

## 1.0 SCOPE

To provide the engineering requirements for the verification of the "as-built" condition of the Control Rod Drive Scram Discharge Volume Piping System.

This verification will include the primary flow path of the scram discharge from the SDV inlet of all control rod drives to the reactor building sump. All branch lines and instrument lines will be included. Any interfaces with other systems will be identified.

## 2.0 PURPOSE

To assure the Company that the Scram Discharge Volume is built according to design. To provide assurance that there are no built-in hydraulic problems which may prevent the control rod drives from full scram upon demand. And to provide a means to document the results of the survey.

Completion of the procedure as is set forth in the specification will provide the documentation as requested in IE Bulletin 80-17.

## 3.0 REFERENCES

1. P&ID 8856-M-147, Rev. 9
2. P&ID 8856-M-161, Rev. 13
3. CRD Piping Arrangement 8856-M-164-83-(1)2, Rev. 2 ✓
4. CRD (Isometric) Piping Arrangement 8856-M-164-83-(6)-1, ✓  
Rev. NC
5. CRD (Isometric) Scram Header Vent Line 8856-M-164-158-5, ✓  
Rev. 3 *12/280*
6. CRD (Isometric) Scram Header Drain Line 8856-M-164-157-6, ✓  
Rev. 3
7. CRD (Isometric) Scram Header Drain Line 8856-SP-HBD-1130-1, ✓  
Rev. 0
8. CRD (Isometric) Scram Header Drain Line 8856-SP-HBD-1130-2, ✓  
Rev. 0
9. CRD (Isometric) Scram Header Vent Line 8856-SP-HBD-1131-1, ✓  
Rev. 0

10. CRD (Isometric) Scram Header Vent Line 3856-SP-HBD-1131 ✓  
-2, Rev. 0
11. CRD (Isometric) Scram Header Vent Line 3856-SP-HBD-1131 ✓  
-3, Rev. 0
12. PP&L Quality Assurance Manual Procedure 16.0, Rev. 5
13. PP&L Quality Assurance Manual Procedure 16.1, Rev. 3
14. PP&L Quality Assurance Manual Procedure 19.0, Rev. 2
15. NRC I&E Bulletin Number 80-17 with Supplement Nos. 1 & 2
16. CRD Piping Arrangement 3856-HB4-83(4)-2 ✓
- 4.0 PREREQUISITES

4.1 Inspection Personnel

Personnel selected for the survey of the "as-built" condition of the piping system will be qualified to perform the function they are designated to perform. Reference AD-00-051.

4.2 Quality Assurance

Assure all survey personnel have been briefed on the PP&L Quality Assurance Manual Procedures 16.0, 16.1, and 19.0, latest revision, at time of the survey.

4.3 Lighting

Assure adequate lighting is provided to obtain the information required.

5.0 PRECAUTIONS

- 5.1 Assure system is not above atmospheric pressure.
- 5.2 Assure no systems in close proximity to the SDV system is currently undergoing a pressure test.

6.0 TEST EQUIPMENT

1. Tape measure, with English units, and sub-division to 1/8", minimum.
2. Two (2) foot long ~~minimum~~ <sup>omit JMB 12-12-80</sup> carpenter level or engineering equivalent. Calibrate before and after use.
3. Flashlight. <sup>or a 9" spirit level JMB 12-12-80</sup>

## 7.0 TEST PROCEDURE

Measurements of the existing Scram Discharge Volume (SDV) and associated piping systems are to be made. Items to be recorded are:

1. Size of pipe
2. Length of pipe
3. Slope of pipe
4. Type of valve
5. Direction of flow through valve
6. Interconnection of SDV system with any other system

Assumptions to be made are:

1. Referenced building coordinates are accurate.
2. Referenced building elevations are accurate.
3. Referenced contractor did the work indicated.
4. Referenced pipe schedules and classifications are correct.
5. Referenced scale of drawings are accurate.
6. Ignore pipe and equipment supports.
7. Ignore switch actuation positions.

7.1 Utilizing the referenced isometric drawings identified in Section 3, Items <sup>3 thru 11</sup> through 11, <sup>and item 16 thru 12-12</sup> yellow line all correct dimensions, slopes, valve and instrument identification. Whatever dimensions or verifications are incorrect, correct using a red pencil. Any additional piping attained will be red lined.

7.2 The completed marked-up drawings will become attachments to this procedure.

7.3 Each drawing shall have the following statement filled out by the qualified inspector:

I, \_\_\_\_\_, certify that this drawing is accurate, as marked. Assumptions made are indicated in PLI- 10942.

Date: \_\_\_\_\_

QUALITY INSPECTION REPORT

QIR NO. (1) 80-627	CALL NO. (2) N/A	DATE (3) 12-12-80
W.A. (SWA) NO. (4) N/A	SUSQUEHANNA S.E.S. X	SYSTEM NAME/NO. (5) Control Rod Hydraulic /55
RESPONSIBLE DEPT/GROUP (6) NPE	ACTIVITY LOCATION (7) Unit 1 React BLDG EL 719	
PROCEDURE TITLE/NO./REV. (8) Control Rod Drive System, Verification PLI-10942 Attachment A		
RIR NO.(S). (9) N/A	NCR NO. (10) N/A	
REASON FOR ACTIVITY (11) Verification of "AS-BUILT" Condition of the CRD Scram Discharge Volume		
INSPECTION DESCRIPTION: (12) Pipi		

Levels to be used in performing test procedure were checked by I & C cal. shop. Level indication was compared to water level in U-shaped tygon tube by positioning each end of the level at a meniscus in the tube. Two 2' levels were checked; they were identified PLI 1 & PLI 2. Two 9" levels were then compared to the level indication of a 2' level; they were identified as PLI 3 & PLI 4. All levels were accurate prior to use. All levels were checked, using the same method, at completion of procedure; all levels were accurate.

Measurements of Scram Discharge Volume and associated piping were made per the Test Procedure. Isometric drawings as listed in section 3.0 of the procedure were used to verify system as-built configuration. Drawings were yellow lined where correct, and red lined where incorrect.

