50V
F9C6	.37 @ 50V
F10C7	.37 @ 50V
F11C8	.37 @ 50V
F12C9	.36 @ 50V
G1A1	.35 @ 50V
G2B2	.35 @ 50V
G3A3	.35 @ 50V
G4B4	.36 @ 50V
G5A5	.36 @ 50V
G6B6	.36 @ 50V
G7A7	.36 @ 50V
G8B8	.35 @ 50V
G9A9	.36 @ 50V
G10D1	.36 @ 50V
G11C2	.36 @ 50V
G12D3	.35 @ 50V
A7C4	.40 @ 100V
A8C5	.40 @ 100V
A9C6	.40 @ 100V
A10C7	.38 @ 50V
A11C8	.38 @ 50V
A12C9	.36 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.36 @ 50V
E2B2-E3A3	.36 @ 50V
E3A3-E4B4	.35 @ 50V
E4B4-E5A5	.35 @ 50V
E5A5-E6B6	.35 @ 50V
E6B6-E7A7	.35 @ 50V
E7A7-E8B8	.35 @ 50V
E8B8-E9A9	.35 @ 50V
E9A9-E10D1	.35 @ 50V
E10D1-E11C2	.35 @ 50V
E11C2-E12D3	.35 @ 50V
F7C4-F8C5	.37 @ 50V
F8C5-F9C6	.37 @ 50V
F9C6-F10C7	.37 @ 50V
F10C7-F11C8	.37 @ 50V
F11C8-F12C9	.37 @ 50V
G1A1-G2B2	.35 @ 50V
G2B2-G3A3	.35 @ 50V
G3A3-G4B4	.35 @ 50V
G4B4-G5A5	.35 @ 50V
G5A5-G6B6	.35 @ 50V
G6B6-G7A7	.35 @ 50V
G7A7-G8B8	.35 @ 50V
G8B8-G9A9	.35 @ 50V
G9A9-G10D1	.35 @ 50V
G10D1-G11C2	.35 @ 50V
G11C2-G12D3	.35 @ 50V
A7C4-A8C5	.38 @ 100V
A8C5-A9C6	.38 @ 50V
A9C6-A10C7	.38 @ 100V
A10C7-A11C8	.38 @ 50V
A11C8-A12C9	.38 @ 50V

INSULATION RESISTANCE - LOCA TEST #1

A.C. 

Date: 3:30 PM 1/2/77

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.37 @ 50V
E2B2	.37 @ 50V
E3A3	.37 @ 50V
E4B4	.37 @ 50V
E5A5	.38 @ 50V
E6B6	.37 @ 50V
E7A7	.38 @ 50V
E8B8	.38 @ 50V
E9A9	.38 @ 50V
E10D1	.37 @ 50V
E11C2	.38 @ 50V
E12D3	.38 @ 50V
F7C4	.38 @ 50V
F8C5	.37 @ 50V
F9C6	.37 @ 50V
F10C7	.38 @ 50V
F11C8	.38 @ 50V
F12C9	.37 @ 50V
G1A1	.38 @ 50V
G2B2	.38 @ 50V
G3A3	.38 @ 50V
G4B4	.38 @ 50V
G5A5	.38 @ 50V
G6B6	.38 @ 50V
G7A7	.38 @ 50V
G8B8	.38 @ 50V
G9A9	.38 @ 50V
G10D1	.38 @ 50V
G11C2	.38 @ 50V
G12B3 D3	.38 @ 50V
A7C4	.37 @ 50V
A8C5	.38 @ 50V
A9C6	.37 @ 50V
A10C7	.38 @ 50V
A11C8	.38 @ 50V
A12C9	.38 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.38 @ 50V
E2B2-E3A3	.38 @ 50V
E3A3-E4B4	.38 @ 50V
E4B4-E5A5	.38 @ 50V
E5A5-E6B6	.38 @ 50V
E6B6-E7A7	.38 @ 50V
E7A7-E8B8	.38 @ 50V
E8B8-E9A9	.38 @ 50V
E9A9-E10D1	.38 @ 50V
E10D1-E11C2	.38 @ 50V
E11C2-E12B3 D3	.38 @ 50V
F7C4-F8C5	.38 @ 50V
F8C5-F9C6	.37 @ 50V
F9C6-F10C7	.37 @ 50V
F10C7-F11C8	.38 @ 50V
F11C8-F12C9	.38 @ 50V
G1A1-G2B2	.38 @ 50V
G2B2-G3A3	.38 @ 50V
G3A3-G4B4	.38 @ 50V
G4B4-G5A5	.38 @ 50V
G5A5-G6B6	.38 @ 50V
G6B6-G7A7	.38 @ 50V
G7A7-G8B8	.38 @ 50V
G8B8-G9A9	.38 @ 50V
G9A9-G10D1	.38 @ 50V
G10D1-G11C2	.38 @ 50V
G11C2-G12D3	.38 @ 50V
A7C4-A8C5	.38 @ 50V
A8C5-A9C6	.38 @ 50V
A9C6-A10C7	.37 @ 50V
A10C7-A11C8	.38 @ 50V
A11C8-A12C9	.37 @ 50V

DATA SHEET D

Sheet 4 of 21

INSULATION RESISTANCE - LOCA TEST #1

9.10.1979

8:30 A.M.
Date: 1-10-79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.39 @ 80V
E2B2	0.40 @ 80V
E3A3	0.40 @ 80V
E4B4	0.40 @ 80V
E5A5	0.40 @ 90V
E6B6	0.40 @ 80V
E7A7	0.40 @ 90V
E8B8	0.40 @ 80V
E9A9	0.40 @ 90V
E10D1	0.39 @ 80V
E11C2	0.38 @ 70V
E12D3	0.38 @ 60V
F7C4	0.37 @ 40V
F8C5	0.37 @ 40V
F9C6	0.37 @ 40V
F10C7	0.37 @ 40V
F11C8	0.37 @ 40V
F12C9	0.37 @ 40V
G1A1	0.38 @ 60V
G2B2	0.38 @ 60V
G3A3	0.38 @ 60V
G4B4	0.38 @ 60V
G5A5	0.38 @ 70V
G6B6	0.38 @ 60V
G7A7	0.38 @ 70V
G8B8	0.38 @ 60V
G9A9	0.38 @ 70V
G10D1	0.38 @ 60V
G11C2	0.38 @ 60V
G12D3	0.37 @ 50V
A7C4	0.37 @ 40V
A8C5	0.37 @ 40V
A9C6	0.37 @ 40V
A10C7	0.37 @ 40V
A11C8	0.37 @ 40V
A12C9	0.37 @ 40V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.37 @ 50V
E2B2-E3A3	0.37 @ 50V
E3A3-E4B4	0.37 @ 50V
E4B4-E5A5	0.38 @ 50V
E5A5-E6B6	0.38 @ 50V
E6B6-E7A7	0.38 @ 50V
E7A7-E8B8	0.37 @ 50V
E8B8-E9A9	0.38 @ 50V
E9A9-E10D1	0.38 @ 60V
E10D1-E11C2	0.38 @ 50V
E11C2-E12D3	0.38 @ 50V
F7C4-F8C5	0.39 @ 70V
F8C5-F9C6	0.40 @ 80V
F9C6-F10C7	0.39 @ 60V
F10C7-F11C8	0.38 @ 60V
F11C8-F12C9	0.39 @ 50V
G1A1-G2B2	0.38 @ 50V
G2B2-G3A3	0.38 @ 60V
G3A3-G4B4	0.38 @ 50V
G4B4-G5A5	0.38 @ 50V
G5A5-G6B6	0.38 @ 70V
G6B6-G7A7	0.38 @ 60V
G7A7-G8B8	0.38 @ 50V
G8B8-G9A9	0.38 @ 50V
G9A9-G10D1	0.38 @ 50V
G10D1-G11C2	0.38 @ 50V
G11C2-G12D3	0.38 @ 50V
A7C4-A8C5	0.37 @ 50V
A8C5-A9C6	0.40 @ 70V
A9C6-A10C7	0.40 @ 80V
A10C7-A11C8	0.38 @ 50V
A11C8-A12C9	0.38 @ 50V

DATA SHEET D

Sheet 5 of 21

INSULATION RESISTANCE - LOCA TEST #1 *J.D.*Date: 4:30 P.M.
1-10-79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.14 @ 200V
E2B2	0.11 @ 200V
E3A3	0.14 @ 200V
E4B4	0.13 @ 200V
E5A5	0.14 @ 200V
E6B6	0.12 @ 200V
E7A7	0.13 @ 200V
E8B8	0.11 @ 200V
E9A9	0.16 @ 100V
E10D1	0.10 @ 200V
E11C2	0.16 @ 100V
E12D3	0.10 @ 90V
F7C4	0.16 @ 100V
F8C5	0.10 @ 100V
F9C6	0.16 @ 100V
F10C7	0.10 @ 90V
F11C8	0.19 @ 100V
F12C9	0.10 @ 30V
G1A1	0.12 @ 100V
G2B2	0.12 @ 100V
G3A3	0.13 @ 100V
G4B4	0.10 @ 90V
G5A5	0.18 @ 100V
G6B6	0.10 @ 100V
G7A7	0.16 @ 100V
G8B8	0.14 @ 100V
G9A9	0.18 @ 100V
G10D1	0.15 @ 100V
G11C2	0.11 @ 100V
G12D3	0.10 @ 80V
A7C4	0.16 @ 100V
A8C5	0.10 @ 100V
A9C6	0.19 @ 100V
A10C7	0.10 @ 90V
A11C8	0.10 @ 100V
A12C9	0.10 @ 30V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.12 @ 100V
E2B2-E3A3	0.12 @ 100V
E3A3-E4B4	0.11 @ 100V
E4B4-E5A5	0.14 @ 100V
E5A5-E6B6	0.12 @ 100V
E6B6-E7A7	0.10 @ 100V
E7A7-E8B8	0.11 @ 100V
E8B8-E9A9	0.13 @ 100V
E9A9-E10D1	0.15 @ 100V
E10D1-E11C2	0.14 @ 100V
E11C2-E12D3	0.10 @ 100V
F7C4-F8C5	0.13 @ 100V
F8C5-F9C6	0.15 @ 100V
F9C6-F10C7	0.13 @ 100V
F10C7-F11C8	0.17 @ 100V
F11C8-F12C9	0.17 @ 100V
G1A1-G2B2	0.11 @ 100V
G2B2-G3A3	0.12 @ 100V
G3A3-G4B4	0.10 @ 100V
G4B4-G5A5	0.11 @ 100V
G5A5-G6B6	0.11 @ 100V
G6B6-G7A7	0.10 @ 100V
G7A7-G8B8	0.11 @ 100V
G8B8-G9A9	0.12 @ 100V
G9A9-G10D1	0.10 @ 100V
G10D1-G11C2	0.10 @ 90V
G11C2-G12D3	0.10 @ 90V
A7C4-A8C5	0.10 @ 100V
A8C5-A9C6	0.11 @ 100V
A9C6-A10C7	0.12 @ 100V
A10C7-A11C8	0.10 @ 90V
A11C8-A12C9	0.10 @ 80V

DATA SHEET D

Sheet 6 of 21

INSULATION RESISTANCE - LOCA TEST #1

8:30 A.M.

Date: 1/11/70

R.C.

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.16 @ 200V
E2B2	.14 @ 200V
E3A3	.11 @ 300V
E4B4	.18 @ 200V
E5A5	.22 @ 200V
E6B6	.16 @ 200V
E7A7	.16 @ 200V
E8B8	.14 @ 200V
E9A9	.13 @ 200V
E10D1	.14 @ 200V
E11C2	.21 @ 100V
E12D3	.10 @ 100V
F7C4	.13 @ 200V
F8C5	.11 @ 90V
F9C6	.15 @ 200V
F10C7	.12 @ 80V
F11C8	.22 @ 200V
F12C9	.1 @ 30V
G1A1	.14 @ 100V
G2B2	.12 @ 100V
G3A3	.19 @ 100V
G4B4	.10 @ 100V
G5A5	.28 @ 100V
G6B6	.10 @ 80V
G7A7	.20 @ 100V
G8B8	.23 @ 100V
G9A9	.24 @ 100V
G10D1	.14 @ 100V
G11C2	.13 @ 100V
G12B3 D3	.15 @ 50V
A7C4	.17 @ 100V
A8C5	.11 @ 90V
A9C6	.1 @ 100V
A10C7	.11 @ 80V
A11C8	.11 @ 100V
A12C9	.11 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.14 @ 100V
E2B2-E3A3	.18 @ 100V
E3A3-E4B4	.18 @ 100V
E4B4-E5A5	.3 @ 100V
E5A5-E6B6	.2 @ 100V
E6B6-E7A7	.14 @ 100V
E7A7-E8B8	.14 @ 100V
E8B8-E9A9	.16 @ 100V
E9A9-E10D1	.22 @ 100V
E10D1-E11C2	.22 @ 100V
E11C2-E12B3 D3	.11 @ 100V
F7C4-F8C5	.19 @ 100V
F8C5-F9C6	.11 @ 200V
F9C6-F10C7	.11 @ 200V
F10C7-F11C8	.13 @ 100V
F11C8-F12C9	.1 @ 100
G1A1-G2B2	.11 @ 200V
G2B2-G3A3	.11 @ 200V
G3A3-G4B4	.14 @ 100V
G4B4-G5A5	.18 @ 100V
G5A5-G6B6	.23 @ 100V
G6B6-G7A7	.16 @ 100V
G7A7-G8B8	.16 @ 100V
G8B8-G9A9	.16 @ 100V
G9A9-G10D1	.16 @ 100V
G10D1-G11C2	.10 @ 100V
G11C2-G12D3	.10 @ 100V
A7C4-A8C5	.1 @ 90V
A8C5-A9C6	.1 @ 100V
A9C6-A10C7	.1 @ 90V
A10C7-A11C8	.1 @ 100V
A11C8-A12C9	.1 @ 100V

INSULATION RESISTANCE - LOCA TEST #1

mR

Date: 1/11/79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.45 @ 100V
E2B2	.3 @ 100V
E3A3	.45 @ 100V
E4B4	.32 @ 100V
E5A5	.48 @ 100V
E6B6	.3 @ 100V
E7A7	.45 @ 100V
E8B8	.3 @ 100V
E9A9	.45 @ 100V
E10D1	.3 @ 100V
E11C2	.44 @ 100V
E12D3	.27 @ 100V
F7C4	.37 @ 100V
F8C5	.34 @ 100V
F9C6	.40 @ 100V
F10C7	.34 @ 100V
F11C8	.38 @ 100V
F12C9	.33 @ 100V
G1A1	.4 @ 100V
G2B2	.25 @ 100V
G3A3	.26 @ 100V
G4B4	.26 @ 100V
G5A5	.3 @ 100V
G6B6	.1 @ 100V
G7A7	.28 @ 100V
G8B8	.25 @ 100V
G9A9	.29 @ 100V
G10D1	.24 @ 100V
G11C2	.28 @ 100V
G12B8 D 3	.23 @ 100V
A7C4	.35 @ 100V
A8C5	.34 @ 100V
A9C6	.35 @ 100V
A10C7	.23 @ 100V
A11C8	.37 @ 100V
A12C9	.33 @ 100V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.25 @ 100V
E2B2-E3A3	.25 @ 100V
E3A3-E4B4	.25 @ 100V
E4B4-E5A5	.25 @ 100V
E5A5-E6B6	.25 @ 100V
E6B6-E7A7	.24 @ 100V
E7A7-E8B8	.24 @ 100V
E8B8-E9A9	.24 @ 100V
E9A9-E10D1	.24 @ 100V
E10D1-E11C2	.25 @ 100V
E11C2-E12B8 D 3	.24 @ 100V
F7C4-F8C5	.5 @ 100V
F8C5-F9C6	.51 @ 100V
F9C6-F10C7	.52 @ 100V
F10C7-F11C8	.50 @ 100V
F11C8-F12C9	.5 @ 100V
G1A1-G2B2	.25 @ 100V
G2B2-G3A3	.25 @ 100V
G3A3-G4B4	.25 @ 100V
G4B4-G5A5	.25 @ 100V
G5A5-G6B6	.25 @ 100V
G6B6-G7A7	.24 @ 100V
G7A7-G8B8	.24 @ 100V
G8B8-G9A9	.25 @ 100V
G9A9-G10D1	.24 @ 100V
G10D1-G11C2	.23 @ 100V
G11C2-G12D3	.24 @ 100V
A7C4-A8C5	.17 @ 100V
A8C5-A9C6	.17 @ 100V
A9C6-A10C7	.17 @ 100V
A10C7-A11C8	.18 @ 100V
A11C8-A12C9	.19 @ 200V

