KAISER ENGINEERS

KAISER ENGINEERS, INC.
P. O. BOX 201
MOSCOW, OHIO 45153

Date: 9-5-78

Standard Test Procedure

Perform Hydrostatic/Pneumatic Test, Test No. PP-25 in accordance with attached Test Data Sheet and QACMI M-10.

Estimated Date of Test: 9-18-78

Test to be Conducted by: R. WELDER
Test Superintendent

CG&E Const. Approval: _____

8302180140 821227
PDR FOIA
DEVINE82-206 PDR

Wm. H. Zimmer Nuclear Power Station
Hydrostatic/Pneumatic Test Report
(Page 1)

Test No. PR-2C

A. Test Parameters

1. System to be tested REACTOR RECIRCULATION (RR)
   Cleanliness Class "B"
2. Bldg. or Location of test R BLDG
3. Orientation and Terminal Points of test SEE ATTACHED P&ID
   elevation of high point 553' elevation of low point 534' el.
4. Attached Drawing Numbers & Revision Numbers M-47-1 REV: G
5. Pipe Fabricator: (KEI) Other
6. Type Test: Hydrostatic [X] Pneumatic [ ]
7. Test Media FYRQUEL EHC HYDRAULIC FLUID
8. Test Plan (Select One) (USE SYSTEM HYDRAULIC UNIT FOR PRESSURE SOURCE.)
   Hydrostatic KEI 10-101 [X] Pneumatic KEI 10-103 [ ]
   Hydrostatic KEI 10-102 [ ]
9. A. Required Test Pressure 3000 P.S.I.G. (minimum at highest elev.
   (1.) From S&L Piping Line List
   2. 1.25 times design pressure Ref. ASME Code
   3. 1.5 times design pressure Ref. ANSI B31.1
   4. As specified by CG&E Construction Engineer for Class D Systems only
   Signature/Date N/A
   B. Maximum pressure to which system can be pressurized 3150 PSIG (material or component restraint)

KAISER ENGINEERS

Form 2 Rev. 5
4-5-78

Wm. H. Zimmer Nuclear Power Station
Hydrostatic/Pneumatic Test Report
(Page 2)

Test No. RR-35

C. Gauge location (elevation) 530' expected static pressure reading 10 PSIG

D. Specified test pressure (9A + 9C) 2010 PSIG

E. Greater of 3/4 test pressure or design pressure (ASME test only) 2000 PSIG

F. Holding test pressure (~~9E - 9F~~) 3000 PSIG

10. Test Parameters completed by [signature] 9-5-79
Signature/Date

Verified [signature] 9-5-79
KEI Q.A. Engineer

B. Test Prerequisites

1. Valve Lineup completed by [signature] 3-5-79
Signature/date

2. Water Analysis Report available and acceptable. NA
KEI-QA Signature/Date

3. Test Gauges: Note Range shall be more than 1½ times test pressure but less than 4 times test pressure.

S/N WTG-58 Range 0-5000 Psi Calib. date 10-22-78 Due date 4-22-79

S/N WTG-1.00 Range ± 500 Psi Calib. date 1-22-79 Due date 7-22-79

S/N N/A Range ± Psi Calib. date _____ Due date _____

9/27/79 - ReTest - WTG-71-0-5000 9/11/79 3/11/80

9/27/79 - ReTest - WTG-68-0-5000 9/11/79 3/11/80

" " " " TS-1.00

" " " " TR-256

" " " " HT + 10 MIN

[illegible]CTIONS (1) VALVE B33-F343D. [illegible]
TIME OF TEST. WELD [illegible]
NOT INSPECTED.

Wm. H. Zimmer Nuclear Power Station
Hydrostatic/Pneumatic Test Report
(Page 3)

Test No. RR-25

C. Test Results

1. Ambient temp. 75° Media temp. 75°

2. Time test started 10:15AM Time test pressure reached 10:25A
Hold time 10min Time test completed 10:45AM
Test Gauge Pressure Reading at test 3025 PSIG