(13) QUALITY INSPECTOR

*W. B. Rish*

DATE 12-15-80

(14) QUALITY SUPERVISOR

*E. J. Loh*

DATE 12/15/80

(15) PAGE 1 OF 4

QUALITY INSPECTION REPORT  
CONTINUATION SHEET

QIR #  
80-627

PAGE 2 OF 4

The following dwgs. differ from the as-built configuration as indicated:

- 3856-M-164-83-(6)-1 Rev NC

The 1" EBB line between valve F092C and F092D has a 0" slope; dwg. indicates 1/8" slope /12"

The line between the scram discharge instrument volume and valve F103 has a 0" slope; dwg. indicates 1/8" slope /12"

Four capped lines, each with 2 valves, are installed in the instrumentation lines of the hydraulic control units on both North and South sides of the containment. The dwg. does not indicated these lines and valves.

A 1" line is upstream of instrumentation lines; dwg. indicates a 2" line.



QUALITY INSPECTION REPORT  
CONTINUATION SHEET

PAGE 3 OF 4

QIR #  
80-627

- 8856-M-164-157-6 Rev 3

A line at 713' 5 7/16" elev. has a 0" slope;  
dwg. indicates 3/16" slope /12".

The line between 714' 10 11/16" and 714' 8 7/8"  
elevations is sloped in the direction opposite that  
indicated by dwg.

- SP-HBD-1111-1 Rev 0

The line at 743' 5 5/8" elev. has a 0" slope;  
dwg. indicates that it should be sloped.

An abnormal condition of valve F010 (ref. dwg. 8856-M-164-158-5  
Rev 3) was found during inspection. The valve is physically  
blocked in the open position by a piece of metal against the  
valve operator. It was noted by PP&L Construction Engineer that  
NISCO had the valve blocked open to maintain a flow path for

QUALITY INSPECTION REPORT  
CONTINUATION SHEET

QIR #

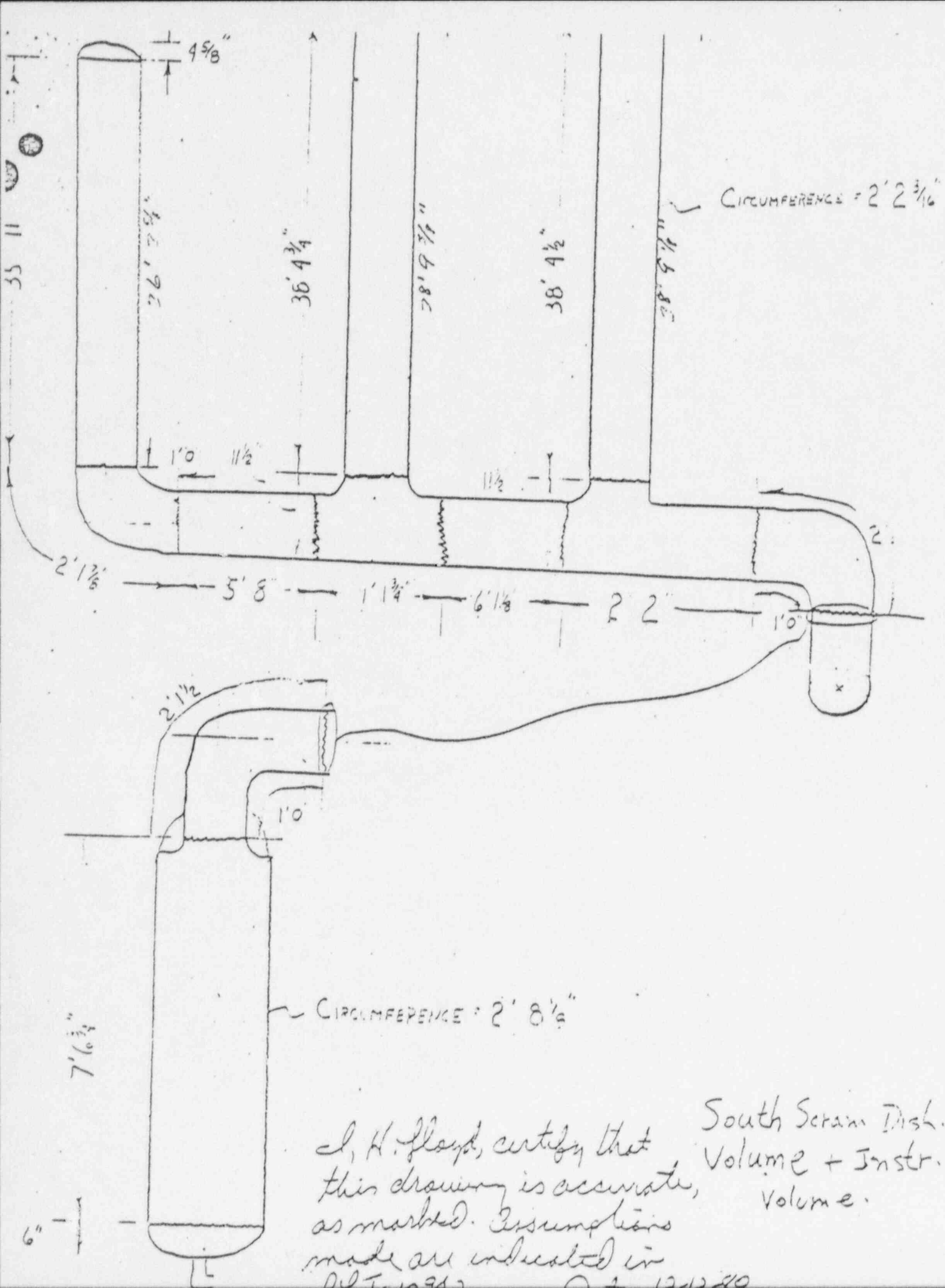
80-627

PAGE 4 OF 4

Testing.

This System is not completely turned over. There are turn  
over exceptions documenting that "as-built" drawings are not  
updated. (Exception #7024 is for SUS 55B).

Copies of this report and drawings will be sent to NQA-  
Construction.