INSULATION RESISTANCE - LOCA TEST #1 *J.D.*

Date: 1/12/78

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.15 @ 200V
E2B2	0.13 @ 200V
E3A3	0.16 @ 200V
E4B4	0.16 @ 200V
E5A5	0.21 @ 200V
E6B6	0.15 @ 200V
E7A7	0.16 @ 200V
E8B8	0.15 @ 200V
E9A9	0.14 @ 200V
E10D1	0.14 @ 200V
E11C2	0.10 @ 190V
E12D3	0.10 @ 100V
F7C4	0.10 @ 300V
F8C5	0.10 @ 300V
F9C6	0.10 @ 200V
F10C7	0.10 @ 100V
F11C8	0.10 @ 100V
F12C9	0.10 @ 40V
G1A1	0.10 @ 150V
G2B2	0.11 @ 200V
G3A3	0.16 @ 300V
G4B4	0.10 @ 100V
G5A5	0.17 @ 300V
G6B6	0.10 @ 100V
G7A7	0.13 @ 300V
G8B8	0.10 @ 190V
G9A9	0.13 @ 300V
G10D1	0.10 @ 160V
G11C2	0.13 @ 100V
G12B3/D3	0.10 @ 80V
A7C4	0.10 @ 180V
A8C5	0.10 @ 180V
A9C6	0.10 @ 220V
A10C7	0.10 @ 100V
A11C8	0.10 @ 90V
A12C9	0.10 @ 40V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.10 @ 180V
E2B2-E3A3	0.10 @ 200V
E3A3-E4B4	0.16 @ 300V
E4B4-E5A5	0.16 @ 300V
E5A5-E6B6	0.10 @ 200V
E6B6-E7A7	0.10 @ 150V
E7A7-E8B8	0.10 @ 180V
E8B8-E9A9	0.10 @ 200V
E9A9-E10D1	0.15 @ 200V
E10D1-E11C2	0.10 @ 400V
E11C2-E12B3/D3	0.10 @ 120V
F7C4-F8C5	0.10 @ 300V
F8C5-F9C6	0.10 @ 300V
F9C6-F10C7	0.13 @ 200V
F10C7-F11C8	0.10 @ 170V
F11C8-F12C9	0.11 @ 300V
G1A1-G2B2	0.10 @ 220V
G2B2-G3A3	0.11 @ 500V
G3A3-G4B4	0.12 @ 400V
G4B4-G5A5	0.13 @ 300V
G5A5-G6B6	0.10 @ 400V
G6B6-G7A7	0.10 @ 200V
G7A7-G8B8	0.10 @ 400V
G8B8-G9A9	0.10 @ 200V
G9A9-G10D1	0.10 @ 300V
G10D1-G11C2	0.11 @ 100V
G11C2-G12D3	0.11 @ 100V
A7C4-A8C5	0.12 @ 100V
A8C5-A9C6	0.11 @ 100V
A9C6-A10C7	0.11 @ 100V
A10C7-A11C8	0.16 @ 100V
A11C8-A12C9	0.15 @ 100V

INSULATION RESISTANCE - LOCA TEST #1

A.D.

4:00 P.M.

Date: 1-12-79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.30 @ 100V
E2B2	0.25 @ 100V
E3A3	0.30 @ 100V
E4B4	0.30 @ 100V
E5A5	0.35 @ 100V
E6B6	0.30 @ 100V
E7A7	0.35 @ 100V
E8B8	0.30 @ 100V
E9A9	0.25 @ 100V
E10D1	0.30 @ 100V
E11C2	0.20 @ 100V
E12D3	0.10 @ 100V
F7C4	0.25 @ 100V
F8C5	0.40 @ 100V
F9C6	0.27 @ 100V
F10C7	0.13 @ 100V
F11C8	0.10 @ 100V
F12C9	0.10 @ 50V
G1A1	0.13 @ 100V
G2B2	0.20 @ 100V
G3A3	0.25 @ 100V
G4B4	0.25 @ 100V
G5A5	0.30 @ 100V
G6B6	0.30 @ 100V
G7A7	0.30 @ 100V
G8B8	0.30 @ 100V
G9A9	0.25 @ 100V
G10D1	0.18 @ 100V
G11C2	0.14 @ 100V
G12D3	0.10 @ 90V
A7C4	0.21 @ 100V
A8C5	0.23 @ 100V
A9C6	0.18 @ 100V
A10C7	0.10 @ 90V
A11C8	0.10 @ 80V
A12C9	0.10 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.13 @ 100V
E2B2-E3A3	0.15 @ 100V
E3A3-E4B4	0.15 @ 100V
E4B4-E5A5	0.20 @ 100V
E5A5-E6B6	0.16 @ 100V
E6B6-E7A7	0.14 @ 100V
E7A7-E8B8	0.14 @ 100V
E8B8-E9A9	0.15 @ 100V
E9A9-E10D1	0.18 @ 100V
E10D1-E11C2	0.16 @ 100V
E11C2-E12D3	0.13 @ 100V
F7C4-F8C5	0.32 @ 100V
F8C5-F9C6	0.43 @ 100V
F9C6-F10C7	0.50 @ 100V
F10C7-F11C8	0.32 @ 100V
F11C8-F12C9	0.35 @ 100V
G1A1-G2B2	0.19 @ 100V
G2B2-G3A3	0.22 @ 100V
G3A3-G4B4	0.16 @ 100V
G4B4-G5A5	0.19 @ 100V
G5A5-G6B6	0.23 @ 100V
G6B6-G7A7	0.17 @ 100V
G7A7-G8B8	0.17 @ 100V
G8B8-G9A9	0.21 @ 100V
G9A9-G10D1	0.17 @ 100V
G10D1-G11C2	0.12 @ 100V
G11C2-G12D3	0.10 @ 100V
A7C4-A8C5	0.16 @ 100V
A8C5-A9C6	0.21 @ 100V
A9C6-A10C7	0.16 @ 100V
A10C7-A11C8	0.10 @ 90V
A11C8-A12C9	0.10 @ 100V

INSULATION RESISTANCE - LOCA TEST #1

Date: 1/2/9

R.C.

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.28 @ 100V
E2B2	.39 @ 100V
E3A3	.37 @ 100V
E4B4	.58 @ 100V
E5A5	.55 @ 100V
E6B6	.43 @ 100V
E7A7	.5 @ 100V
E8B8	.43 @ 100V
E9A9	.45 @ 100V
E10D1	.38 @ 100V
E11C2	.3 @ 100V
E12D3	.15 @ 100V
F7C4	.5 @ 100V
F8C5	.2 @ 100V
F9C6	.75 @ 100V
F10C7	.15 @ 100V
F11C8	.7 @ 100V
F12C9	.1 @ 50V
G1A1	.22 @ 100V
G2B2	.5 @ 100V
G3A3	.48 @ 100V
G4B4	.45 @ 100V
G5A5	.58 @ 100V
G6B6	.45 @ 100V
G7A7	.6 @ 100V
G8B8	.45 @ 100V
G9A9	.55 @ 100V
G10D1	.3 @ 100V
G11C2	.32 @ 100V
G12B D3	.13 @ 100V
A7C4	.3 @ 100V
A8C5	.1 @ 100V
A9C6	.5 @ 100V
A10C7	.1 @ 100V
A11C8	.35 @ 100V
A12C9	.1 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.25 @ 100V
E2B2-E3A3	.25 @ 100V
E3A3-E4B4	.26 @ 100V
E4B4-E5A5	.35 @ 100V
E5A5-E6B6	.3 @ 100V
E6B6-E7A7	.26 @ 100V
E7A7-E8B8	.23 @ 100V
E8B8-E9A9	.24 @ 100V
E9A9-E10D1	.3 @ 100V
E10D1-E11C2	.3 @ 100V
E11C2-E12B D3	.22 @ 100V
F7C4-F8C5	.15 @ 100V
F8C5-F9C6	.55 @ 100V
F9C6-F10C7	.55 @ 100V
F10C7-F11C8	.50 @ 100V
F11C8-F12C9	.50 @ 100V
G1A1-G2B2	.4 @ 100V
G2B2-G3A3	.5 @ 100V
G3A3-G4B4	.3 @ 100V
G4B4-G5A5	.33 @ 100V
G5A5-G6B6	.5 @ 100V
G6B6-G7A7	.32 @ 100V
G7A7-G8B8	.53 @ 100V
G8B8-G9A9	.43 @ 100V
G9A9-G10D1	.3 @ 100V
G10D1-G11C2	.27 @ 100V
G11C2-G12D3	.23 @ 100V
A7C4-A8C5	.22 @ 100V
A8C5-A9C6	.22 @ 100V
A9C6-A10C7	.23 @ 100V
A10C7-A11C8	.22 @ 100V
A11C8-A12C9	.22 @ 100V

DATA SHEET D

Sheet 11 of 21

INSULATION RESISTANCE - LOCA TEST #1

RC

Date: 4:30 P.M.
1/3/79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.20 @ 100V
E2B2	0.25 @ 100V
E3A3	0.30 @ 100V
E4B4	0.39 @ 100V
E5A5	0.40 @ 100V
E6B6	0.38 @ 100V
E7A7	0.34 @ 100V
E8B8	0.38 @ 100V
E9A9	0.38 @ 100V
E10D1	0.38 @ 100V
E11C2	0.23 @ 100V
E12D3	0.15 @ 100V
F7C4	0.60 @ 100V
F8C5	0.18 @ 100V
F9C6	0.62 @ 100V
F10C7	0.12 @ 100V
F11C8	0.70 @ 100V
F12C9	0.10 @ 50V
G1A1	0.18 @ 100V
G2B2	0.44 @ 100V
G3A3	0.55 @ 100V
G4B4	0.35 @ 100V
G5A5	0.51 @ 100V
G6B6	0.40 @ 100V
G7A7	0.51 @ 100V
G8B8	0.40 @ 100V
G9A9	0.50 @ 100V
G10D1	0.27 @ 100V
G11C2	0.24 @ 100V
G12B3 D3	0.11 @ 100V
A7C4	0.50 @ 100V
A8C5	0.10 @ 100V
A9C6	0.60 @ 100V
A10C7	0.10 @ 100V
A11C8	0.50 @ 100V
A12C9	0.12 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.20 @ 100V
E2B2-E3A3	0.21 @ 100V
E3A3-E4B4	0.28 @ 100V
E4B4-E5A5	0.33 @ 100V
E5A5-E6B6	0.28 @ 100V
E6B6-E7A7	0.21 @ 100V
E7A7-E8B8	0.21 @ 100V
E8B8-E9A9	0.22 @ 100V
E9A9-E10D1	0.27 @ 100V
E10D1-E11C2	0.27 @ 100V
E11C2-E12B3 D3	0.21 @ 100V
F7C4-F8C5	0.80 @ 100V
F8C5-F9C6	0.80 @ 100V
F9C6-F10C7	0.80 @ 100V
F10C7-F11C8	0.80 @ 100V
F11C8-F12C9	0.80 @ 100V
G1A1-G2B2	0.40 @ 100V
G2B2-G3A3	0.43 @ 100V
G3A3-G4B4	0.33 @ 100V
G4B4-G5A5	0.34 @ 100V
G5A5-G6B6	0.44 @ 100V
G6B6-G7A7	0.30 @ 100V
G7A7-G8B8	0.33 @ 100V
G8B8-G9A9	0.38 @ 100V
G9A9-G10D1	0.31 @ 100V
G10D1-G11C2	0.29 @ 100V
G11C2-G12D3	0.20 @ 100V
A7C4-A8C5	0.60 @ 100V
A8C5-A9C6	0.90 @ 100V
A9C6-A10C7	1.0 @ 100V
A10C7-A11C8	0.5 @ 100V
A11C8-A12C9	0.7 @ 100V

DATA SHEET D

Sheet 12 of 21

INSULATION RESISTANCE - LOCA TEST #1 *M.R.*

Date: 1/14/79

8:30 AM

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.17 @ 100V
E2B2	.25 @ 100V
E3A3	.27 @ 100V
E4B4	.42 @ 100V
E5A5	.49 @ 100V
E6B6	.40 @ 100V
E7A7	.36 @ 100V
E8B8	.40 @ 100V
E9A9	.37 @ 100V
E10D1	.37 @ 100V
E11C2	.23 @ 100V
E12D3	.18 @ 100V
F7C4	.35 @ 100V
F8C5	.25 @ 100V
F9C6	.5 @ 100V
F10C7	.14 @ 100V
F11C8	.35 @ 100V
F12C9	.1 @ 50V
G1A1	.18 @ 100V
G2B2	.50 @ 100V
G3A3	.45 @ 100V
G4B4	.50 @ 100V
G5A5	.60 @ 100V
G6B6	.50 @ 100V
G7A7	.60 @ 100V
G8B8	.53 @ 100V
G9A9	.60 @ 100V
G10D1	.35 @ 100V
G11C2	.30 @ 100V
G12D3	.16 @ 100V
A7C4	.4 @ 100V
A8C5	.1 @ 100V
A9C6	.45 @ 100V
A10C7	.1 @ 100V
A11C8	.45 @ 100V
A12C9	.1 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.19 @ 100V
E2B2-E3A3	.27 @ 100V
E3A3-E4B4	.25 @ 100V
E4B4-E5A5	.27 @ 100V
E5A5-E6B6	.23 @ 100V
E6B6-E7A7	.20 @ 100V
E7A7-E8B8	.20 @ 100V
E8B8-E9A9	.20 @ 100V
E9A9-E10D1	.53 @ 100V
E10D1-E11C2	.49 @ 100V
E11C2-E12D3	.19 @ 100V
F7C4-F8C5	.5 @ 100V
F8C5-F9C6	.5 @ 100V
F9C6-F10C7	.5 @ 100V
F10C7-F11C8	.45 @ 100V
F11C8-F12C9	.35 @ 100V
G1A1-G2B2	.35 @ 100V
G2B2-G3A3	.35 @ 100V
G3A3-G4B4	.24 @ 100V
G4B4-G5A5	.33 @ 100V
G5A5-G6B6	.35 @ 100V
G6B6-G7A7	.32 @ 100V
G7A7-G8B8	.25 @ 100V
G8B8-G9A9	.26 @ 100V
G9A9-G10D1	.35 @ 100V
G10D1-G11C2	.19 @ 100V
G11C2-G12D3	.20 @ 100V
A7C4-A8C5	.18 @ 100V
A8C5-A9C6	.28 @ 100V
A9C6-A10C7	.3 @ 100V
A10C7-A11C8	.28 @ 100V
A11C8-A12C9	.22 @ 100V

INSULATION RESISTANCE - LOCA TEST #1

Date: 1/14/79

R.C.