3. Test Results & Remarks: No Leaks

4. Test conducted by: [signature] 3-5-79
Signature/date

5. Remove test tags, remove test equipment, etc. R
[signature] 3-5-79
Signature/date

R

D. Test Witnessed and Accepted By:

1. KEI Hydrotest Super. and/or Engineer [signature] 3-5-79
Signature/date

2. Quality Assurance Representative [signature] 5-79 R
Signature/date WITH 1 EXCEPTION (SEE BACK)

3. CG&E Representative/Ohio Special Insp. [signature] 3/5/79
Signature/date

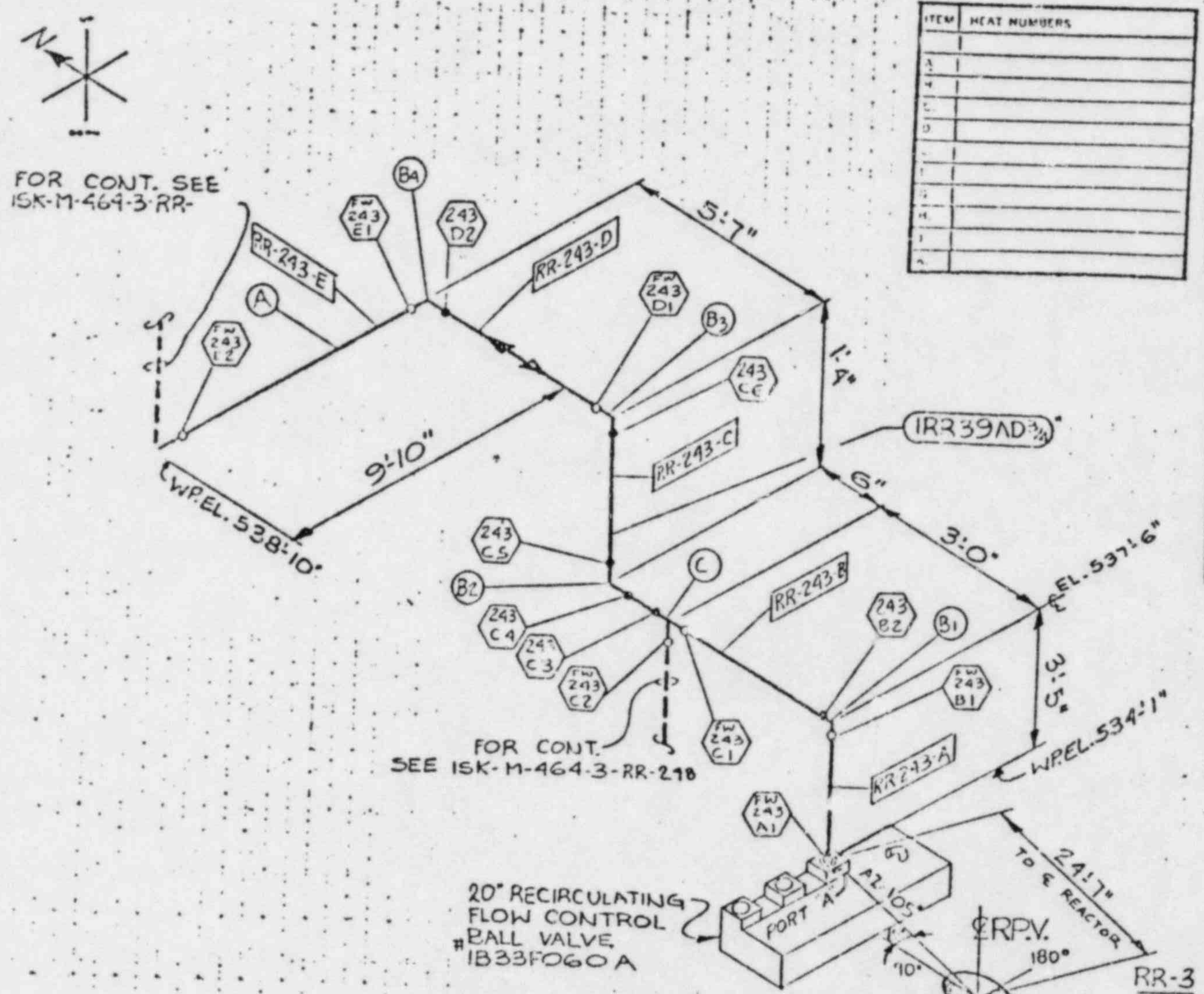
4. Authorized Nuclear Inspector [signature] 3-5-79
Signature/date

HYDROSTATIC TEST VALVE LINE UP Hydro RR-25

VALVE NUMBER	POSITION	COORDINATES	DRAWING NUMBER
1B33F3[illegible]D	Open	[illegible]-4	M-47-1
1B33F3[illegible]D	Closed	[illegible]-4	M-47-1

Note: Protect all instruments in panels, on racks, etc. from Hydro Test Pressure.