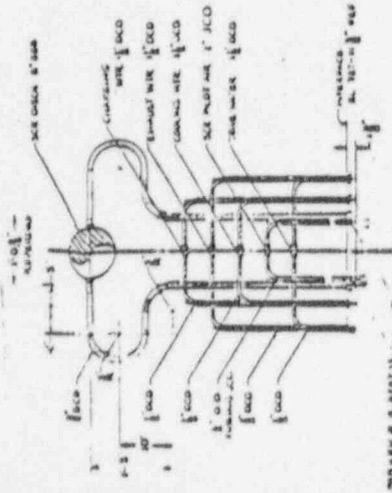




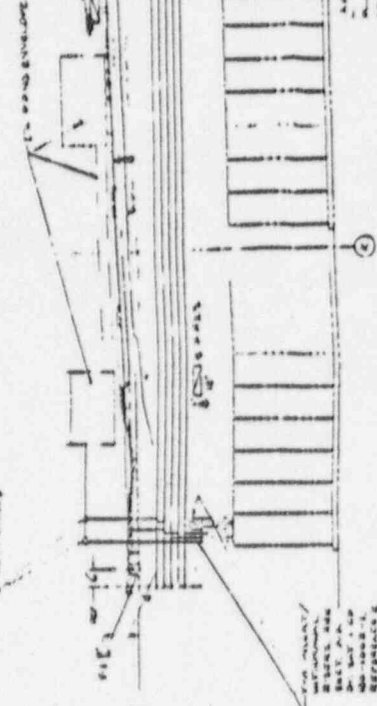
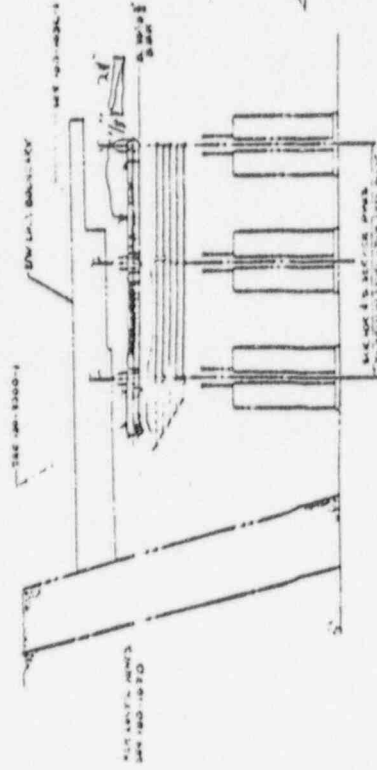
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REVISION	DATE	BY	DESCRIPTION
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2	10/1/80	J. J. J.	REVISIONS TO DESIGN
3	10/1/80	J. J. J.	REVISIONS TO DESIGN
4	10/1/80	J. J. J.	REVISIONS TO DESIGN
5	10/1/80	J. J. J.	REVISIONS TO DESIGN
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9	10/1/80	J. J. J.	REVISIONS TO DESIGN
10	10/1/80	J. J. J.	REVISIONS TO DESIGN

NOTES:  
1. SEE SHEET 1 FOR GENERAL NOTES.  
2. SEE DOCUMENTS AND NEW DRAWINGS.



SECTION C-C  
SCALE: 1/4" = 1'-0"

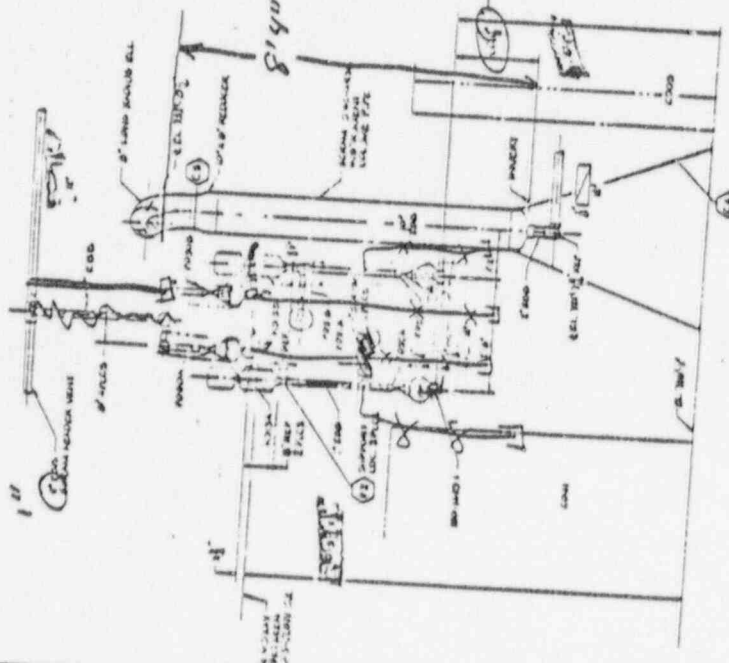
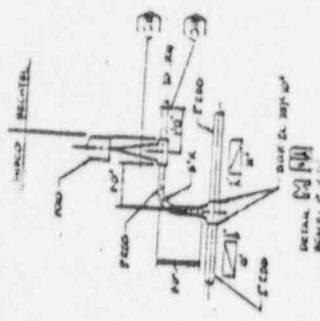
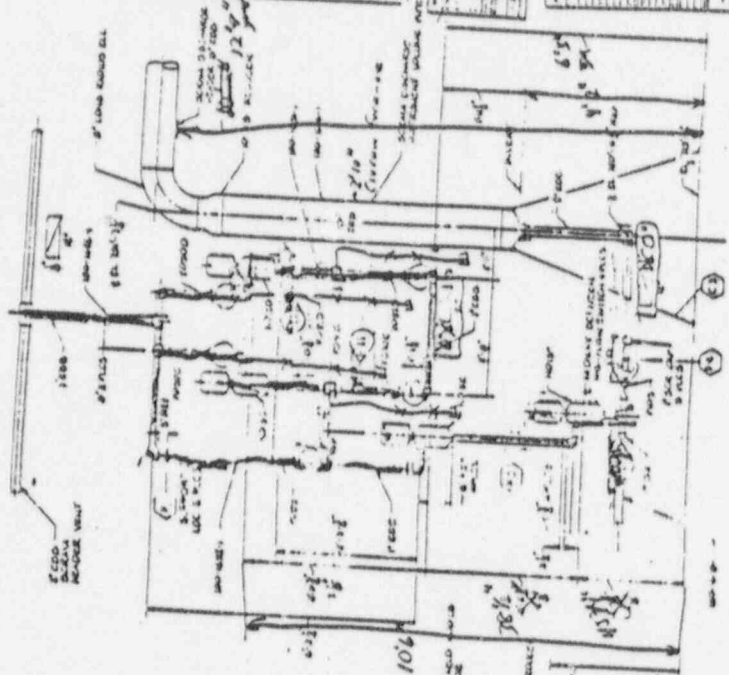


Notes:  
1. See sheet 1 for general notes.  
2. See documents and new drawings.  
3. See sheet 2 for general notes.  
4. See documents and new drawings.  
5. See sheet 3 for general notes.  
6. See documents and new drawings.  
7. See sheet 4 for general notes.  
8. See documents and new drawings.  
9. See sheet 5 for general notes.  
10. See documents and new drawings.