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.2 @ 100V
E2B2	.28 @ 100V
E3A3	.3 @ 100V
E4B4	.5 @ 100V
E5A5	.5 @ 100V
E6B6	.51 @ 100V
E7A7	.48 @ 100V
E8B8	.52 @ 100V
E9A9	.40 @ 100V
E10D1	.48 @ 100V
E11C2	.23 @ 100V
E12D3	.27 @ 100V
F7C4	.1 @ 100V
F8C5	.23 @ 100V
F9C6	.6 @ 100V
F10C7	.18 @ 100V
F11C8	.6 @ 100V
F12C9	.1 @ 50V
G1A1	.20 @ 100V
G2B2	.50 @ 100V
G3A3	.53 @ 100V
G4B4	.50 @ 100V
G5A5	.70 @ 100V
G6B6	.50 @ 100V
G7A7	.70 @ 100V
G8B8	.50 @ 100V
G9A9	.70 @ 100V
G10D1	.48 @ 100V
G11C2	.50 @ 100V
G12D3	.22 @ 100V
A7C4	.45 @ 100V
A8C5	.1 @ 100V
A9C6	.45 @ 100V
A10C7	.1 @ 100V
A11C8	.45 @ 100V
A12C9	.1 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.14 @ 100V
E2B2-E3A3	.13 @ 100V
E3A3-E4B4	.21 @ 100V
E4B4-E5A5	.22 @ 100V
E5A5-E6B6	.22 @ 100V
E6B6-E7A7	.21 @ 100V
E7A7-E8B8	.16 @ 100V
E8B8-E9A9	.16 @ 100V
E9A9-E10D1	.16 @ 100V
E10D1-E11C2	.22 @ 100V
E11C2-E12D3	.18 @ 100V
F7C4-F8C5	.6 @ 100V
F8C5-F9C6	.62 @ 100V
F9C6-F10C7	.6 @ 100V
F10C7-F11C8	.6 @ 100V
F11C8-F12C9	.6 @ 100V
G1A1-G2B2	.35 @ 100V
G2B2-G3A3	.35 @ 100V
G3A3-G4B4	.33 @ 100V
G4B4-G5A5	.33 @ 100V
G5A5-G6B6	.35 @ 100V
G6B6-G7A7	.33 @ 100V
G7A7-G8B8	.33 @ 100V
G8B8-G9A9	.34 @ 100V
G9A9-G10D1	.33 @ 100V
G10D1-G11C2	.22 @ 100V
G11C2-G12D3	.22 @ 100V
A7C4-A8C5	.35 @ 100V
A8C5-A9C6	.35 @ 100V
A9C6-A10C7	.4 @ 100V
A10C7-A11C8	.42 @ 100V
A11C8-A12C9	.42 @ 100V

DATA SHEET D

Sheet 14 of 21

@100V

8:00 AM

INSULATION RESISTANCE - LOCA TEST #1

Date: 1/15/80

RC

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.73
E2B2	.30
E3A3	.30
E4B4	.35
E5A5	.40
E6B6	.38
E7A7	.37
E8B8	.38
E9A9	.22
E10D1	.37
E11C2	.21
E12D3	.18
F7C4	.53
F8C5	.31
F9C6	.60
F10C7	.30
F11C8	.55
F12C9	.10
G1A1	.16
G2B2	.50
G3A3	.43
G4B4	.40
G5A5	.65
G6B6	.53
G7A7	.53
G8B8	.53
G9A9	.53
G10D1	.43
G11C2	.25
G12D3	.19
A7C4	.50
A8C5	.11
A9C6	.55
A10C7	.10
A11C8	.50
A12C9	.10 @ 50V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.20
E2B2-E3A3	.21
E3A3-E4B4	.28
E4B4-E5A5	.35
E5A5-E6B6	.32
E6B6-E7A7	.22
E7A7-E8B8	.21
E8B8-E9A9	.22
E9A9-E10D1	.22
E10D1-E11C2	.22
E11C2-E12D3	.22
F7C4-F8C5	.60
F8C5-F9C6	.65
F9C6-F10C7	.65
F10C7-F11C8	.60
F11C8-F12C9	.60
G1A1-G2B2	.45
G2B2-G3A3	.45
G3A3-G4B4	.30
G4B4-G5A5	.45
G5A5-G6B6	.50
G6B6-G7A7	.40
G7A7-G8B8	.38
G8B8-G9A9	.40
G9A9-G10D1	.40
G10D1-G11C2	.32
G11C2-G12D3	.22
A7C4-A8C5	.50
A8C5-A9C6	.50
A9C6-A10C7	.50
A10C7-A11C8	.22
A11C8-A12C9	.22

INSULATION RESISTANCE - LOCA TEST #1

Date: 1/15/80

R.C

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.15
E2B2	.34
E3A3	.36
E4B4	.50
E5A5	.50
E6B6	.48
E7A7	.48
E8B8	.48
E9A9	.40
E10D1	.47
E11C2	.25
E12D3	.25
F7C4	.80
F8C5	.38
F9C6	.30
F10C7	.26
F11C8	.55
F12C9	.10
G1A1	.22
G2B2	.72
G3A3	.80
G4B4	.50
G5A5	.72
G6B6	.60
G7A7	.70
G8B8	.68
G9A9	.70
G10D1	.47
G11C2	.40
G12D3	.22
A7C4	.55
A8C5	.11
A9C6	.60
A10C7	.10
A11C8	.52
A12C9	.10

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.24
E2B2-E3A3	.26
E3A3-E4B4	.34
E4B4-E5A5	.40
E5A5-E6B6	.37
E6B6-E7A7	.26
E7A7-E8B8	.26
E8B8-E9A9	.26
E9A9-E10D1	.32
E10D1-E11C2	.33
E11C2-E12D3	.25
F7C4-F8C5	.80
F8C5-F9C6	.80
F9C6-F10C7	.75
F10C7-F11C8	.80
F11C8-F12C9	.80
G1A1-G2B2	.60
G2B2-G3A3	.62
G3A3-G4B4	.50
G4B4-G5A5	.50
G5A5-G6B6	.55
G6B6-G7A7	.50
G7A7-G8B8	.48
G8B8-G9A9	.50
G9A9-G10D1	.50
G10D1-G11C2	.45
G11C2-G12D3	.30
A7C4-A8C5	.75
A8C5-A9C6	.80
A9C6-A10C7	.60
A10C7-A11C8	.40
A11C8-A12C9	.40

INSULATION RESISTANCE - LOCA TEST #1

M.P.

Date: 1/16/79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	.13
E2B2	.30
E3A3	.30
E4B4	.40
E5A5	.40
E6B6	.40
E7A7	.40
E8B8	.40
E9A9	.40
E10D1	.40
E11C2	.23
E12D3	.19
F7C4	.20
F8C5	.38
F9C6	.75
F10C7	.24
F11C8	.70
F12C9	.15
G1A1	.22
G2B2	.60
G3A3	.50
G4B4	.55
G5A5	.55
G6B6	.55
G7A7	.50
G8B8	.55
G9A9	.50
G10D1	.45
G11C2	.35
G12B3	.17
A7C4	.22
A8C5	.24
A9C6	1.0
A10C7	.14
A11C8	.55
A12C9	.12

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	.23
E2B2-E3A3	.23
E3A3-E4B4	.24
E4B4-E5A5	.35
E5A5-E6B6	.35
E6B6-E7A7	.33
E7A7-E8B8	.33
E8B8-E9A9	.33
E9A9-E10D1	.33
E10D1-E11C2	.33
E11C2-E12B3	.33
F7C4-F8C5	1.2
F8C5-F9C6	1.3
F9C6-F10C7	1.2
F10C7-F11C8	.9
F11C8-F12C9	.9
G1A1-G2B2	.45
G2B2-G3A3	.70
G3A3-G4B4	.60
G4B4-G5A5	.65
G5A5-G6B6	.70
G6B6-G7A7	.65
G7A7-G8B8	.65
G8B8-G9A9	.65
G9A9-G10D1	.65
G10D1-G11C2	.60
G11C2-G12D3	.40
A7C4-A8C5	.25
A8C5-A9C6	1.4
A9C6-A10C7	1.4
A10C7-A11C8	.58
A11C8-A12C9	.60

DATA SHEET D

Sheet 17 of 21

@100VDC

unless noted 4:30 P.M.
J.D. Date: 1-16-79

INSULATION RESISTANCE - LOCA TEST #1

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.10 @80V
E2B2	0.14
E3A3	0.14
E4B4	0.21
E5A5	0.23
E6B6	0.21
E7A7	0.19
E8B8	0.21
E9A9	0.19
E10D1	0.17
E11C2	0.11
E12D3	0.13
F7C4	0.42
F8C5	0.23
F9C6	0.54
F10C7	0.15
F11C8	0.35
F12C9	0.10 @80V
G1A1	0.10 @90V
G2B2	0.33
G3A3	0.30
G4B4	0.25
G5A5	0.35
G6B6	0.27
G7A7	0.32
G8B8	0.28
C9A9	0.32
G10D1	0.23
G11C2	0.17
G12D3	0.11
A7C4	0.24
A8C5	0.13
A9C6	0.62
A10C7	0.10 @80V
A11C8	0.38
A12C9	0.10 @80V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.12
E2B2-E3A3	0.19
E3A3-E4B4	0.17
E4B4-E5A5	0.20
E5A5-E6B6	0.16
E6B6-E7A7	0.10
E7A7-E8B8	0.15
E8B8-E9A9	0.15
E9A9-E10D1	0.15
E10D1-E11C2	0.24
E11C2-E12D3	0.14
F7C4-F8C5	0.45
F8C5-F9C6	0.60
F9C6-F10C7	0.60
F10C7-F11C8	0.35
F11C8-F12C9	0.35
G1A1-G2B2	0.28
G2B2-G3A3	0.33
G3A3-G4B4	0.23
G4B4-G5A5	0.23
G5A5-G6B6	0.26
G6B6-G7A7	0.24
G7A7-G8B8	0.24
G8B8-G9A9	0.24
G9A9-G10D1	0.24
G10D1-G11C2	0.15
G11C2-G12D3	0.15
A7C4-A8C5	0.18
A8C5-A9C6	0.50
A9C6-A10C7	0.50
A10C7-A11C8	0.35
A11C8-A12C9	0.35

DATA SHEET D

Sheet 18 of 21

INSULATION RESISTANCE - LOCA TEST #1

@100V unless noted
J.D. Date: 8:30 A.M.
1-17-79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.10
E2B2	0.19
E3A3	0.17
E4B4	0.30
E5A5	0.23
E6B6	0.27
E7A7	0.26
E8B8	0.27
E9A9	0.23
E10D1	0.25
E11C2	0.13
E12D3	0.16
F7C4	0.48
F8C5	0.25
F9C6	0.53
F10C7	0.16
F11C8	0.48
F12C9	0.10
G1A1	0.10
G2B2	0.37
G3A3	0.30
G4B4	0.37
G5A5	0.42
G6B6	0.37
G7A7	0.42
G8B8	0.37
G9A9	0.42
G10D1	0.35
G11C2	0.24
G12B3/D3	0.14
A7C4	0.30
A8C5	0.13
A9C6	0.60
A10C7	0.10
A11C8	0.50
A12C9	0.10 @ 80V

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.16
E2B2-E3A3	0.23
E3A3-E4B4	0.23
E4B4-E5A5	0.25
E5A5-E6B6	0.23
E6B6-E7A7	0.17
E7A7-E8B8	0.17
E8B8-E9A9	0.17
E9A9-E10D1	0.23
E10D1-E11C2	0.23
E11C2-E12B3/D3	0.17
F7C4-F8C5	0.66
F8C5-F9C6	0.70
F9C6-F10C7	0.70
F10C7-F11C8	0.50
F11C8-F12C9	0.50
G1A1-G2B2	0.32
G2B2-G3A3	0.48
G3A3-G4B4	0.30
G4B4-G5A5	0.35
G5A5-G6B6	0.35
G6B6-G7A7	0.33
G7A7-G8B8	0.33
G8B8-G9A9	0.33
G9A9-G10D1	0.33
G10D1-G11C2	0.24
G11C2-G12D3	0.24
A7C4-A8C5	0.25
A8C5-A9C6	0.80
A9C6-A10C7	0.80
A10C7-A11C8	0.60
A11C8-A12C9	0.60

DATA SHEET D

Sheet 19 of 21 @ 100V
unless noted
J.D.

INSULATION RESISTANCE - LOCA TEST #1

Date: 4:45 P.M.
1-17-79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.10 @ 80V
E2B2	0.13
E3A3	0.11
E4B4	0.16
E5A5	0.17
E6B6	0.13
E7A7	0.16
E8B8	0.14
E9A9	0.16
E10D1	0.13
E11C2	0.10
E12D3	0.10
F7C4	0.35
F8C5	0.23
F9C6	0.43
F10C7	0.15
F11C8	0.30
F12C9	0.10
G1A1	0.10 @ 90V
G2B2	0.26
G3A3	0.30
G4B4	0.25
G5A5	0.30
G6B6	0.25
G7A7	0.30
G8B8	0.20
G9A9	0.13
G10D1	0.11
G11C2	0.16
G12B3	0.19
A7C4	0.13
A8C5	0.11
A9C6	0.50
A10C7	0.10
A11C8	0.40
A12C9	0.10 @ 90

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.12
E2B2-E3A3	0.17
E3A3-E4B4	0.13
E4B4-E5A5	0.16
E5A5-E6B6	0.15
E6B6-E7A7	0.10 @ 90V
E7A7-E8B8	0.14
E8B8-E9A9	0.14
E9A9-E10D1	0.10
E10D1-E11C2	0.10 @ 90V
E11C2-E12B3	0.10
F7C4-F8C5	0.40
F8C5-F9C6	0.50
F9C6-F10C7	0.50
F10C7-F11C8	0.35
F11C8-F12C9	0.35
G1A1-G2B2	0.23
G2B2-G3A3	0.35
G3A3-G4B4	0.22
G4B4-G5A5	0.23
G5A5-G6B6	0.28
G6B6-G7A7	0.24
G7A7-G8B8	0.24
G8B8-G9A9	0.24
G9A9-G10D1	0.19
G10D1-G11C2	0.19
G11C2-G12D3	0.16
A7C4-A8C5	0.15
A8C5-A9C6	0.50
A9C6-A10C7	0.43
A10C7-A11C8	0.42
A11C8-A12C9	0.42

DATA SHEET D

Sheet 20 of 21 @ 100V

INSULATION RESISTANCE - LOCA TEST #1

R.C.

8:30A.M.
Date: 1/18/79

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	0.10
E2B2	0.33
E3A3	0.18
E4B4	0.29
E5A5	0.25
E6B6	0.28
E7A7	0.24
E8B8	0.30
E9A9	0.21
E10D1	0.24
E11C2	0.12
E12D3	0.16
F7C4	0.35
F8C5	0.16
F9C6	0.40
F10C7	0.16
F11C8	0.40
F12C9	0.11
G1A1	0.10
G2B2	0.42
G3A3	0.35
G4B4	0.29
G5A5	0.35
G6B6	0.38
G7A7	0.35
G8B8	0.38
G9A9	0.35
G10D1	0.33
G11C2	0.21
G12B3	0.32
A7C4	0.20
A8C5	0.13
A9C6	0.50
A10C7	0.13
A11C8	0.50
A12C9	0.10

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	0.12
E2B2-E3A3	0.19
E3A3-E4B4	0.18
E4B4-E5A5	0.20
E5A5-E6B6	0.19
E6B6-E7A7	0.11
E7A7-E8B8	0.11
E8B8-E9A9	0.18
E9A9-E10D1	0.14
E10D1-E11C2	0.24
E11C2-E12B3	0.11
F7C4-F8C5	0.47
F8C5-F9C6	0.49
F9C6-F10C7	0.50
F10C7-F11C8	0.47
F11C8-F12C9	0.47
G1A1-G2B2	0.29
G2B2-G3A3	0.32
G3A3-G4B4	0.21
G4B4-G5A5	0.22
G5A5-G6B6	0.30
G6B6-G7A7	0.24
G7A7-G8B8	0.24
G8B8-G9A9	0.25
G9A9-G10D1	0.24
G10D1-G11C2	0.22
G11C2-G12D3	0.19
A7C4-A8C5	0.22
A8C5-A9C6	0.45
A9C6-A10C7	0.48
A10C7-A11C8	0.48
A11C8-A12C9	0.50

DATA SHEET D

Sheet 21 of 21

POST INSULATION RESISTANCE - LOCA TEST #1



Date: 1/19/77

7:30 A.M.