INFORMATION ONLY
NOT TO BE USED FOR
PHYSICAL CONSTRUCTION



ITEM	HEAT NUMBERS
A	
B	
C	
D	
E	
F	
G	
H	
J	
K	

MATERIAL – TAKE-OFF CLASS B ESSENTIAL

Pipe design table: 2540WZ — Code class: 2

ITEM	QTY	UNIT	SIZE	SCH	MATERIAL DESCRIPTION & SPEC
A	24'-1	LF	3/4"	80S	PIPE ASTM A312 GR TP304
B	4	EA	3/4"	6000	90° ELL ASTM A182 F304
C	1	EA	3/4"	6000	TEE ASTM A182 F304
D					
E					
F					
G					
H					
J					
K					

KE-1-WELD DATA — SMALL BORE PIPING

Weld Procedure: 3.1.3?
Preheat & Interpass Temp.
Filler Metal Type: ER 308
Filler Metal Size: 3/32"
Fillet Size (See Procedure)
Special Instructions

For filled welds only
APPROVALS
Project Eng.
QA Eng.
Field Review 7/12/78

Verify fit-up
Verify weld size
Verify ferrite
Verify content record

N/A N/A

The welding data noted on this ISK shall not apply to groove weld connections to large bore pipe.

JPScott 7-11-78

CLEAN. CLASS	B	SEISMIC CLASS	B
DESIGN TEMP	185° F	DESIGN PRESS	3000 PSIG
REF. SPEC	H-2256	INSULATION	N/A
WELD PROCEDURE			
LINE NO	IRR39AD 3/4"		
HANGER NO.			
PIECE NOS	RR-243-A, B, C, D, E		
REF. DWGS	M-47-1, M-464-3		
AREA	AA-533 REACTOR BLDG.		
DRAWN BY	R.L.S.	CHECKED BY	DES
SYSTEM	REACTOR RECIRCULATION		

NO	DATE	BY	DESCRIPTION

REVISIONS

WM. H. ZIMMER NUCLEAR POWER STATION UNIT I

KAISER ENGINEERS

KAISER ENGINEERS INC
JOB NO 7010

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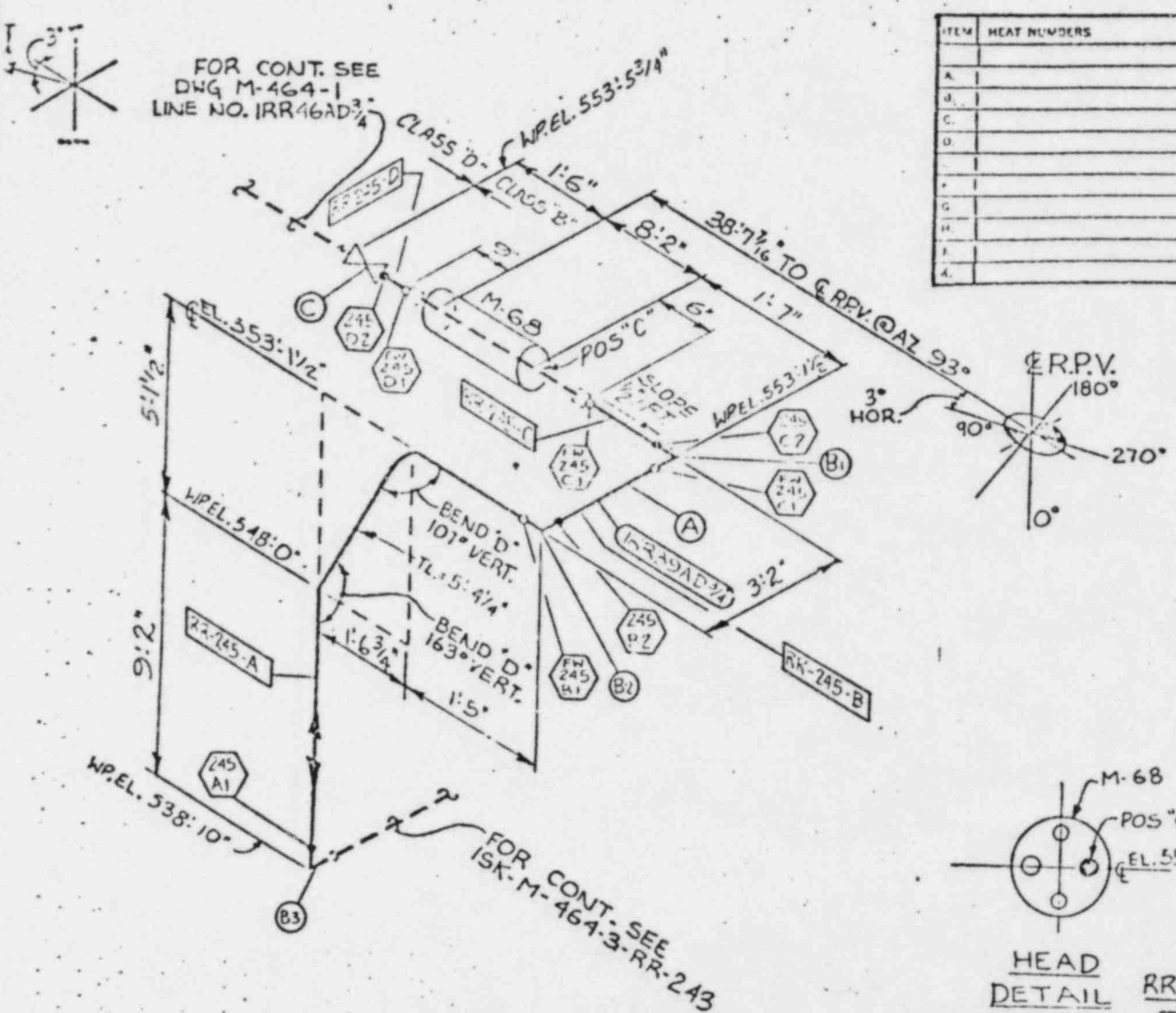