REVISION	DATE	BY	DESCRIPTION
1	10/1/80	J. J. J.	INITIAL AND FINAL DESIGN
2	10/1/80	J. J. J.	REVISIONS TO DESIGN
3	10/1/80	J. J. J.	REVISIONS TO DESIGN
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SECTION C-C  
SCALE: 1/4" = 1'-0"

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1000 10th Avenue, S.W.
Albuquerque, New Mexico 87102
4094 42nd Ave. N.W. (4th Floor)
Albuquerque, New Mexico 87114

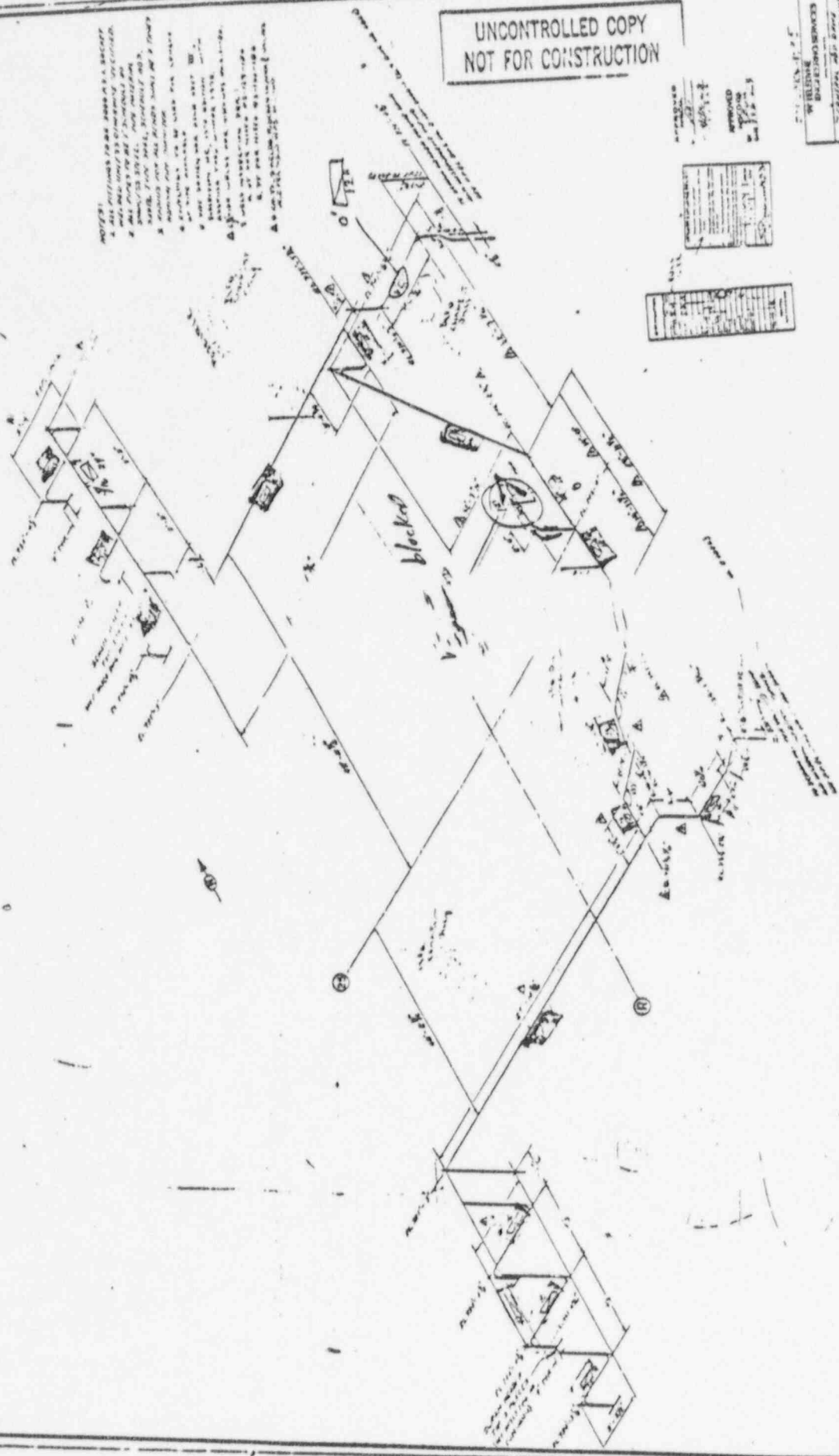
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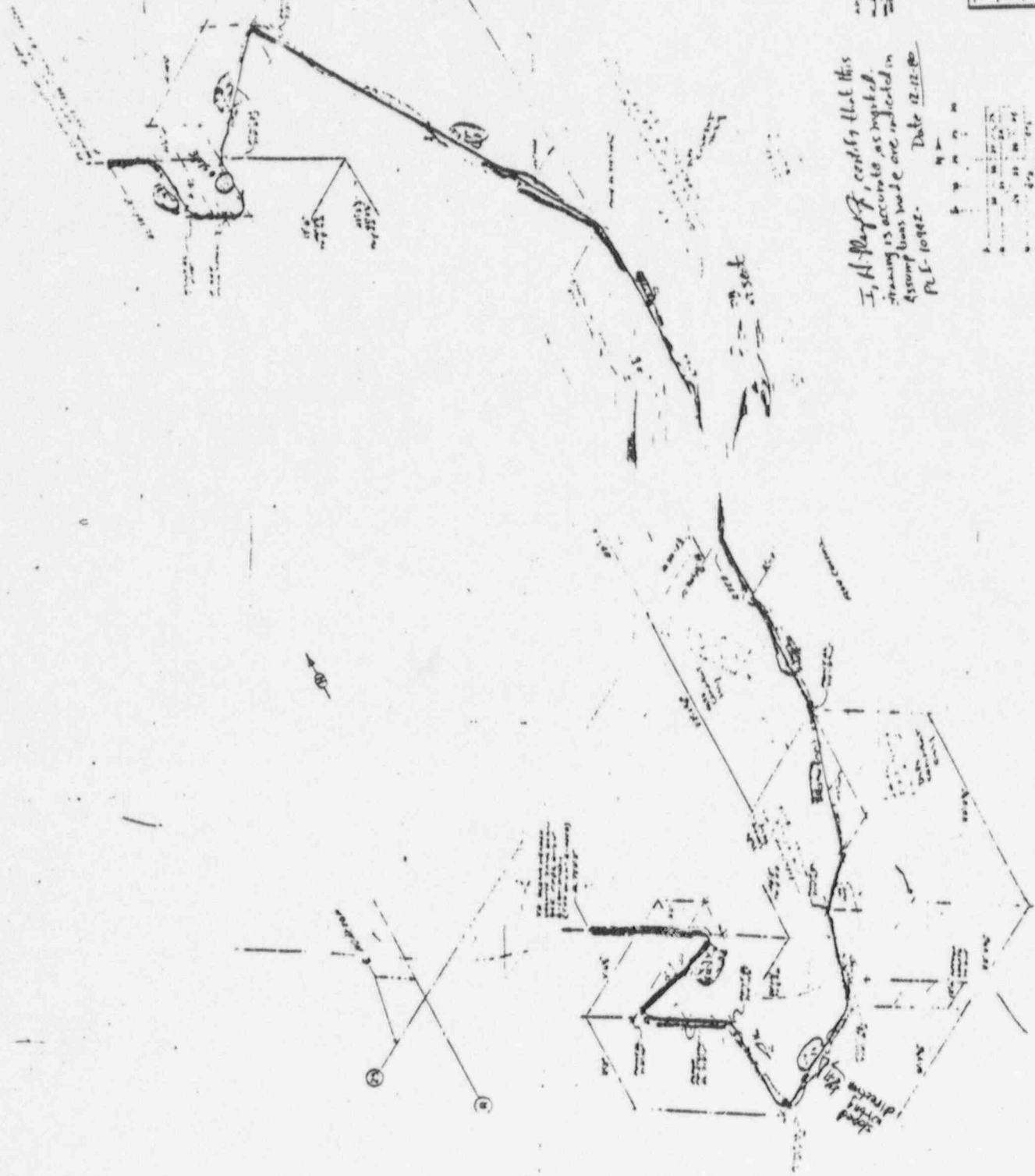
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NOTES:  
1. THIS DRAWING IS A REPRODUCTION OF THE ORIGINAL DRAWING AND IS NOT TO BE USED FOR CONSTRUCTION.  
2. ALL DIMENSIONS ARE IN FEET AND INCHES.  
3. ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.  
4. ALL DIMENSIONS ARE TO BE MAINTAINED TO THE CENTERLINE OF THE ROAD.  
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4. 1/16" = 1' - 1/16" scale  
5. 1/32" = 1' - 1/32" scale  
6. 1/64" = 1' - 1/64" scale  
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11-11-8