TO GROUND FROM POINT	RESISTANCE IN MEGOHMS
E1A1	1.2
E2B2	3.0
E3A3	2.5
E4B4	3.5
E5A5	3.6
E6B6	3.2
E7A7	2.4
E8B8	2.8
E9A9	2.3
E10D1	2.4
E11C2	1.3
E12D3	1.4
F7C4	19
F8C5	2.2
F9C6	1.8
F10C7	1.4
F11C8	11
F12C9	1.6
G1A1	7.3
G2B2	50
G3A3	17
G4B4	17
G5A5	20
G6B6	22
G7A7	19
G8B8	28
G9A9	21
G10D1	16
G11C2	11
G12B8D3	9
A7C4	25
A8C5	3.0
A9C6	60
A10C7	2.2
A11C8	6.2
A12C9	1.3

FROM POINT TO POINT	RESISTANCE IN MEGOHMS
E1A1-E2B2	2.3
E2B2-E3A3	2.8
E3A3-E4B4	2.9
E4B4-E5A5	3.5
E5A5-E6B6	2.8
E6B6-E7A7	2.1
E7A7-E8B8	1.8
E8B8-E9A9	2.1
E9A9-E10D1	2.1
E10D1-E11C2	2.0
E11C2-E12B8D3	3.0
F7C4-F8C5	18.0
F8C5-F9C6	19.0
F9C6-F10C7	18.0
F10C7-F11C8	12.0
F11C8-F12C9	12.0
G1A1-G2B2	58
G2B2-G3A3	65
G3A3-G4B4	23
G4B4-G5A5	24
G5A5-G6B6	32
G6B6-G7A7	26
G7A7-G8B8	35
G8B8-G9A9	40
G9A9-G10D1	26
G10D1-G11C2	17
G11C2-G12D3	13
A7C4-A8C5	28
A8C5-A9C6	70
A9C6-A10C7	80
A10C7-A11C8	70
A11C8-A12C9	70

DATA SHEET E

ENVIRONMENTAL CONDITIONS - SLB TEST #2

IPS-400

Date 1-22-79

Sheet 1 of 3

START TIME: 1:32 P.M.

Chamber			Spray		Enclosure Temperatures				Lapsed Time	Initials
Temp. in °F	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface		Terminal Block			
					17 in °F	13	14 in °F	22		
					Left	Right	Left	Right		
125	0	0	9.2	0					0	J.D. 81
240	30	0		0					10S	MR
280	53	0		0					20S	MR
300	72	0		0					30S	MR
318	90	0		0					45S	MR
322	95	0		0					1M	MR
322	98	0		0					2M	MR
324	98	0		0					3M	MR
330	100	0		0					4M	MR
338	110	0		0					5M	MR
345	120	0		0					6M	MR
353	135	0		0					7M	MR
353	132	0		0					8M	MR
353	130	0		0					9M	MR
353	130	0		0					10M	MR
351	128	0		1.0					11M	MR
345	115	0		1.0					12M	MR
340	100	0		1.0					13M	MR
330	80	0		1.0					14M	MR
280	35	0		1.0					15M	MR
250	15	3"		1.0					16M	MR
242	10	4"		1.0					17M	MR

DATA SHEET E

IPS-400

ENVIRONMENTAL CONDITIONS - SLB TEST #2

Date 1/22/79

Sheet 2 of 3

Temp. in °F	Chamber		Spray			Enclosure Temperatures				Lapsed Time	Initials
	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface		Terminal Block				
					Left	Right	Left	Right			
238	8	4"		1.0	17	13	14	22	18 M	MA	
238	10	3"		1.0					19 M	MA	
240	10	1"		1.0					20 M	MA	
240	10	0		1.0	264	255	265	278	30 M	MA	
244	12	0		1.0	249	246	256	258	1 H	MA	
245	12	0		1.0	245	245	249	260	2 H	MA	
245	12	0		1.0	245	245	249	260	3 H	MA	
245	12	0		1.0	243	242	243	256	4 H	MA	
245	12	0		1.0	246	248	248	258	5 H	MA	
245	12	0		1.0	245	246	245	259	6 H	MA	
245	12	0		1.0	245	255	245	258	7 H	MA	
245	12	0		1.0	242	263	243	254	8 H	MA	
244	11	0		1.0	244	260	242	254	9 H	MA	
244	11	0		1.0	243	258	241	255	10 H	MA	
242	11	0	9.5-1	1.0	243	260	241	255	11 H	MA	
242	11	0		1.0	244	259	244	255	12 H	MA	
242	11	0		1.0	245	261	245	256	13 H	MA	
242	11	0		1.0	244	248	244	257	14 H	MA	
242	11	0		1.0	243	251	243	257	15	MA	
242	11	0		1.0	243	255	243	254	16	MA	
242	11	0		1.0	243	253	243	255	17	MA	
242	11	0		1.0	244	264	244	254	18	MA	

DATA SHEET F

ELECTRICAL CONDITIONS - SLB TEST #2

IPS-400

Date 1-22-79

Sheet 1 of 2 START TIME: 1:32 P.M.

DC Voltage in Volts	DC Line Current L in ma R	AC Line Currents in Amps.												Lapsed Time	Initials
		H1A1	H3A3	H5A5	H7A7	H9A9	H11C2	C1A1	C3A3	C5A5	C7A7	C9A9	C11C2		
140	50-50	3.4	3.4	3.2	3.4	3.3	3.3	3.3	3.3	3.2	3.2	2.6	3.1	0	MR
75	100-40	3.2	3.2	3.0	3.4	3.2	3.2	3.2	3.2	3.1	3.0	2.6	3.0	5M	MR
140	90-40	3.2	3.2	3.1	3.4	3.3	3.2	3.2	3.2	3.2	3.2	2.6	3.0	8M	MR
140	50-50	3.2	3.3	3.0	3.3	3.2	3.2	3.2	3.2	3.2	3.2	2.5	3.0	15M	MR
140	50-50	3.3	3.4	3.1	3.4	3.3	3.3	3.3	3.3	3.4	3.2	3.2	2.4	30M	MR
170	50-50	3.3	3.4	3.1	3.4	3.3	3.3	3.3	3.3	3.2	3.2	2.7	3.1	1H	MR
140	50-50	3.2	3.4	2.8	3.4	3.3	3.3	3.4	3.2	3.2	3.4	3.4	3.4	2H	MR
140	50-50	3.4	3.5	3.2	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	3H	R.C.
140	50-50	3.4	3.4	3.2	3.4	3.4	3.4	3.3	3.4	3.3	3.3	3.2	3.2	4H	JD
140	50-50	3.4	3.5	3.2	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	5H	JD
140	50-50	3.4	3.5	3.2	3.5	3.4	3.4	3.4	3.4	3.4	3.3	3.2	3.2	6H	JD
140	50-50	3.4	3.4	2.2	2.5	3.4	3.4	3.4	3.4	3.3	3.3	3.2	3.2	7H	JD
140	50-50	3.4	3.4	2.3	2.6	3.4	3.4	3.4	3.4	2.3	2.3	3.2	3.2	8H	JD
140	50-50	3.4	3.4	3.2	3.4	3.4	3.4	3.4	3.4	2.3	2.3	3.2	3.2	9H	JD
140	50-50	3.4	3.4	3.2	3.4	3.4	3.4	3.4	3.4	3.2	3.3	3.2	3.2	10H	JD
140	50-50	3.3	3.4	3.2	3.4	3.4	3.3	3.3	3.4	3.3	3.2	3.1	3.1	11	JD
140	50-50	3.3	3.4	3.2	3.5	3.4	3.4	3.3	3.4	3.3	3.3	3.2	3.1	12	DAS
140	50-50	3.4	3.4	3.2	3.5	3.4	3.4	3.3	3.4	3.3	3.3	3.2	3.2	13	DAS
140	50-50	3.4	3.4	3.2	3.5	3.3	3.4	3.4	3.4	3.3	3.3	3.2	3.2	14	DAS
140	50-50	3.4	3.4	3.2	3.4	3.4	3.3	3.3	3.4	3.3	3.3	3.2	3.1	15	DAS
140	50-50	3.5	3.4	3.2	3.5	3.4	3.4	3.3	3.4	3.3	3.3	3.2	3.1	16	DAS
140	50-50	3.3	3.4	3.2	3.4	3.3	3.3	3.3	3.4	3.2	3.2	3.2	3.1	17	DAS
140	50-50	3.4	3.4	3.2	3.5	3.3	3.4	3.3	3.4	3.3	3.3	3.2	3.1	18	DAS

DATA SHEET F

ELECTRICAL CONDITIONS - SLB TEST #2

Sheet 2 of 2

IPS-400

Date 1/23/79

DC Voltage in Volts	DC Line Current in ma R	AC Line Currents in Amps.											Lapsed Time	Initials		
		H1A1	H3A3	H5A5	H7A7	H9A9	H11C2	C1A1	C3A3	C5A5	C7A7	C9A9			C11C2	
140	50-50	3.4	3.3	3.2	3.4	3.4	3.4	3.2	3.4	3.3	3.2	3.2	3.1	3.1	19	MR
140	50-50	3.4	3.4	3.2	3.4	3.3	3.4	3.4	3.4	3.3	3.2	3.1	3.1	3.1	20	MR
140	50-50	3.4	3.4	3.0	3.4	3.3	3.4	3.3	3.4	3.3	3.2	3.1	3.1	3.1	21	MR
140	50-50	3.2	3.1	2.9	3.2	3.2	3.2	3.2	3.2	3.1	3.1	3.0	2.9	2.9	22	MR
140	50-50	3.4	3.4	3.1	3.4	3.3	3.4	3.4	3.4	3.3	3.2	3.2	3.1	3.1	23	RC
140	50-50	3.4	3.4	3.2	3.4	3.3	3.4	3.3	3.4	3.2	3.2	3.2	3.1	3.1	24	RC
140	50-50	3.4	3.2	3.2	3.3	3.2	3.4	3.4	3.4	3.3	3.3	3.3	3.2	3.2	25	RC

DATA SHEET G

ELECTRICAL CONDITIONS - SLB TEST #2

IPS-400

Sheet 1 of 2 START TIME: 1:32 P.M. Date 1-22-79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma										Lapsed Time	Initials				
	H1B1	H3B3	H5B5	H7B7	H9B9	H11D2	C1B1	C3B3	C5B5	C7B7			C9B9	C11D2		
140	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Q.D.
140	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	Q.D.
141	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	Q.D.
141	0	0	0	0	0	0	0	1.2	0	0	0	0	0	0	0	Q.D.
141	0	0	0	0	0	0	0	2.7	0	0	0	0	0	0	0	Q.D.
141	1.2	1.6	1.4	1.2	1.2	2.4	0	2.4	0	0	0	1.0	0	0	0	Q.D.
140	2.2	2.4	2.3	2.0	2.0	2.8	<1.0	2.4	1.2	<1.0	<1.0	1.2	<1.0	1.2	2H	M.R.
140	2.9	3.0	3.0	2.5	2.6	3.5	1.2	2.7	1.6	1.0	1.0	1.5	1.0	1.5	3H	M.R.
140	2.5	2.5	2.4	2.0	2.1	2.8	<1.0	2.4	1.2	<1.0	<1.0	1.2	<1.0	1.2	4H	Q.D.
140	2.4	2.4	2.3	2.0	2.0	2.6	<1.0	2.5	1.2	0	0	1.1	<1.0	1.1	5H	Q.D.
140	2.4	2.2	2.2	2.2	2.0	2.4	1.0	2.5	1.2	0	0	1.0	<1.0	1.0	6H	Q.D.
140	2.4	2.2	2.2	2.0	2.0	2.4	1.0	2.4	1.2	0	0	1.1	<1.0	1.1	7H	Q.D.
140	2.9	2.5	2.6	3.0	3.0	4.0	1.4	3.0	1.0	1.1	1.1	1.8	<1.0	1.8	8H	Q.D.
140	2.2	2.2	2.0	1.9	1.9	2.2	<1.0	2.4	1.0	0	0	<1.0	<1.0	<1.0	9H	Q.D.
140	2.3	2.2	2.0	1.9	2.0	2.2	1.0	2.3	1.2	0	0	1.0	<1.0	1.0	10H	Q.D.
140	2.3	2.1	2.1	2.0	1.9	2.2	1.1	2.3	1.2	<1.0	<1.0	1.1	<1.0	1.1	11	Q.D.
141	2.4	2.1	2.0	1.8	2.0	2.2	1.1	2.2	1.2	<1.0	<1.0	1.0	<1.0	1.0	12	Q.D.
141	2.3	2.1	2.0	1.9	1.9	2.2	1.1	2.2	1.2	<1.0	<1.0	1.0	<1.0	1.0	13	Q.D.
141	2.4	2.0	2.0	1.9	1.9	2.2	1.0	2.2	1.2	<1.0	<1.0	1.0	<1.0	1.0	14	Q.D.
141	2.3	2.1	2.0	1.9	1.9	2.2	1.1	2.3	1.2	<1.0	<1.0	1.0	<1.0	1.0	15	Q.D.
141	2.4	2.0	2.0	1.8	1.9	2.1	1.1	2.1	1.2	<1.0	<1.0	1.0	<1.0	1.0	16	Q.D.
141	2.4	2.1	2.0	1.8	1.9	2.2	1.2	2.1	1.2	<1.0	<1.0	1.0	<1.0	1.0	17	Q.D.
141	2.4	2.0	1.9	1.9	1.9	2.0	1.2	2.0	1.2	<1.0	<1.0	1.0	<1.0	1.0	18	Q.D.

DATA SHEET G

ELECTRICAL CONDITIONS - SLB TEST #2

Sheet 2 of 2

IPS-400

Date 1/23/79

AC Voltage in Volts	AC LEAKAGE CURRENTS IN ma											Lapsed Time	Initials	
	H1B1	H3B3	H5B5	H7B7	H9B9	H11D2	C1B1	C3B3	C5B5	C7B7	C9B9			C11D2
140	2.4	2.0	2.0	1.8	1.8	2.1	1.2	2.1	1.2	1.0	1.1	1.1	19	MR
140	3.7	2.2	2.1	2.0	2.0	2.3	1.4	2.3	1.4	1.0	1.1	1.1	20	MR
140	2.8	2.1	2.0	1.8	2.0	2.2	1.2	2.2	1.4	1.0	1.1	1.1	21	MR
140	2.8	2.1	2.0	1.9	1.9	2.2	1.3	2.1	1.4	1.0	1.2	1.2	22	MR
140	2.7	2.0	1.9	1.7	1.8	2.1	1.2	2.0	1.3	1.0	1.1	1.1	23	RC
140	2.8	2.0	1.9	1.9	1.8	2.0	1.2	2.0	1.3	1.0	1.1	1.1	24	RC
140	2.8	2.0	1.9	1.8	1.8	2.1	1.2	2.0	1.4	1.0	1.2	1.2	24.5	RC

Pre Test

INSULATION RESISTANCE - SLB TEST #2

Sheet 1 of 5 RC

@500V

9:30 A.M.

To Ground From Point	Resistance in Megohms
H1A1	4500
H2B2	2600
H3A3	4500
H4B4	5000
H5A5	2300
H6B6	750
H7A7	1800
H8B8	1700
H9A9	500
H10D1	700
H11C2	430
H12D3	800
I7C1	2500
I8C5	1600
I9C6	800
I10C7	500
I11C8	1400
I12C9	1000
C1A1	470
C2B2	1100
C3A3	140
C4B4	350
C5A5	500
C6B6	2500
C7A7	1700
C8B8	1500
C9A9	1500
C10D1	380
C11C2	240
C12D3	38
J7C4	500
J8C5	900
J9C6	460
J10C7	800
J11C8	350
J12C9	1000

From Point To Point	Resistance in Megohms
H1A1-H2B2	6000
H2B2-H3A3	5000
H3A3-H4B4	6000
H4B4-H5A5	6000
H5A5-H6B6	2100
H6B6-H7A7	2200
H7A7-H8B8	3000
H8B8-H9A9	2500
H9A9-H10D1	2000
H10D1-H11C2	2200
H11C2-H12D3	2000
I7C4-I8C5	4000
I8C5-I9C6	2500
I9C6-I10C7	2000
I10C7-I11C8	2000
I11C8-I12C9	2400
C1A1-C2B2	1700
C2B2-C3A3	1000
C3A3-C4B4	370
C4B4-C5A5	700
C5A5-C6B6	2500
C6B6-C7A7	3500
C7A7-C8B8	2500
C8B8-C9A9	3000
C9A9-C10D1	1700
C10D1-C11C2	500
C11C2-C12D3	220
J7C4-J8C5	1700
J8C5-J9C6	2200
J9C6-J10C7	2000
J10C7-J11C8	2000
J11C8-J12C9	1800

@ 100V EXCEPT WHERE NOTED

IPS-100

Date: 1-22-79

INSULATION RESISTANCE - SLB TEST #2

Sheet 2 of 5


A.D.