ITEM	HEAT NUMBERS
A.	
B.	
C.	
D.	
E	
F	
G	
H	
I	
J	

MATERIAL – TAKE OFF CLASS 2 ESSENTIAL
2540 WZ

	QTY			MATERIAL DESCRIPTION	
A	[illegible]	LF	3/4	80S PIPE ASTM A312 TP [illegible]	
B	3	EA	3/4	6000 COUPL ASTM A182 F304	
C	1	EA	3/4	1500 VALVE GLOBE, SS A182 F304 or F316 [illegible]	
D					
E					
F					
G					
H					
I					
J					
K					

KE-1-WELD DATA — SMALL BORE PIPING

	INSTRUCTIONS	QA STAMP
Weld Procedure # [illegible]	1. Verify ...	
Preheat & Interpass Temp [illegible]		
Filler Metal Type [illegible]	2. Verify ...	
Filler Metal Size 3/32" 1/8"	3. ...	
Fillet Size (see procedure)	4. Check ...	
Special Instructions		
for fillet welds only		
APPROVALS		
Const. Eng. 7/11/78	5. Verify ...	
QA Eng.		
ANI Review 7/12/78		

ALL BENDING PER FIELD
CONSTRUCTION PROCEDURE 2-205
BEND A - 92° - 22'
BEND B - 90° - 0'
BEND C - 87° - 33'
BEND D - AS NOTED

The welding data noted on this ISK shall not apply to groove weld connections to large bore pipe.

HEAD DETAIL
SEE DOC# M-2554

RR-3
8 TOTAL WELDS

CLEAN CLASS B	SEISMIC CLASS B		
DESIGN TEMP 185°F	DESIGN PRESS 3000 PSIG		
REF. SPEC H-2256	INSULATION N/A		
WELD PROCEDURE			
LINE NO. IRR39AD3/4"			
HANGER NO			
PIECE NOS RR-245-A,B,C,D			
REF DWGS M-47-1, M-464-3			
AREA AA-553 REACTOR BLDG			
DRAWN BY R.L.S.			
SYSTEM REACTOR RECIRCULATION (RR)			