I, H. Haupt, certify that this training is accurate as reported.  
Assumptions made are indicated in  
Date 12-12-80  
PL-1092.

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Number	1-600-000
Date	1-1-1918
Name	
Address	
City	
State	
Country	
Remarks	

1. The first step is to identify the problem. This involves understanding the symptoms and the context in which they are occurring.

2. The second step is to gather information. This includes talking to people who are involved in the problem and looking at any relevant data or documents.

3. The third step is to analyze the information. This involves looking for patterns, trends, and potential causes of the problem.

4. The fourth step is to develop a plan. This involves deciding on the best way to address the problem and setting out the steps that need to be taken.

5. The fifth step is to implement the plan. This involves putting the plan into action and making any necessary adjustments along the way.

6. The sixth step is to evaluate the results. This involves checking to see if the problem has been solved and if the solution is sustainable.

7. The seventh step is to document the process. This involves writing up what has happened and what has been learned, so that it can be used as a guide for future problems.

8. The eighth step is to communicate the results. This involves sharing the findings with the relevant stakeholders and ensuring that everyone is aware of what has happened and what has been learned.

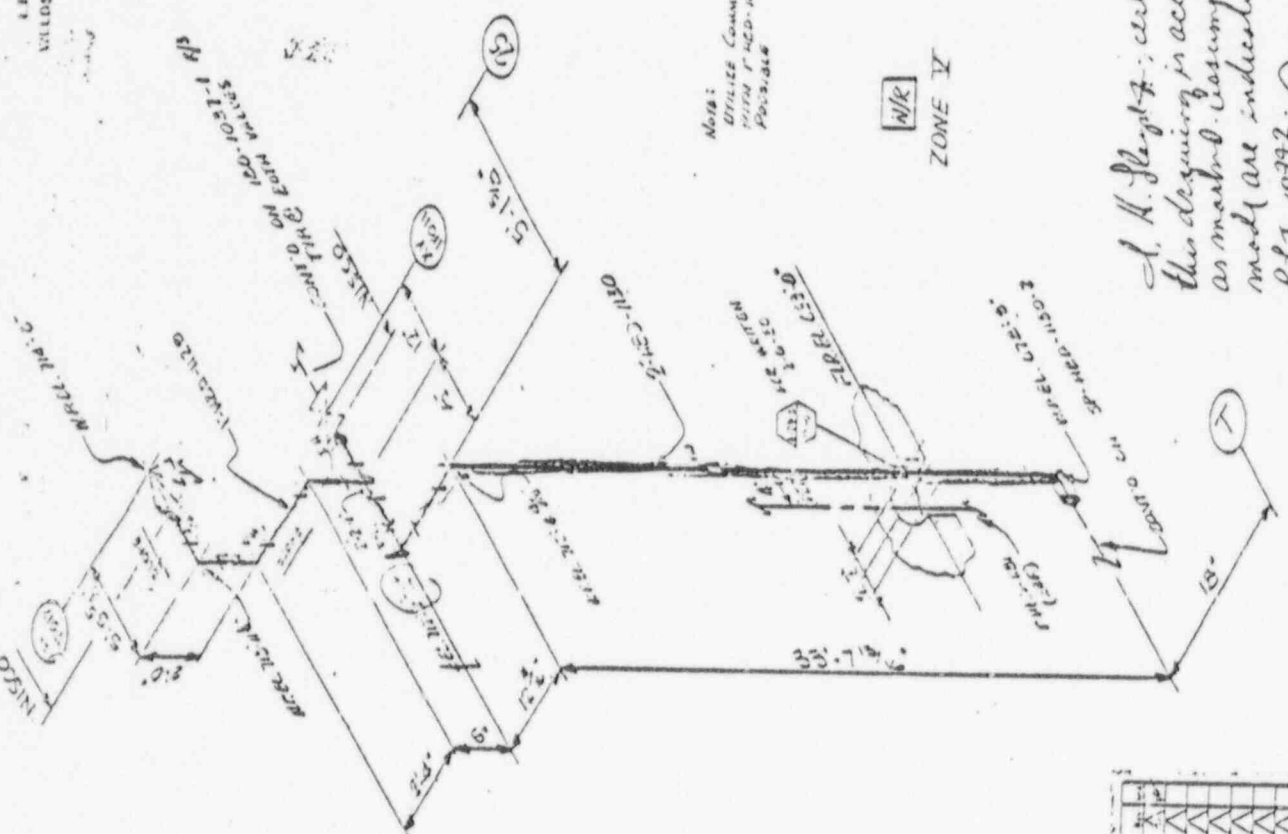
9. The ninth step is to review the process. This involves looking back at the entire process and thinking about what could be done better next time.

10. The tenth step is to celebrate success. This involves acknowledging the efforts of everyone who has been involved in solving the problem and celebrating the achievement.

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Notes:  
UTILIZE CONCRETE WALLS  
WITH 1" REINFORCING  
ROD, 12" DIA.

W/R  
ZONE V

L. H. Sleight, certifying the  
this drawing is accurate,  
as marked. As inspectors  
made are indicated in  
P.T. 10772. Date 1/12/80

ITEM	DESCRIPTION	QTY	UNIT
1	1" REINFORCING ROD, 12" DIA.	100	LB
2	1" REINFORCING ROD, 12" DIA.	100	LB
3	1" REINFORCING ROD, 12" DIA.	100	LB
4	1" REINFORCING ROD, 12" DIA.	100	LB
5	1" REINFORCING ROD, 12" DIA.	100	LB
6	1" REINFORCING ROD, 12" DIA.	100	LB
7	1" REINFORCING ROD, 12" DIA.	100	LB
8	1" REINFORCING ROD, 12" DIA.	100	LB
9	1" REINFORCING ROD, 12" DIA.	100	LB
10	1" REINFORCING ROD, 12" DIA.	100	LB

QUALITY CONTROL DATA	
NO.	DATE
1	1/12/80
2	1/12/80
3	1/12/80
4	1/12/80
5	1/12/80
6	1/12/80
7	1/12/80
8	1/12/80
9	1/12/80
10	1/12/80

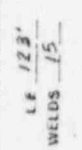
BECHTEL  
NOT FOR CONSTRUCTION

DATE	1/12/80
BY	10772
CHECKED BY	10772
APPROVED BY	10772

WELDING REQUIREMENTS	
ITEM	REQUIREMENT
1	1" REINFORCING ROD, 12" DIA.
2	1" REINFORCING ROD, 12" DIA.
3	1" REINFORCING ROD, 12" DIA.
4	1" REINFORCING ROD, 12" DIA.
5	1" REINFORCING ROD, 12" DIA.
6	1" REINFORCING ROD, 12" DIA.
7	1" REINFORCING ROD, 12" DIA.
8	1" REINFORCING ROD, 12" DIA.
9	1" REINFORCING ROD, 12" DIA.
10	1" REINFORCING ROD, 12" DIA.

1	1" REINFORCING ROD, 12" DIA.
2	1" REINFORCING ROD, 12" DIA.
3	1" REINFORCING ROD, 12" DIA.
4	1" REINFORCING ROD, 12" DIA.
5	1" REINFORCING ROD, 12" DIA.
6	1" REINFORCING ROD, 12" DIA.
7	1" REINFORCING ROD, 12" DIA.
8	1" REINFORCING ROD, 12" DIA.
9	1" REINFORCING ROD, 12" DIA.
10	1" REINFORCING ROD, 12" DIA.





A small diagram of a cell, likely a bacterium, showing a circular nucleus labeled 'N' and a flagellum extending from one side.

L. H. Shepard, certifying that this  
drawing is accurate, as marked.  
Assessments made are indicated  
in P.S. - 10942. Date 12/2/80

ALLOW 15% MOISTURE LOSS ON ALL SINKING WELLS	VENGEANCE	IN - 100% CEMENTAL V - 100% CEMENTAL	W - 100% CEMENTAL
--	-----------	--------------------------------------	-------------------