4:30 P.M.

To Ground From Point	Resistance in Megohms
H1A1	0.15
H2B2	0.26
H3A3	0.33
H4B4	0.37
H5A5	0.37
H6B6	0.37
H7A7	0.38
H8B8	0.37
H9A9	0.37
H10D1	0.37
H11C2	0.24
H12D3	0.23
I7C4	0.10 @ 300V
I8C5	0.11 @ 300V
I9C6	0.10 @ 300V
I10C7	0.10 @ 250V
I11C8	0.10 @ 250V
I12C9	0.10 @ 200V
C1A1	0.44
C2B2	0.50
C3A3	0.12
C4B4	0.60
C5A5	0.90
C6B6	1.0
C7A7	1.0
C8B8	1.0
C9A9	1.1
C10D1	1.0
C11C2	0.68
C12D3	0.40
J7C4	0.10 @ 230V
J8C5	0.10 @ 450V
J9C6	0.10 @ 150V
J10C7	0.10 @ 350V
J11C8	0.10 @ 300V
J12C9	0.10 @ 300V

From Point To Point	Resistance in Megohms
H1A1-H2B2	0.18
H2B2-H3A3	0.27
H3A3-H4B4	0.27
H4B4-H5A5	0.25
H5A5-H6B6	0.22
H6B6-H7A7	0.23
H7A7-H8B8	0.35
H8B8-H9A9	0.32
H9A9-H10D1	0.28
H10D1-H11C2	0.23
H11C2-H12D3	0.19
I7C4-I8C5	0.10 @ 300V
I8C5-I9C6	0.10 @ 320V
I9C6-I10C7	0.10 @ 200V
I10C7-I11C8	0.10 @ 200V
I11C8-I12C9	0.10 @ 250V
C1A1-C2B2	0.45
C2B2-C3A3	0.41
C3A3-C4B4	0.47
C4B4-C5A5	0.56
C5A5-C6B6	0.55
C6B6-C7A7	0.50
C7A7-C8B8	0.48
C8B8-C9A9	0.50
C9A9-C10D1	0.48
C10D1-C11C2	0.46
C11C2-C12D3	0.46
J7C4-J8C5	0.10 @ 500V
J8C5-J9C6	0.10 @ 420V
J9C6-J10C7	0.10 @ 400V
J10C7-J11C8	0.10 @ 350V
J11C8-J12C9	0.10 @ 450V

INSULATION RESISTANCE - SLB TEST #2
Sheet 3 of 5

 R. C. 8:30 AM

To Ground From Point	Resistance in Megohms @100V	
H1A1	.11	.11@100V
H2B2	.16	.10@200V
H3A3	.21	.1@250V
H4B4	.26	.1@300V
H5A5	.27	.1@400V
H6B6	.32	.1@300V
H7A7	.30	.1@350V
H8B8	.26	.1@300V
H9A9	.30	.1@350V
H10D1	.30	.1@300V
H11C2	.17	.1@200V
H12D3	.15	.1@200V
I7C4	.12	.12@100V
I8C5	.12	.12@100V
I9C6	.14	.14@100V
I10C7	.11	.11@100V
I11C8	.12	.12@100V
I12C9		.10@50V
C1A1	.18	.1@300V
C2B2	.30	.1@500V
C3A3	.12	.12@100V
C4B4	.40	.1@500V
C5A5	.55	.13@500V
C6B6	.60	.14@500V
C7A7	.65	.15@500V
C8B8	.65	.15@500V
C9A9	.60	.15@500V
C10D1	.45	.12@500V
C11C2	.36	.1@500V
C12D3	.18	.1@250V
J7C1	.10	.10@100V
J8C5	.12	.12@100V
J9C6		.10@75V
J10C7	.12	.12@100V
J11C8	.12	.12@100V
J12C9		.10@50V

From Point To Point	Resistance in Megohms @100V	
H1A1-H2B2	.12	.1@200V
H2B2-H3A3	.20	.10@250V
H3A3-H4B4	.17	.10@250V
H4B4-H5A5	.19	.10@250V
H5A5-H6B6	.18	.10@250V
H6B6-H7A7	.20	.10@300V
H7A7-H8B8	.21	.10@300V
H8B8-H9A9	.20	.10@300V
H9A9-H10D1	.20	.10@300V
H10D1-H11C2	.20	.10@300V
H11C2-H12D3	.14	.10@200V
I7C4-I8C5	.10	.10@100V
I8C5-I9C6		.11@75V
I9C6-I10C7	.11	.11@100V
I10C7-I11C8	.10	.10@100V
I11C8-I12C9	.10	.10@100V
C1A1-C2B2	.26	.10@500V
C2B2-C3A3	.30	.10@450V
C3A3-C4B4	.38	.10@500V
C4B4-C5A5	.40	.11@500V
C5A5-C6B6	.40	.13@500V
C6B6-C7A7	.40	.12@500V
C7A7-C8B8	.30	.12@500V
C8B8-C9A9	.45	.13@500V
C9A9-C10D1	.40	.13@500V
C10D1-C11C2	.35	.10@500V
C11C2-C12D3	.28	.10@300V
J7C4-J8C5	.14	.10@150V
J8C5-J9C6	.12	.12@100V
J9C6-J10C7	.13	.13@100V
J10C7-J11C8	.12	.12@100V
J11C8-J12C9	.12	.12@100V

INSULATION RESISTANCE - SLB TEST #2

Sheet 4 of 5



R.C. 1:30 P.M.

To Ground From Point	Resistance in Megohms @100V
H1A1	.10 .1 @ 50V
H2B2	.10 .10 @ 100V
H3A3	.12 .12 @ 100V
H4B4	.14 .10 @ 200V
H5A5	.17 .10 @ 200V
H6B6	.18 .10 @ 200V
H7A7	.20 .10 @ 200V
H8B8	.17 .10 @ 200V
H9A9	.19 .10 @ 200V
H10D1	.16 .10 @ 200V
H11C2	.10 .10 @ 100V
H12D3	.10 .10 @ 100V
I7C4	.11 .11 @ 100V
I8C5	.10 .10 @ 100V
I9C6	.11 .11 @ 100V
I10C7	.10 .10 @ 100V
I11C8	.12 .12 @ 100V
I12C9	- .10 @ 75V
C1A1	.10 .10 @ 100V
C2B2	.19 .10 @ 300V
C3A3	.10 .10 @ 100V
C4B4	.30 .10 @ 450V
C5A5	.35 .10 @ 500V
C6B6	.47 .12 @ 500V
C7A7	.40 .12 @ 500V
C8B8	.40 .11 @ 500V
C9A9	.45 .12 @ 500V
C10D1	.33 .11 @ 500V
C11C2	.21 .10 @ 300V
C12D3	.11 .11 @ 100V
J7C4	.10 .10 @ 100V
J8C5	.11 .11 @ 100V
J9C6	- .10 @ 75V
J10C7	.10 .10 @ 100V
J11C8	.11 .11 @ 100V
J12C9	- .10 @ 75V

From Point To Point	Resistance in Megohms @100V
H1A1-H2B2	.10 .10 @ 100V
H2B2-H3A3	.12 .10 @ 200V
H3A3-H4B4	.13 .10 @ 200V
H4B4-H5A5	.12 .12 @ 100V
H5A5-H6B6	.10 .10 @ 100V
H6B6-H7A7	.12 .10 @ 150V
H7A7-H8B8	.12 .10 @ 200V
H8B8-H9A9	.12 .10 @ 150V
H9A9-H10D1	.13 .10 @ 200V
H10D1-H11C2	.14 .10 @ 200V
H11C2-H12D3	.10 .10 @ 100V
I7C4-I8C5	.10 .10 @ 100V
I8C5-I9C6	- .10 @ 75V
I9C6-I10C7	- .10 @ 75V
I10C7-I11C8	- .10 @ 75V
I11C8-I12C9	.10 .10 @ 100V
C1A1-C2B2	.21 .10 @ 400V
C2B2-C3A3	.30 .10 @ 390V
C3A3-C4B4	.33 .10 @ 480V
C4B4-C5A5	.38 .10 @ 500V
C5A5-C6B6	.36 .10 @ 500V
C6B6-C7A7	.37 .10 @ 500V
C7A7-C8B8	.37 .10 @ 500V
C8B8-C9A9	.43 .10 @ 500V
C9A9-C10D1	.53 .10 @ 500V
C10D1-C11C2	.33 .10 @ 370V
C11C2-C12D3	.20 .10 @ 250V
J7C4-J8C5	.10 .10 @ 100V
J8C5-J9C6	.10 .10 @ 100V
J9C6-J10C7	.10 .10 @ 100V
J10C7-J11C8	.10 .10 @ 100V
J11C8-J12C9	.10 .10 @ 100V

Post INSULATION RESISTANCE - SLB TEST #2
 Sheet 5 of 5 R.C.

To Ground From Point	Resistance in Megohms
H1A1	900
H2B2	5000
H3A3	900
H4B4	2500
H5A5	4500
H6B6	5000
H7A7	2000
H8B8	1800
H9A9	4500
H10D1	5000
H11C2	5000
H12D3	2000
I7C4	200
I8C5	290
I9C6	210
I10C7	150
I11C8	240
I12C9	180
C1A1	1500
C2B2	2200
C3A3	2400
C4B4	1900
C5A5	2300
C6B6	1700
C7A7	5000
C8B8	2000
C9A9	1800
C10D1	1800
C11C2	2000
C12D3	2500
J7C4	58
J8C5	240
J9C6	80
J10C7	80
J11C8	90
J12C9	260

From Point To Point	Resistance in Megohms
H1A1-H2B2	5000
H2B2-H3A3	5000
H3A3-H4B4	2000
H4B4-H5A5	4000
H5A5-H6B6	5000
H6B6-H7A7	4500
H7A7-H8B8	2000
H8B8-H9A9	4500
H9A9-H10D1	5000
H10D1-H11C2	5000
H11C2-H12D3	5000
I7C4-I8C5	500
I8C5-I9C6	500
I9C6-I10C7	350
I10C7-I11C8	375
I11C8-I12C9	400
C1A1-C2B2	3500
C2B2-C3A3	3500
C3A3-C4B4	3000
C4B4-C5A5	3000
C5A5-C6B6	3000
C6B6-C7A7	3000
C7A7-C8B8	3000
C8B8-C9A9	3000
C9A9-C10D1	2500
C10D1-C11C2	2700
C11C2-C12D3	3000
J7C4-J8C5	90
J8C5-J9C6	250
J9C6-J10C7	70
J10C7-J11C8	140
J11C8-J12C9	330

DATA SHEET I

IPS-400

Date 1-25-79

ENVIRONMENTAL CONDITIONS - SLB TEST #3

Sheet 2 of 2

Temp. in °F	Chamber		Spray		Enclosure Temperatures				Lapsed Time	Initials	
	Pressure in psig	Water Level in inches	pH Value	Flow Rate in GPM	Inside Surface		Terminal Block				
					#17 in °F Left	#13 Right	#14 in °F Left	#22 Right			
350	123	0		0						7M-205	W.S.
349	118	0		0	328	328	353	347		7M-405	W.S.
344	111	0		0						8M	W.S.
335	100	0		0						9M	
330	90	0		0				338		10M	
324	83	0		1.0						11M	
303	58	0		1.0						12M	
270	26	0		1.0				300		13M	
258	20	0		1.0						14M	
249	16	0		1.0	274	280	286	268		15M	
241	11	0		1.0	256	248	260	252		30M	
241	11	0		1.0	246	242	245	244		45M	✓
241	11	0		1.0	244	241	243	242		1 HR	W.S.

DATA SHEET J

ELECTRICAL CONDITIONS - SLB TEST #3

SHEET 1 OF 2 START TIME: 5:21 P.M. DATE: 1/25/79

IPS-400

DC Voltage in volts	DC Leakage Current in Amperes								Lapsed Time	Initials
	K1-K2	K5-K6	K11-K12	L1-L2	L5-L6	L11-L12				
140	0	0	0	0	0	0	0	0	0	G.D.
140	.02	0	0	0	0	0	0	0	20S	G.D.
140	.02	0	0	0	0	0	0	0	40S	G.D.
140	.02	.02	0	0	0	0	0	0	1M	
140	.02	.02	.01	0	0	0	0	0	1M-20S	
140	.03	.02	.01	0	0	0	0	0	1M-40S	
140	.03	.02	.01	0	0	0	0	0	2M	
140	.03	.02	.02	0	0	0	0	0	2M-20S	
140	.03	.02	.02	0	0	0	0	0	2M-40S	
140	.03	.02	.02	0	0	0	0	0	3M	
140	.03	.02	.02	0	0	0	0	0	3M-20S	
140	.03	.02	.02	0	0	0	0	0	3M-40S	
140	.03	.02	.02	0	0	0	0	0	4M	
140	.03	.02	.02	0	.01	0	0	0	4M-20S	
140	.03	.02	.02	0	.01	0	0	0	4M-40S	
140	.03	.02	.02	0	.01	0	0	0	5M	
140	.04	.02	.02	.01	.02	0	0	0	5M-20S	
140	.04	.02	.02	.01	.02	0	0	0	5M-40S	
140	.04	.03	.02	.02	.02	0	0	0	6M	
140	.04	.03	.02	.02	.02	0	0	0	6M-20S	
140	.04	.03	.02	.02	.02	0	0	0	6M-40S	
140	.04	.03	.02	.02	.02	0	0	0	7M	
140	.04	.03	.02	.02	.02	0	0	0	7M-20S	V

DATA SHEET J

ELECTRICAL CONDITIONS - SLB TEST #3
 SHEET 2 OF 2 START TIME: 5:21 P.M. DATE: 1/25/79

IPS-400

DC Voltage in volts	DC Leakage Current in Amperes							Lapsed Time	Initials
	K1-K2	K5-K6	K11-K12	L1-L2	L5-L6	L11-L12			
140	.04	.03	.02	.02	.02	0	7M-40S	P.D.	
140	.04	.02	.02	.02	.02	0	8M	P.D.	
140	.03	.02	.02	.01	.02	0	9M		
140	.02	.02	.01	.01	.01	0	10M		
140	.02	.01	.01	.01	.01	0	11M		
140	.02	0.0	0.0	0	.01	0	12M		
140	.01	0.0	0.0	0	.01	0	13M		
140	.01	0.0	0.0	0	.01	0	14M		
140	.01	0.0	0.0	0	0	0	15M		
140	0.0	0.0	0.0	0	0	0	30M		
140	0.0	0.0	0.0	0	0	0	45M		
140	0.0	0.0	0.0	0	0	0	1 HR	V	

Pre Test
@ 500VDC

INSULATION RESISTANCE - SLB TEST #3

Sheet 1 of 3

IPS-400

Date 1-25-79

2:00P.M.

R.C.