WM. H. ZIMMER NUCLEAR POWER STATION UNIT I
KAISER ENGINEERS
KAISER ENGINEERS, INC JOB NO 7010

NO	DATE	BY	DESCRIPTION
			REVISIONS

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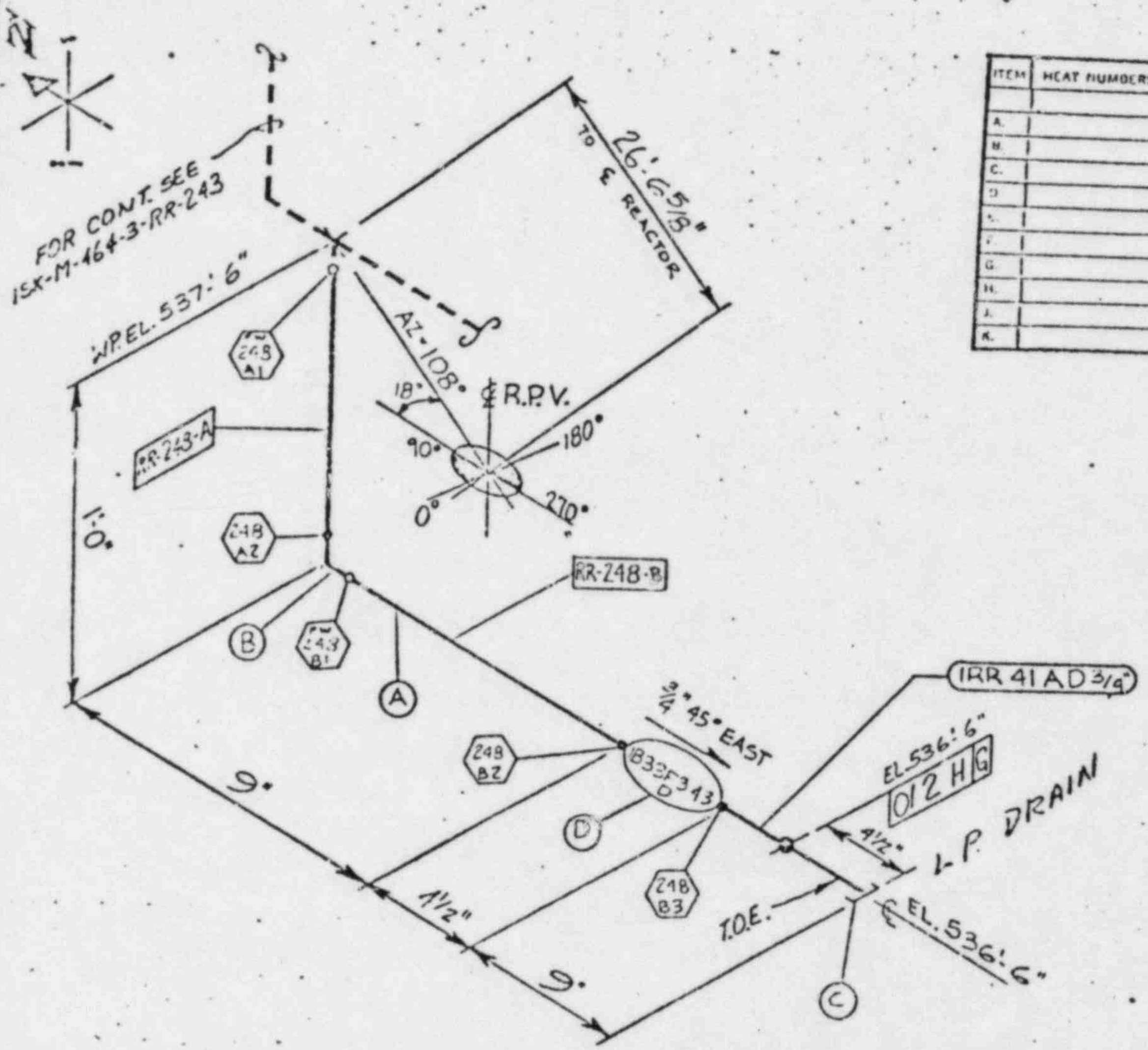
PHYSICAL CONSTRUCTION



ITEM	HEAT NUMBERS
A.	
B.	
C.	
D.	
E.	
F.	
G.	
H.	
J.	
K.	

MATERIAL – TAKE-OFF CLASS B ESSENTIAL

Design Table: 2540WL — ASME Class: 2

ITEM	QTY	UNIT	SIZE	MATERIAL DESCRIPTION & SPEC			
A	2	LF	3/4	80S PIPE ASTM A312 [illegible]	[illegible]	[illegible]	[illegible]
B	1	EA	3/4	[illegible] 90° ELL ASTM A182 [illegible]	[illegible]	[illegible]	[illegible]
C	1	EA	3/4	[illegible] CAP ASTM SA-316 SCHD	[illegible]	[illegible]	[illegible]
D	1	EA	3/4	2500# VALVE GLOBE SS-182 F316 OR F316 (1833F343 D)			
E							
F							
G							
H							
J							
K							