Q14		Q15		Q16		Q17		Q18		Q19		Q20		Q21		Q22		Q23		Q24		Q25		Q26		Q27		Q28		Q29		Q30		Q31		Q32		Q33		Q34		Q35		Q36		Q37		Q38		Q39		Q40		Q41		Q42		Q43		Q44		Q45		Q46		Q47		Q48		Q49		Q50		Q51		Q52		Q53		Q54		Q55		Q56		Q57		Q58		Q59		Q60		Q61		Q62		Q63		Q64		Q65		Q66		Q67		Q68		Q69		Q70		Q71		Q72		Q73		Q74		Q75		Q76		Q77		Q78		Q79		Q80		Q81		Q82		Q83		Q84		Q85		Q86		Q87		Q88		Q89		Q90		Q91		Q92		Q93		Q94		Q95		Q96		Q97		Q98		Q99		Q100	
Q14		Q15		Q16		Q17		Q18		Q19		Q20		Q21		Q22		Q23		Q24		Q25		Q26		Q27		Q28		Q29		Q30		Q31		Q32		Q33		Q34		Q35		Q36		Q37		Q38		Q39		Q40		Q41		Q42		Q43		Q44		Q45		Q46		Q47		Q48		Q49		Q50		Q51		Q52		Q53		Q54		Q55		Q56		Q57		Q58		Q59		Q60		Q61		Q62		Q63		Q64		Q65		Q66		Q67		Q68		Q69		Q70		Q71		Q72		Q73		Q74		Q75		Q76		Q77		Q78		Q79		Q80		Q81		Q82		Q83		Q84		Q85		Q86		Q87		Q88		Q89		Q90		Q91		Q92		Q93		Q94		Q95		Q96		Q97		Q98		Q99		Q100	

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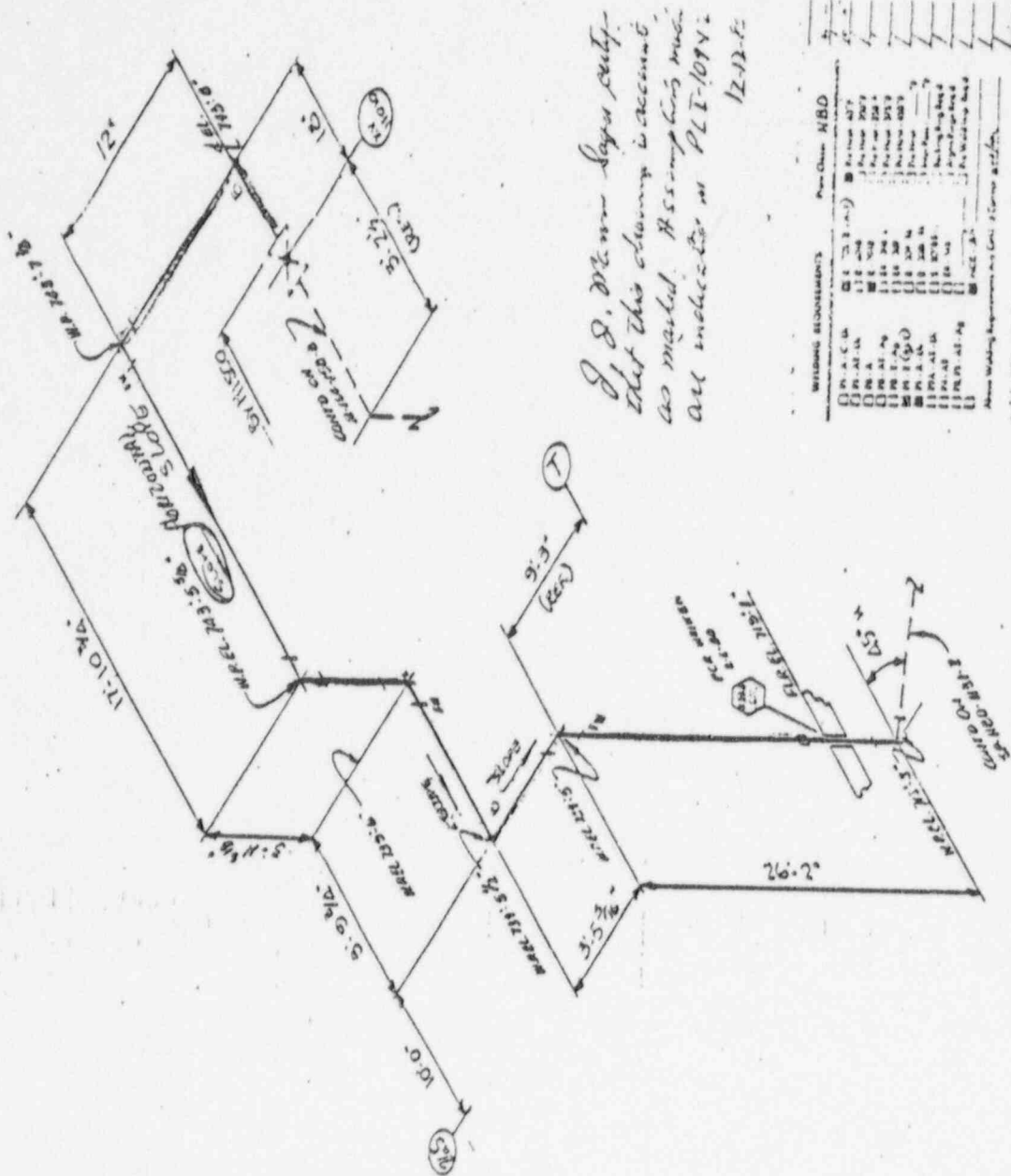
Q43

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~~UNCONTROLLED CO.  
NOT FOR CONSTRUCTION~~