To Ground From Point	Resistance in Megohms
K1A1	4000
K2B2	4000
K3A3	4000
K4B4	4000
K5A5	4000
K6B6	4500
K7A7	4500
K8B8	4000
K9A9	4000
K10D1	3500
K11C2	4000
K12D3	3500
B7C4	4500
B8C5	4500
B9C6	4500
B10C7	5000
B11C8	4000
B12C9	5000
L1A1	2000
L2B2	1300
L3A3	4000
L4B4	1800
L5A5	3500
L6B6	3000
L7A7	4000
L8B8	3000
L9A9	3500
L10D1	4000
L11C2	2000
L12D3	2300
D7C4	4500
D8C5	4500
D9C6	3000
D10C7	4500
D11C8	4500
D12C9	3000

From Point To Point	Resistance in Megohms
K1A1-K2B2	5000
K2B2-K3A3	4500
K3A3-K4B4	4000
K4B4-K5A5	3500
K5A5-K6B6	3500
K6B6-K7A7	4000
K7A7-K8B8	4000
K8B8-K9A9	4000
K9A9-K10D1	4000
K10D1-K11C2	4000
K11C2-K12D3	4000
B7C4-B8C5	5000
B8C5-B9C6	5000
B9C6-B10C7	5000
B10C7-B11C8	5000
B11C8-B12C9	5000
L1A1-L2B2	3000
L2B2-L3A3	3500
L3A3-L4B4	4000
L4B4-L5A5	4000
L5A5-L6B6	4500
L6B6-L7A7	4500
L7A7-L8B8	4500
L8B8-L9A9	4500
L9A9-L10D1	4500
L10D1-L11C2	4000
L11C2-L12D3	4000
D7C4-D8C5	5000
D8C5-D9C6	5000
D9C6-D10C7	5000
D10C7-D11C8	4500
D11C8-D12C9	4500

Immediately following
1 Hr. - @ 241°F with spray

To Ground. From Point	Resistance @ in Megohms 100	
K1A1	.16	.1 @ 270
K2B2	.21	.1 @ 280
K3A3	.30	.1 @ 400
K4B4	.34	.1 @ 425
K5A5	.45	.1 @ 500
K6B6	.47	.12 @ 500
K7A7	.45	.1 @ 500
K8B8	.35	.1 @ 450
K9A9	.35	.1 @ 400
K10D1	.24	.1 @ 250
K11C2	.13	.1 @ 150
K12D3	.10	—
B7C4	.40	.1 @ 500
B8C5	.33	.1 @ 400
B9C6	.18	.1 @ 300
B10C7	.21	.1 @ 270
B11C8	.12	—
B12C9	—	.1 @ 40
L1A1	.27	.1 @ 350
L2B2	.40	.1 @ 500
L3A3	.52	.12 @ 500
L4B4	.60	.13 @ 500
L5A5	.64	.15 @ 500
L6B6	.70	.18 @ 500
L7A7	.80	.16 @ 500
L8B8	.70	.16 @ 500
L9A9	.65	.13 @ 500
L10D1	.50	.12 @ 500
L11C2	.40	.1 @ 480
L12D3	.27	.1 @ 350
D7C4	1.0	.21 @ 500
D8C5	.90	.20 @ 500
D9C6	.75	.17 @ 500
D10C7	.68	.16 @ 500
D11C8	.54	.13 @ 500
D12C9	.35	.1 @ 450

From Point To Point	Resistance @ in Megohms 100	
K1A1-K2B2	.17	.1 @ 200
K2B2-K3A3	.20	.1 @ 270
K3A3-K4B4	.17	.1 @ 250
K4B4-K5A5	.23	.1 @ 300
K5A5-K6B6	.27	.1 @ 370
K6B6-K7A7	.26	.1 @ 350
K7A7-K8B8	.24	.1 @ 350
K8B8-K9A9	.25	.1 @ 300
K9A9-K10D1	.23	.1 @ 350
K10D1-K11C2	.22	.1 @ 300
K11C2-K12D3	.1	—
B7C4-B8C5	.23	.1 @ 350
B8C5-B9C6	.32	.1 @ 400
B9C6-B10C7	.18	.1 @ 250
B10C7-B11C8	.19	.1 @ 250
B11C8-B12C9	.1	—
L1A1-L2B2	.25	.1 @ 350
L2B2-L3A3	.30	.1 @ 400
L3A3-L4B4	.24	.1 @ 300
L4B4-L5A5	.28	.1 @ 400
L5A5-L6B6	.33	.1 @ 500
L6B6-L7A7	.30	.1 @ 500
L7A7-L8B8	.33	.1 @ 450
L8B8-L9A9	.32	.1 @ 450
L9A9-L10D1	.21	.1 @ 300
L10D1-L11C2	.30	.1 @ 350
L11C2-L12D3	.28	.1 @ 400
D7C4-D8C5	.33	.1 @ 500
D8C5-D9C6	.35	.1 @ 500
D9C6-D10C7	.35	.1 @ 500
D10C7-D11C8	.36	.1 @ 500
D11C8-D12C9	.36	.12 @ 500

Post Test INSULATION RESISTANCE - SLB TEST #3
 @ 500V Sheet 3 of 3

IPS-400

Date 1-26-79

8:30 A.M. R.C.

To Ground From Point	Resistance in Megohms
K1A1	2.1
K2B2	2.5
K3A3	2.3
K4B4	3.6
K5A5	4.5
K6B6	4.5
K7A7	4.0
K8B8	3.8
K9A9	3.1
K10D1	3.1
K11C2	1.6
K12D3	0.8
B7C4	5.0
B8C5	5.5
B9C6	3.8
B10C7	3.5
B11C8	2.2
B12C9	1.8
L1A1	5.0
L2B2	6.5
L3A3	8.4
L4B4	9.0
L5A5	12.0
L6B6	11.0
L7A7	11.0
L8B8	11.0
L9A9	8.0
L10D1	7.0
L11C2	5.4
L12D3	3.0
D7C4	8.4
D8C5	7.5
D9C6	6.5
D10C7	5.0
D11C8	3.5
D12C9	1.8

From Point To Point	Resistance in Megohms
K1A1-K2B2	2.3
K2B2-K3A3	2.5
K3A3-K4B4	2.4
K4B4-K5A5	2.8
K5A5-K6B6	3.4
K6B6-K7A7	2.8
K7A7-K8B8	3.0
K8B8-K9A9	3.3
K9A9-K10D1	3.2
K10D1-K11C2	3.4
K11C2-K12D3	1.3
B7C4-B8C5	3.6
B8C5-B9C6	3.6
B9C6-B10C7	2.7
B10C7-B11C8	2.2
B11C8-B12C9	1.2
L1A1-L2B2	4.8
L2B2-L3A3	4.0
L3A3-L4B4	4.0
L4B4-L5A5	5.0
L5A5-L6B6	4.5
L6B6-L7A7	5.0
L7A7-L8B8	5.2
L8B8-L9A9	5.7
L9A9-L10D1	3.5
L10D1-L11C2	4.4
L11C2-L12D3	3.7
D7C4-D8C5	3.5
D8C5-D9C6	3.1
D9C6-D10C7	3.8
D10C7-D11C8	3.0
D11C8-D12C9	2.8

CONAX CORPORATION
2300 Warden Ave. Buffalo, New York 14225

APPENDIX B

Public Service Electric and Gas Company Test Procedure for
Qualification of Electrical Connection Terminal Blocks in
Containment Environment of a Loss of Coolant Accident or
a Steam Line Break Accident, dated 11/30/78, Revision 1, 1/5/79

PUBLIC SERVICE ELECTRIC AND GAS COMPANY

TEST PROCEDURE FOR QUALIFICATION OF ELECTRICAL
CONNECTION TERMINAL BLOCKS IN CONTAINMENT
ENVIRONMENT OF A LOSS OF COOLANT ACCIDENT OR A
STEAM LINE BREAK ACCIDENT

I. SCOPE OF TEST

The following specifies the test procedure for qualifying protected electrical terminal blocks for a LOCA or SLB environment. The test models consisting of junction boxes, terminal blocks, and cable, were assembled at the Salem Nuclear Generating Station in accordance with prescribed installation practices for that plant, and are identical in all respects (excepting length of conduit connected to box) to such equipment presently planned for service at Salem Unit No. 2. The test models were assembled using terminal blocks which were not irradiated; however, the tests will be performed with replacement terminal blocks which have been irradiated (See II below).

II. TEST PRECONDITIONING

- A. Terminal Blocks - Both the Buchanan 2B112N and 616508-6 blocks were exposed to a Cobalt-60 Gamma field at a dose rate of .98 megarads per hour for a total of 200.2 megarads. Pre-exposure and post-exposure high potential tests were performed on these terminal blocks.
- B. Cable - The cable, 9 conductor number 14 wire, has been qualified for 200 megarads exposure though the cable used in this test was not actually exposed to radiation.

III. MATERIAL TO BE TESTED

- A. Individual Items:
 - 1. Four Buchanan Terminal Blocks
(Irradiated to 200 megarads) Model 616508-6.
These blocks are marked A, B, C, and D.
 - 2. Eight Buchanan Terminal Blocks
(Irradiated to 200 megarads) Model 2B112N.
These blocks are marked E, F, G, H, I, J, K
and L.

III. MATERIAL TO BE TESTED (CONT'D.)

A. Individual Items (Cont'd.)

3. Six galvanized steel junction boxes measuring 13-1/2" x 13-1/2" x 6" with cover. These boxes are fabricated in accordance with Public Service Electric and Gas Company Drawing number 212805-D-4131, Figure 3. Each of the boxes is fitted with two 2" close nipples secured with a 2" Meyers scru-tite hub.
4. Twenty four 10' long lengths of 9 conductor number 14 control cable rated for 600 volts. This cable is manufactured by Triangle P.W.C. Inc. and was supplied on Manufacturer's Reel No. 17025 (Salem Reel No. S5054).

B. Assemblies To Be Tested:

Six junction box assemblies each consisting of one junction box, two terminal blocks, and four lengths of cable assembled as per PSE&G Co. sketch E-101278 attached. These assemblies are to be designated as follows:

<u>Assembly</u>	<u>Configuration</u>	<u>Terminal Blocks</u>	
		<u>Position 1</u>	<u>Position 2</u>
1	Left Hand	E	F
2	Right Hand	G	A
3	Left Hand	H	I
4	Right Hand	C	J
5	Left Hand	K	B
6	Right Hand	D	L

C. Modifications:

1. PSE&G Co. Test Coordinator may modify the test assemblies prior to test initiation. Modifications can include (but are not limited to) drilling of weep holes filling of boxes with insulating material, or rearranging terminal block positions.

C. Modifications (Cont'd.):

2. Test assembly quantities may be increased if any tests are aborted due to external circuitry problems.

IV. PREPARATION FOR TESTING:

- A. Assemblies are to have their "As Supplied" terminal blocks removed.
- B. Irradiated terminal blocks are to be installed in accordance with III above.
- C. Thermocouples are to be mounted on the top of at least one of the terminal blocks and a thermocouple is to be mounted on the inside surface of the junction box. (Location to be determined by PSE&G Test Coordinator).
- D. Thermocouple lead wires are to be run through 2-inch nipples.
- E. Opening of 2-inch nipples are to be sealed using PR-855 fire resistant RTV silicone foam packaged in SEMKIT two part sealant cartridge. All space in nipples not occupied by cable is to be filled with silicone foam.

V. TEST - SERVICE CONDITIONS

- A) All terminal points of one block in each test item will be wired to an AC source so as to impress 140 VAC (120 VAC and margin) across neighboring points. Odd numbered terminal points to carry 2 - 5 a.
- B) The lower six terminal points of the second block in each test item will be wired to a DC source so as to impress 140 VDC across neighboring points. Line current will be limited to 100 ma.
- C) Test circuitry will be arranged so as to identify single point failures.
- D) The above service conditions will be maintained throughout the duration of the test except when circuit insulation resistance readings are being performed.

VI. TEST PROFILES - ENVIRONMENTAL CONDITIONS - (Cont'd.)

A) LOCA

- 1) 125^oF @ 0 psig to 286^oF @ 50 psig in 10 seconds.
- 2) Maintain 286^oF @ 43 psig until t = 2 hours, 47 minutes.
- 3) 15 minutes maximum ramp of 286^oF @ 43 psig to 240^oF @ 10 psig.
- 4) Maintain 240^oF and 10 psig until t \geq 240 hours.
- 5) Duration of the test period to be determined by PSE&G Company Test Coordinator.

B) Steam Line Break (SLB)

- 1) 125^oF @ 0 psig to 350^oF @ 43 minimum psig in 5 minutes maximum.
- 2) Maintain 350^oF and 43 psig until t = 10 minutes.
- 3) 15 minute ramp of 340^oF and 43 psig to 240^oF and 10 psig.
- 4) Maintain 240^oF and 10 psig until t = 24 hours.
- 5) Duration of the test period to be determined by PSE&G Company Test Coordinator.

C) Chemical Spray

Spray to consist of 1.2% (By Weight) boric acid solution with sufficient sodium hydroxide added to maintain a pH of 8.5 to 10.0. Spray rate to be .15 to .2 gallons/min./Sq. Ft. Temperature of solution to be established

VI. TEST PROFILES - ENVIRONMENTAL CONDITIONS (CONT'D.)

by conditions required to maintain test chamber temperature. Chemical spray to be initiated 5 minutes after achievement of peak temperature of test profile. Spray to be maintained for 24 hour duration.

- D) All the parameters specified in A, B, and C above are to be considered as ideal and any variation of these values must be recorded and their effect evaluated at the end of test.

VII. DATA RECORDING

A) Hourly

- 1) Chamber temperature
- 2) Terminal Block temperatures
- 3) Enclosure temperatures
- 4) Chamber pressure
- 5) Chamber water level
- 6) Spray solution flow rate
- 7) Voltage
- 8) Line Current
- 9) Leakage currents

- B) Prior to beginning of the test, and twice daily for the duration of the test, IR @ 500 VDC, point to point and point to ground.

- C) Every 12 hours, spray solution pH.

VIII. DESCRIPTION OF TESTS

- A) Test 1 - Test assemblies 1 and 2 subjected to environmental conditions noted in VI A (LOCA) and VI C while subjected to service conditions of V.
- B) Test 2 - Test assemblies 3 and 4 subjected to environmental conditions of VI B (ALB) and VI C while subjected to service conditions of V.
- C) Test 3 - (If required) Test assemblies 3 and 4, modified as directed by Test Coordinator, subjected to environmental conditions of VI A (LOCA) and VI C while subjected to service conditions of V. This test to be performed in event of failure of Test 1.

VIII. DESCRIPTION OF TESTS (CONT'D.)

- D) Test 4 - (If required) Test assemblies 5 and 6, modified as directed by Test Coordinator, subjected to environmental conditions of VI B (SLB) and VI C while subjected to service conditions of V. This test to be performed in event that Test 3 is required.

IX. ACCEPTANCE CRITERIA

The assemblies are expected to perform, throughout the duration of the tests, in the mode described in V above. If leakage current of any test circuit exceeds 1 ampere, post test examination shall determine the cause of the leakage current, that is, if the failure was in the tested circuit or in the connections to the test circuit.

X. TEST REPORT

A formal test report shall be provided encompassing all tests that were performed. This test report should include all photographs, drawings and data involved with each test and each post test inspection. This report and all information regarding the equipment tested is to be classified as Proprietary Information.