KE-1-WELD DATA — SMALL BORE PIPING

		QA STAMP	DATE
Weld Procedure: [illegible]	[illegible]		
Preheat & Interpass Temp: [illegible] °F min.	Weld [illegible]		
Filler Metal Type: ER 308	1 & 2 [illegible] & Record Heat Nos.		
Filler Metal Size: 3/32", 1/8"	Verify [illegible]		
Fillet Size: (see procedure)	[illegible] metal & [illegible]		
Special Instructions:	Visually inspect per SPPM 4.6 R [illegible]		
For [illegible] only	Complete [illegible]		
APPROVALS	4 Final PT per SPPM		
[illegible] 7/11/78 Const. Eng.	4.2 R [illegible]		
[illegible] QA Eng.	5 Verify Ferrite		
KB 7/12/78 [illegible]	Ferrite record [illegible]	[illegible]	[illegible]

J.R. Scott
7-11-78

The welding data noted on this ISK shall not apply to groove weld connections to large bore pipe.

RR-3

5 TOTAL WELDS

NO	DATE	BY	DESCRIPTION

REVISIONS

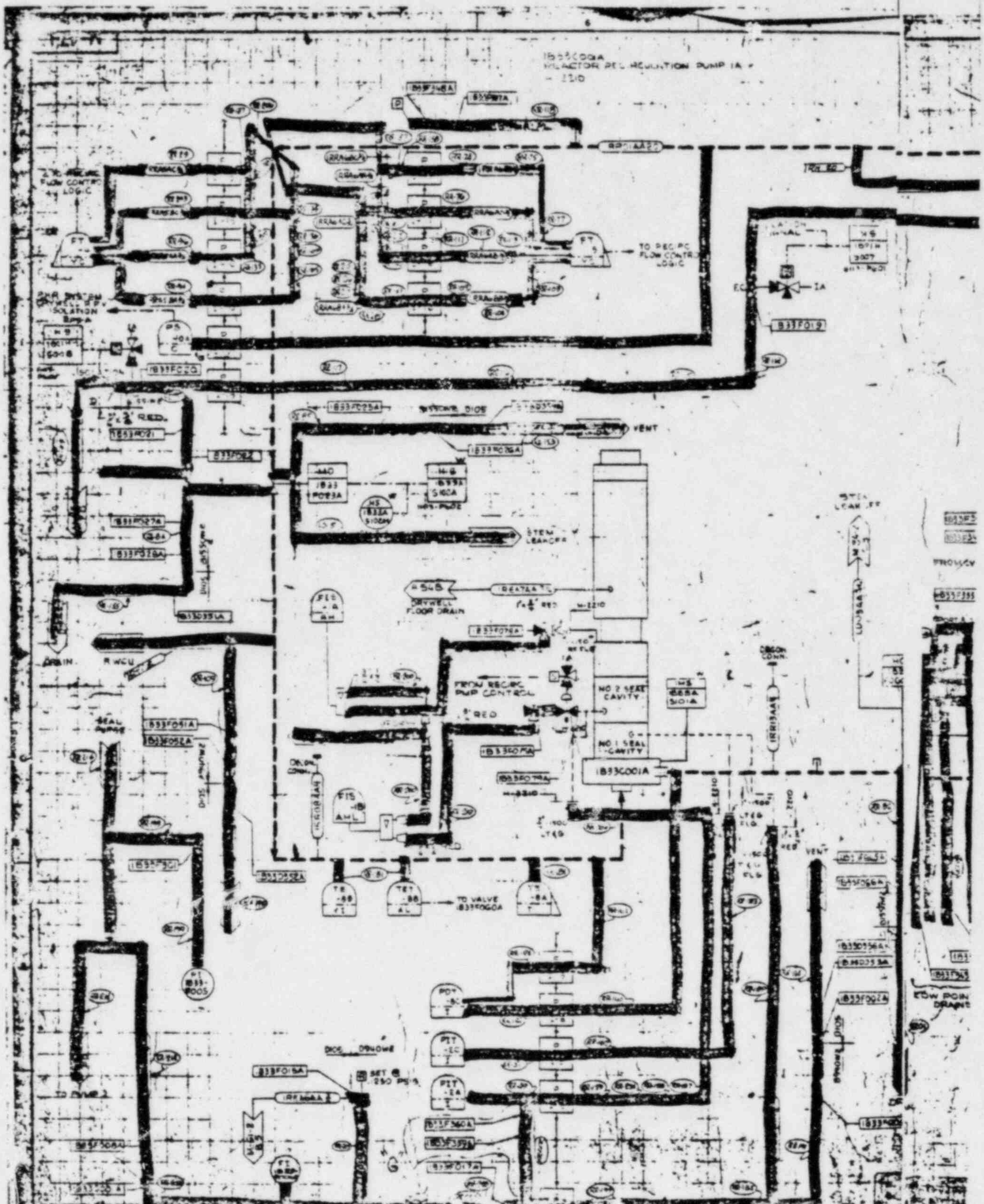
WM. H. ZIMMER NUCLEAR POWER STATION UNIT I