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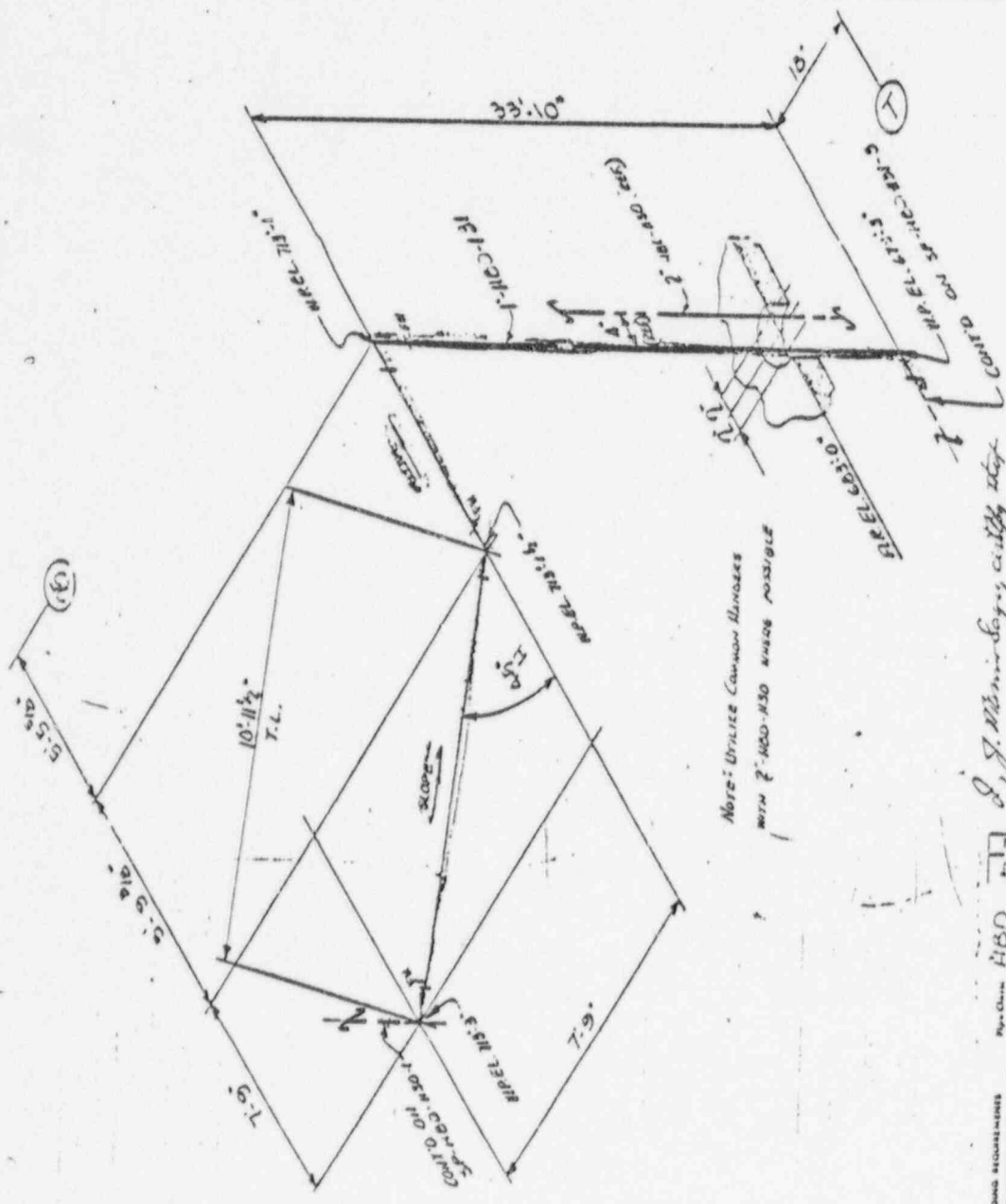
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**BECHTEL POWER CORPORATION**  
BIRMINGHAM, PENNSYLVANIA 15106 - BIRMINGHAM, CALIFORNIA

**PENNSYLVANIA POWER & LIGHT COMPANY**  
ALLENTOWN, PENNSYLVANIA  
POUGHKEEPSIE, NEW YORK  
NEW YORK, NEW YORK  
NEW YORK, NEW YORK

FILE	VENT FROM XV-1FO10 TO REACTOR SUMP	ALIAS NO. 8856	INSTRUMENT NO. SP-HED-1131-2	REV. 0
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Note: Utilize Cannon Hoses  
w/ 2" NED-H30 hoses possible

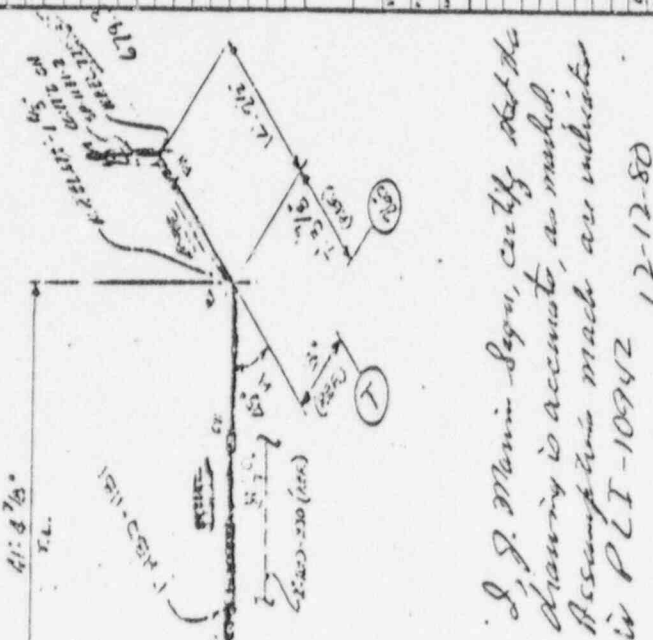
D. J. Manning, with the  
the above accounts as  
proved. Assumption made  
as indicated in P.T-10942.  
12-12-50

WELDING REQUIREMENTS		Play Class	HB
1	101 A C 1A	1	101 300 4879
2	101 A1 1A	1	101 300 330 9
3	101 A2 1A	1	101 300 330 9
4	101 A3 1A	1	101 300 330 9
5	101 A4 1A	1	101 300 330 9
6	101 A5 1A	1	101 300 330 9
7	101 A6 1A	1	101 300 330 9
8	101 A7 1A	1	101 300 330 9
9	101 A8 1A	1	101 300 330 9
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11	101 A10 1A	1	101 300 330 9
12	101 A11 1A	1	101 300 330 9
13	101 A12 1A	1	101 300 330 9
14	101 A13 1A	1	101 300 330 9
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21	101 A20 1A	1	101 300 330 9
22	101 A21 1A	1	101 300 330 9
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100	101 A99 1A	1	101 300 330 9
101	101 A100 1A	1	101 300 330 9

Minimum Welding Requirements for Certified Welders (per AWS)

ALLOW 1"18" ROOF CAP ON ALL SLOKES WALLS

UNCONTROLLED -  
NOT FOR CONSTRUCTION



NOTE: V-LINE COMMON NUMBERS  
WITH 2 250-420 WERE POSSIBLE

[illegible]

LF 117  
WELDS 15

*[Faint, illegible handwritten notes or bleed-through from the reverse side of the page.]*