WMP:hh,vlf
11/30/78
Revised 1/5/79

CONAX

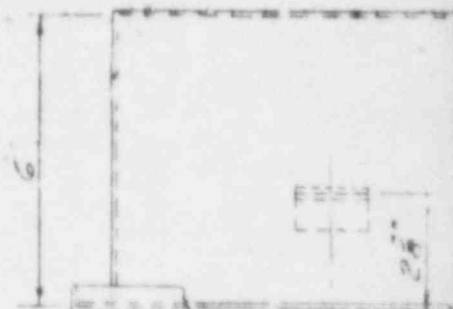
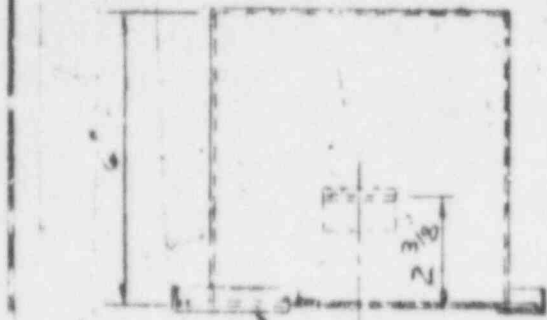
No. IPS-400

CONAX CORPORATION
2300 Walden Ave. Buffalo, New York 14225

APPENDIX C

Public Service Electric and Gas Company Drawing No.
212805 D 4131-1, Public Service Electric and Gas Company
Drawing, E-101278 (sheets 1 and 2)

212805 D 4131-



DISHED COVER

DISHED COVER

ALL HOLES #10-32 TAP
1/2" STRAP - #12 GA

CLEARANCE FOR
#10-32 TAP IN ANGLE

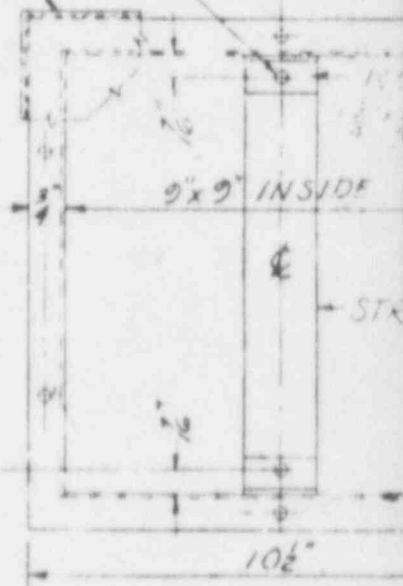
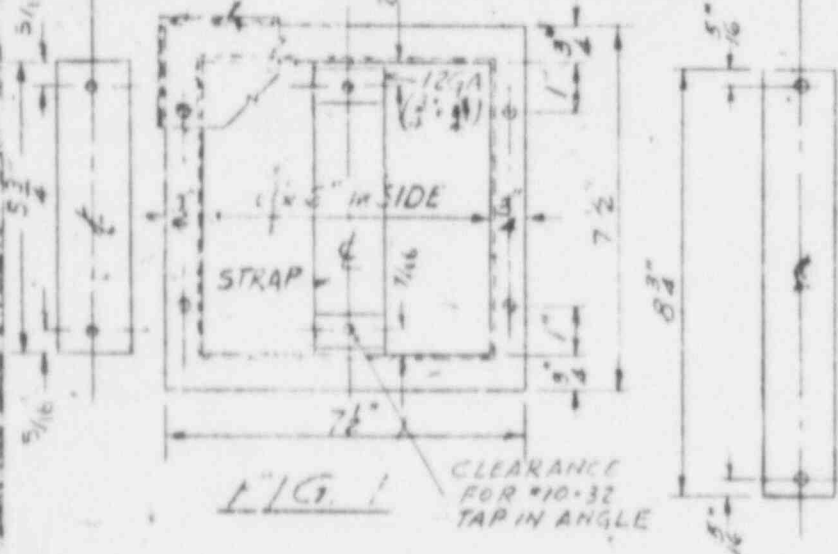


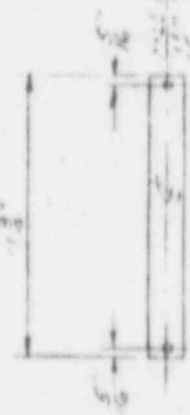
FIG. 1

FIG. 2

NOTES:-

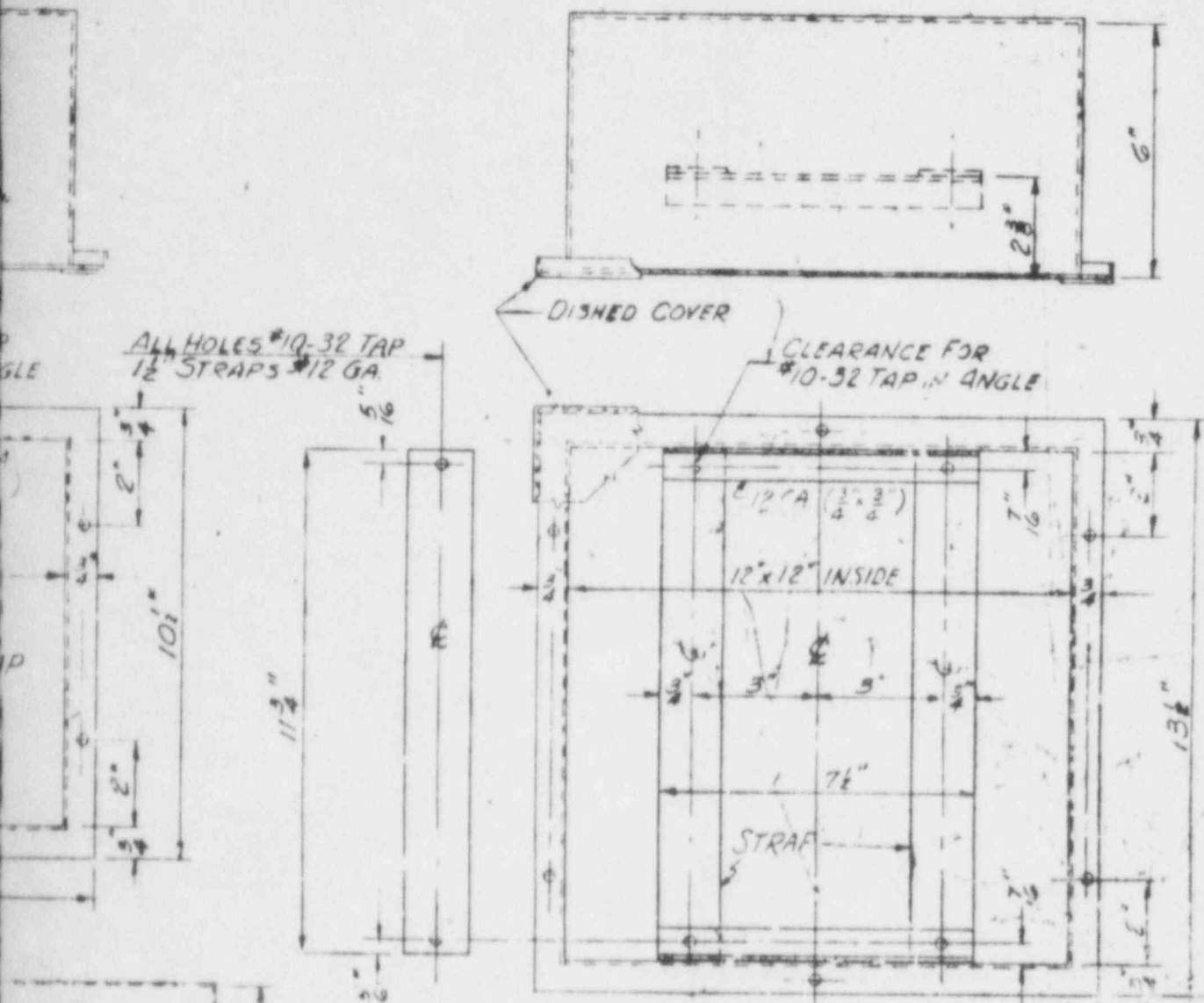
- 1 ALL JOINTS CONTINUOUSLY WELDED
- 2 ALL BOXES TO BE MADE OF 18 GA. STEEL
- 3 BOXES TO BE HOT DIPPED GALV. & IN ACCORDANCE WITH PROVISIONS OF THE LATEST ASTM-A-386
- 4 TO SECURE COVERS DRILL & TAP FOR 1/4"-20 STAINLESS STEEL ROUND HEAD SCREWS.

ALL HOLES #10-32 TAP
1/2" STRAP - #12 GA



5					
4					
3					
2					
1	REV NOTE 3 WITH REF IN ASTM A 386				
Date	1-27-53	Des	236	Est	404

REV 3/1/53



ISSUED 13 1/2"
 FOR CONSTRUCTION
 ENGINEERING & CONSTRUCTION DEPT. 3
 PUBLIC SERVICE ELECTRIC & GAS CO.

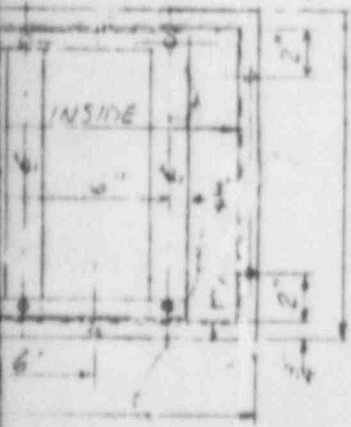
JAN 13 1979

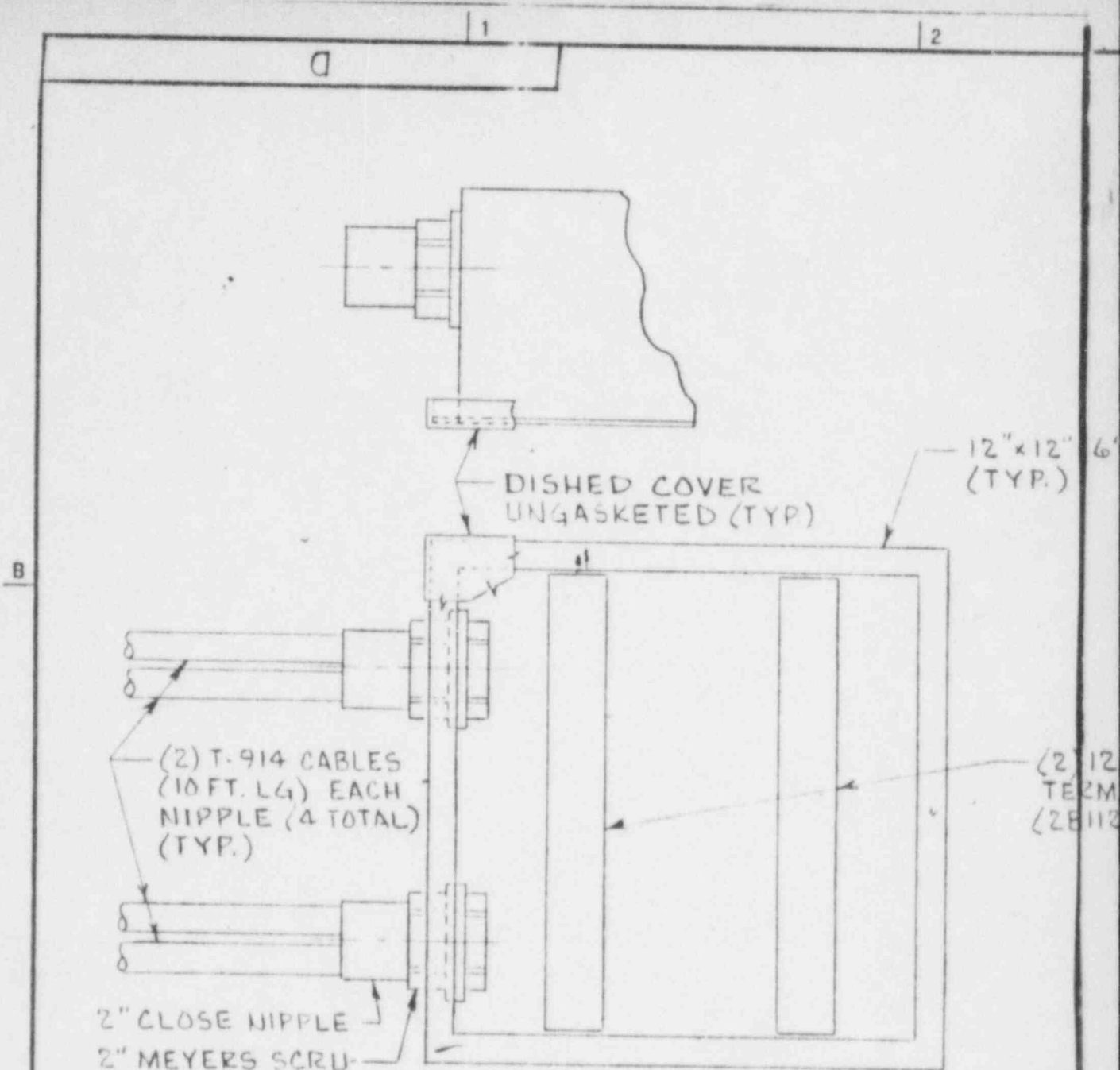
DESIGN DEVIATIONS FROM ISSUED CONSTRUCTION DRAWINGS SHALL NOT BE PERMITTED WITHOUT PRIOR DOCUMENTED APPROVAL OF SPONSOR ENGINEER.

SALEM NUCLEAR GENERATING STATION
 NO. 1 & 2 UNITS
 JUNCTION AND TERMINAL BOXES
 DETAILS ELECTRICAL
 PUBLIC SERVICE ELECTRIC AND GAS COMPANY
 ELECTRIC ENGINEERING DEPARTMENT
 NEWARK, N.J.
 DRAWN J.F.O. CHECKED S.S.D. SCALE 1/2" = 1"
 DATE 2-20-79 EXAMINED R.D. APPROVED R.A.L.
 AUTH. U-02671 APPROVED R.A.L. CHIEF ENGINEER

REVISIONS:
 1. NO. 1 - DATE 1/23/79 BY J.F.O.
 2. NO. 2 - DATE 1/23/79 BY J.F.O.
 FOR LIST OF REFERENCE DRAWINGS SEE DRAWING 5/22/78
 FOR DRAWING LIST SEE
 FOR BLUEPRINT LIST SEE
 THIS DRAWING SUPERSEDES
 THIS DRAWING IS

PROVIDE FOR
 TAP-IN ANGLE





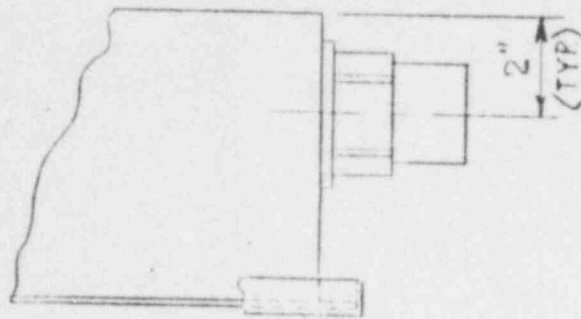
FRONT VIEW

(4 REQ'D-LEFT HAND)

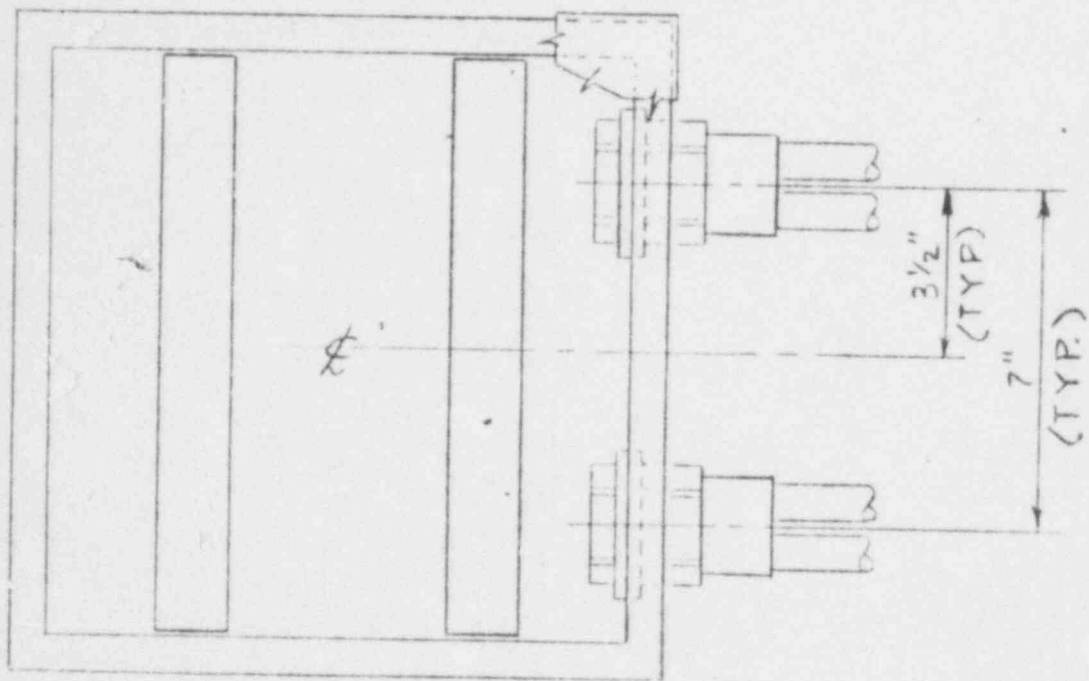
NOTES:

1. FOR BOX CONSTRUCTION SEE P.S. DWG. #212805-REV. 1
2. FOR WIRING DIAGRAM SEE SHEET 2 OF 2

No.	Date	Description	Dwn.	Ckd.	Exp.	App.
REVISION						



JCT. BOX



POINT BLOCKS N-BUCHANAN)

FRONT VIEW
(4 REQ'D - RIGHT HAND)

THIS DWG. IS TO BE USED FOR FABRICATING TEST MODELS ONLY

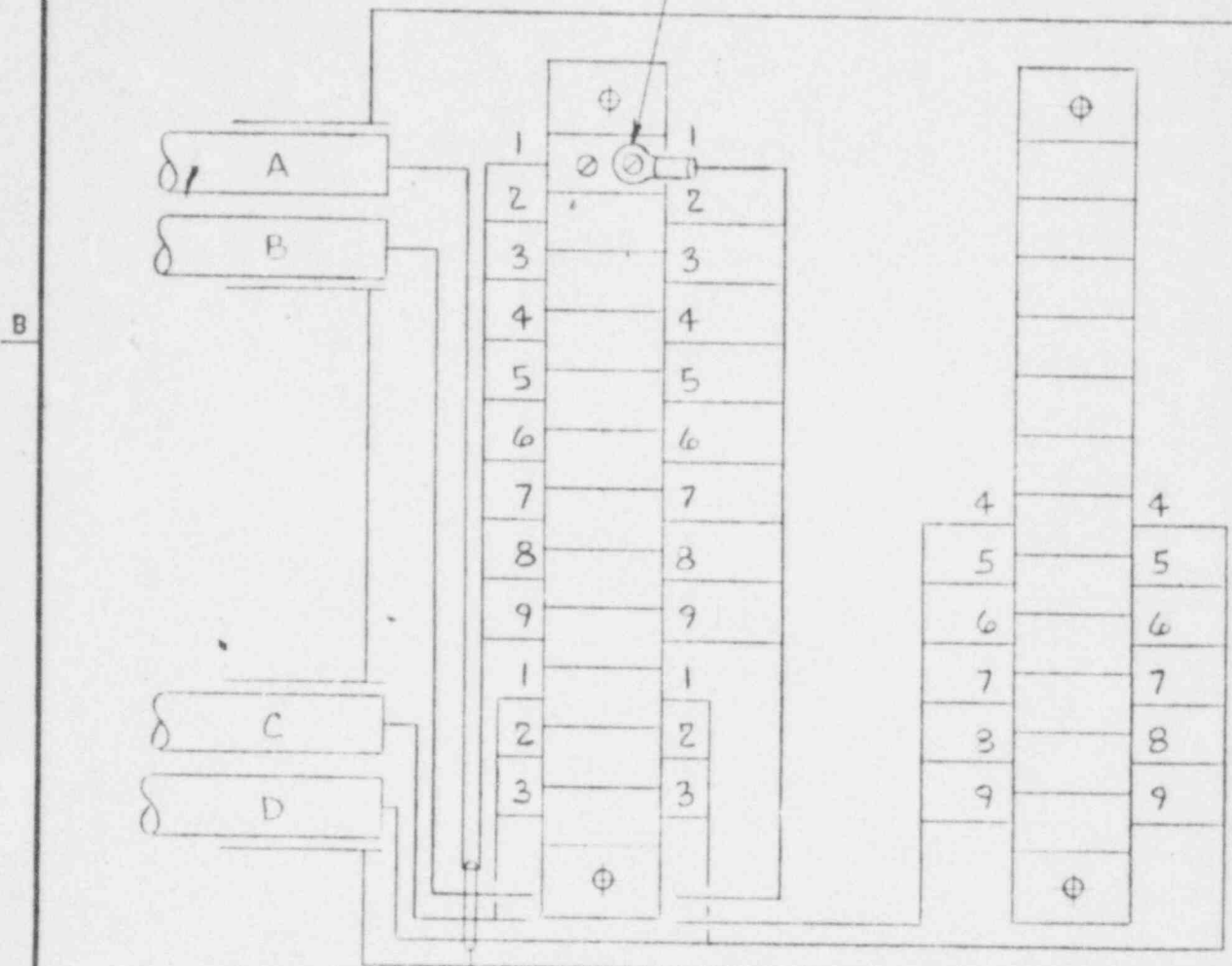
D-4131

GENERAL NOTES

- USE PRINTS OF LATEST REVISION ONLY.
- DO NOT SCALE - USE DIMENSIONS ONLY.
- FOR LIST OF REFERENCE DRAWINGS SEE DRAWING NO. THIS DWG.
- THIS DRAWING SUPERSEDES _____
- THIS DRAWING IS SHEET NO. 1 OF 2 SHEETS

SALEM NUCLEAR GENERATING STATION	
TYPICAL CONTAINMENT	
TERMINAL BOX	
DETAILS	ELECTRICAL
PUBLIC SERVICE ELECTRIC AND GAS COMPANY	
ENGINEERING DEPARTMENT	
NEWARK, N. J.	
DRAWN P.R.F.	CHECKED <i>[Signature]</i>
SCALE 3" = 1'-0"	
DATE 10-12-78	EXAMINED _____
AUTH. A-6300.1	APPROVED _____

TYP. LUG
(BURNDY TYPE
YA VI4)



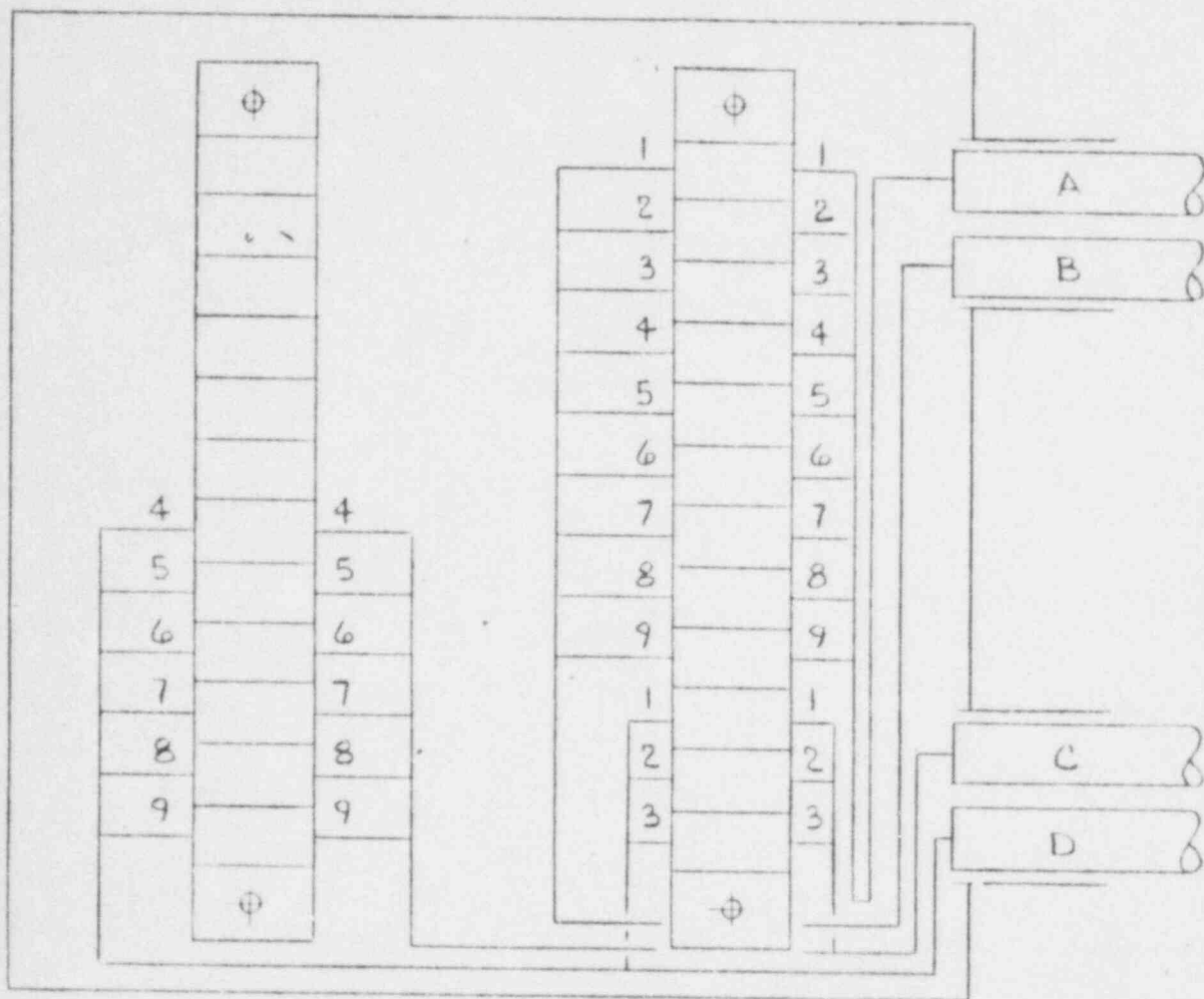
B

A

FRONT VIEW

RUN CONDUCTORS TO BOTTOM OF BOX & THEN UP TO TERMINAL (TO ACT AS DRIP LOOPS)

No.	Date	Description	Dwn.	Ckd.	Exd.	Apd.
REVISION						



FRONT VIEW

THIS DWG IS TO BE USED FOR
FABRICATING TEST MODELS ONLY

GENERAL NOTES

USE PRINTS OF LATEST REVISION ONLY.
DO NOT SCALE - USE DIMENSIONS ONLY.
FOR LIST OF REFERENCE DRAWINGS SEE
DRAWING NO. NONE
THIS DRAWING SUPERSEDES
THIS DRAWING IS SHEET NO. 2 OF 2 SHEETS.

SALEM NUCLEAR GENERATING STATION
TYPICAL CONTAINMENT
TERMINAL BOX
WIRING DIAGRAM ELECTRICAL

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ENGINEERING DEPARTMENT
NEWARK, N. J.

DRAWN PRF CHECKED KAF/V SCALE NONE
DATE 12-12-78 EXAMINED
AUTH. A-6300.1 APPROVED

SKETCH E-101278 SH 2 of 2

CONAX CORPORATION
2300 Walden Ave. Buffalo, New York 14225

APPENDIX D

Report on Terminal Block Irradiation Test for Public Service
Electric and Gas Company from Isomedix Inc., Parsippany,
New Jersey, dated November 10, 1978



November 10, 1978

Mr. G. W. Supplee
Chief Electrical Engineer
Public Service Electrical & Gas. Co.
80 Park Place
Room 616-MP
Newark, New Jersey 07101

WMP

WMP

Dear Mr. Supplee:

Enclosed are revised data sheets to Yves Doyle's letter of October 5, 1978. Earlier sheets omitted Isomedix and PSE&G Co. identification.

Very truly yours,

Charles Ronk
General Manager

Encl.
CR:km



October 5, 1978

Public Service Electric & Gas Co.
80 Park Place
Room 616-MP
Newark, New Jersey 07101

Attention: Mr. G. W. Supplee
Chief Electrical Engineer

Dear Mr. Supplee:

This will summarize parameters pertinent to the measurements and irradiation of your twelve Modified Buchanan terminal blocks, catalog No. 2B112N (8) and No. 616508-6 (4), identified as samples A through L.

Each block had a D.C. high potential test (500 volts D.C.) before irradiation with our Bendix Insulation Testor, Type 60B4-1A (calibrated 4/28/78) at 500 V.D.C., and also after irradiation. From each point to ground and from point to point, no current was detected before and after irradiation. Attached you will find the data from these tests.

For irradiation, your samples were placed in a Cobalt-60 Gamma field, such that the dose rate was 0.98 Megarads per hour. They were exposed for a total of 204.1 hours, yielding a total dose of 200.2 Megarads. Rotation of 180° was made halfway through the exposure time to obtain a more uniform dose distribution.

Dosimetry was performed using an Atomic Energy of Canada, Ltd. (AECL), Red Perspex system with Type BC-2 readout. Calibration of the Perspex is made by AECL using Ceric dosimetry traceable to the U. S. National Bureau of Standards. Isomedix regularly cross-calibrates its AECL system with an in-house Harwell Perspex system, and makes semi-annual calibrations directly with NBS, using the NBS Radiochromic Dye system. A copy of the dosimetry correlation report is available upon request.

Mr. G. W. Supplee

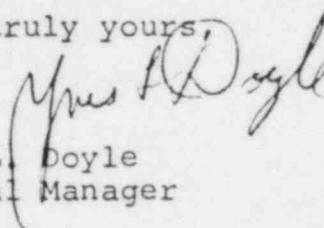
October 5, 1978

- 2 -

Irradiation was conducted in air at ambient temperature and pressure. Radiant heat from the source heated the samples somewhat, but the temperature did not exceed 85°F, as indicated by previous measurements on an oil solution in the same relative position.

Irradiation was initiated on September 15, 1978 and was completed on September 27, 1978.

Very truly yours,



Yves L. Doyle
General Manager

YLD:mv

Enc.

PUBLIC SERVICE ELECTRIC AND GAS COMPANY
ENGINEERING AND CONSTRUCTION DEPARTMENT

SALEM NUCLEAR GENERATING STATION
AUTHORIZATION A6300.1

ATTACHMENT TO REQUISITION NO. E-17512NU
DATED SEPTEMBER 11, 1978

TERMINAL BLOCK IRRADIATION TEST FOR
PUBLIC SERVICE ELECTRIC AND GAS CO.

1. SCOPE

This test shall be performed to certify the effects of gamma radiation on the dielectric characteristics of two types of terminal blocks.

2. TEST MATERIAL

- (a) Eight Buchanan Terminal Blocks, Catalog. No. 2B112N that have been modified by removal of the marking strip.
- (b) Four Buchanan Terminal Blocks, Catalog. No. 616508-6 that have been modified by removal of the cover and marking strip.

3. PRE-TEST MEASUREMENTS AND IDENTIFICATION

- (a) A pre-exposure D.C. high potential test (500 volts D.C.) shall be made from point to point and point to ground of each terminal block.
- (b) Each terminal block is to be marked in such a manner that it can be identified after exposure so that pre-exposure as well as post-exposure high potential tests may be compared.

4. IRRADIATION TEST

- (a) The terminal blocks are to be irradiated at a dosage rate of not greater than 1 megarad per hour.
- (b) A total dosage of 200 megarads is to be achieved.

5. POST RADIATION MEASUREMENTS

- (a) A post-exposure D.C. high potential test (500 volts D.C.) shall be made from point to point and point to ground of each terminal block.

6. RESULTS

- (a) Ten certified copies of the test report are to be forwarded to Public Service Electric and Gas Company to the attention of Mr. G. W. Supplee, Chief Electrical Engineer.
- (b) Upon authorization from Public Service Electric and Gas Company's Chief Electrical Engineer, the Terminal Blocks are to be shipped to:

Conax Corporation
2300 Walden Avenue
Buffalo, New York 14225
Attention: Mr. Frank Illig
Manager of Testing
Nuclear Products.

The package is to be clearly marked as material for testing for Public Service Electric and Gas Company.

WMP:hh
9/11/78