KAISER ENGINEERS

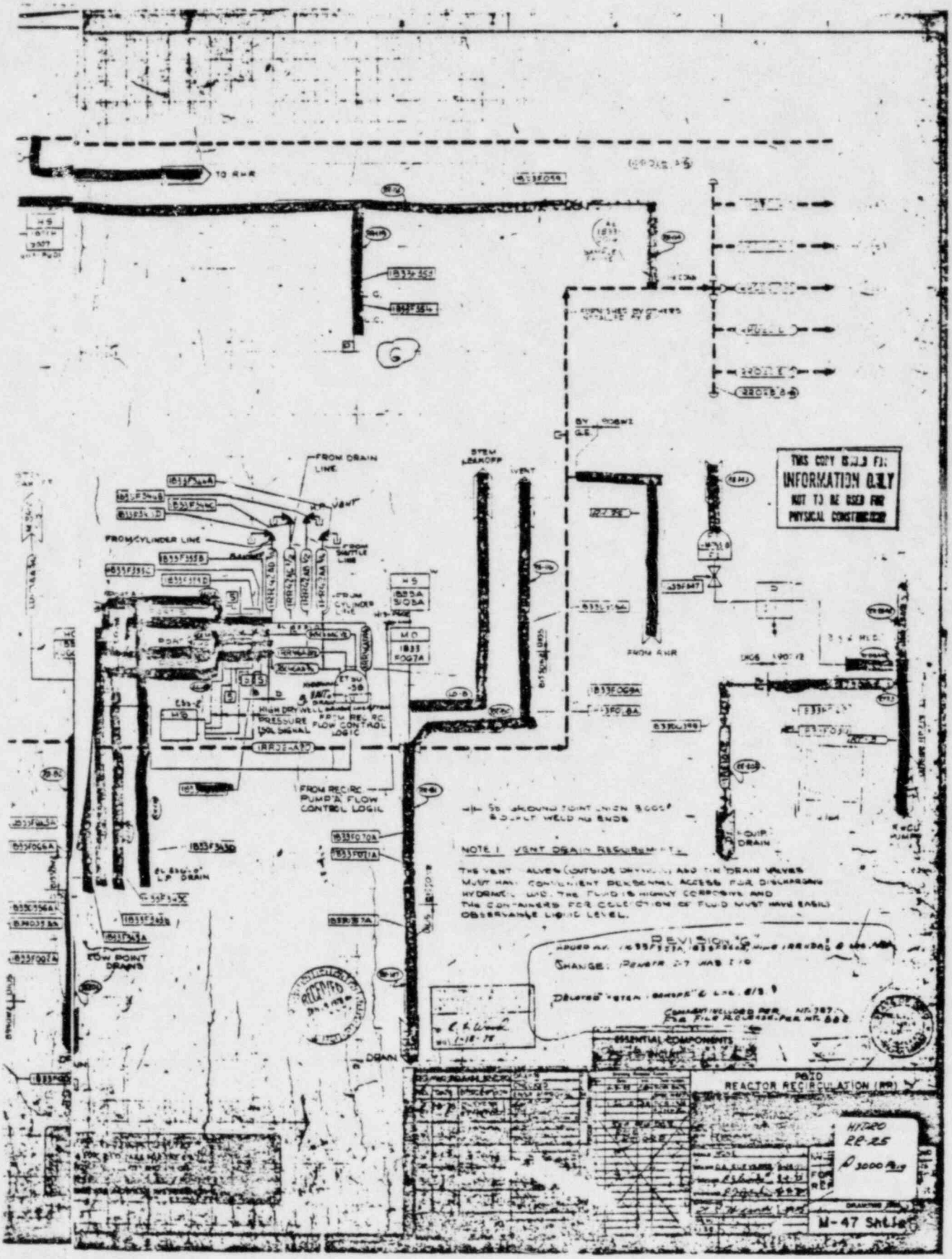
KAISER ENGINEERS, INC.
JOB. NO. 7070

CLEAN CLASS	B	SEISMIC CLASS	[illegible]
DESIGN TEMP	150°F	DESIGN PRESS	[illegible]
REF. SPEC	H-2256	INSULATION	N/A
WELD PROCEDURE			
LINE NO	1RR41AD-3/4"		
HANGER NO	012 HG		
PIECE NOS	RR-243-A, B		

REF. DWGS: M-47-1, M-464-3
AA-534 REACTOR [illegible]
DRAWN: R.L.S. CHECKED: [illegible]
REACTOR RECIRCULATION (RR)
DWG NO ISK-M-464-3-RR-243 REV. [illegible]



1B33C001A
REACTOR RECIRCULATION PUMP 1A
TO RECIRC FLOW CONTROL LOGIC
1B33F019
1B33F020
DRYWELL FLOOR DRAIN
STEM LEAKAGE
VENT
FROM RECIRC PUMP CONTROL
NO. 2 SEAL CAVITY
NO. 1 SEAL CAVITY
1B33C001A
DRAIN
RWCU
SEAL PURGE
TO VALVE 1B33F060A


TO RHR
FROM DRAIN LINE
FROM CYLINDER LINE
FROM RHR
FROM RECIRC PUMP 'A' FLOW CONTROL LOGIC
HIGH DRYWELL PRESSURE SGL SIGNAL
RECIRC FLOW CONTROL LOGIC
EQUIP DRAIN
FLOOR DRAIN
LOW POINT DRAINS
NOTE 1 VENT DRAIN REQUIREMENTS
THE VENT VALVES (OUTSIDE DRYWELL) AND DRAIN VALVES MUST HAVE CONVENIENT PERSONNEL ACCESS FOR DISCHARGING HYDRENE 150. THE FLUID IS HIGHLY CORROSIVE AND THE CONTAINERS FOR COLLECTION OF FLUID MUST HAVE EASILY OBSERVABLE LIQUID LEVEL.
REVISIONS
ESSENTIAL COMPONENTS
REACTOR RECIRCULATION (RR)
M-47 Sht 1
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STANDARD TEST PROCEDURE - HEAD SHEET

	YES	NO
a. Dates Established	[X]	[ ]
b. Package numbered	[X]	[ ]
c. Test Conducted	[X]	[ ]

A. TEST PARAMETERS - SHEET 1
Items filled in correctly

	YES	NO
1. Systems & Class	[X]	[ ]
2. Location of Test	[X]	[ ]
3. Elevation of Terminal PTs	[X]	[ ]
4. Attached Drawings	[X]	[ ]
5. Pipe Fabricator Noted	[X]	[ ]
6. Type Test Matches A.8	[X]	[ ]
7. Test Media	[X]	[ ]
8. Test Plan (only one) and Revision Number Noted	[X]	[ ]
9. a.1. As per S&L	[X]	[ ]
a.2. As per CG&E	[X]	[ ]
9b. Maximum Pressure	[X]	[ ]
9c. Amount of Head Pressure	[X]	[ ]
9d. Gauge Location & Elev Correct	[X]	[ ]
9e. Initial Test Pressure Correct	[X]	[ ]
9f. Holding Test Pressure Correct	[X]	[ ]
10. Test Parameters		
Completed by: signed and dated correctly	[X]	[ ]
Verified by: signed and dated correctly	[X]	[ ]

Check list completed and reviewed by [signature] Date 4/7/80

QUALITY CHECKLIST A.I.R. HYDRO/PNEUMATIC [illegible] [illegible] #

	YES	NO
B. 1. Valve Line up Signed and Dated	X	
2. Water Analysis Report Signed and Dated	X	
3. Test Gauges Listed	X	
Ranges Acceptable	X	
Calibration Dates Acceptable	X	
C. 1. Temperatures Filled In	X	
2. Time Test Started: Completed	X	
Time Test Reached: Completed	X	
Hold Time Correct	X	
3. Test Results: Completed	X	
D. 1. KEI Supv./or Engineer Signed and Dated	X	
2. Q.A. Representative Signed and Dated	X	
3. CG&E Representative Signed and Dated	X	
4. A.N.I.: Signed and Dated	X	
E. Remove Test Tags, Remove Test Equipment etc. Signed and Dated	X	
F. Hydrostatic Test Valve Line up All Items Complete and Match P.I.D. Boundaries	X	
G. PSK or ISKs Marked with Boundaries and Valves Match Valve List	X	

Check list completed and reviewed by R. Clark Date 4/12/80