

Handwritten signature and date: 7/30/84

PHILADELPHIA ELECTRIC COMPANY
LIMERICK GENERATING STATION
SURVEILLANCE TEST

ST-1-051-702-1 "B" RHR LOOP CONTAMINATED PIPING INSPECTION

Test Freq.: 18 Months -OR- Initiating Events: 1. Reason Performance *Initial*
Tech. Spec.: 6.8.4.a
FSAR 6.2.8.1
FSAR 6.2.8.3 2. MRF No. _____

TEST RESULTS:

A. All Asterisked(*) Steps Completed SATISFACTORILY.

Performed By: (Sign/Date) *mjs* 9/15/84
Performed By: (Sign/Date) _____
Informed Test Complete: (ACO or CO) (Sign/Date) *R. J. ...* 9-15-84
(Time) 14:11
Reviewed By: (SSVN or STA) (Sign/Date) *W. R. ...* 9/15/84

B. One or More Asterisked(*) Steps Test Results UNSATISFACTORY.

Performed By: (Sign/Date) _____
Informed of Test Results: (CO or ACO) (Sign/Date) _____
(Time) _____
Shift Supervision: (Sign/Date) _____
Corrective Action: MRF No.: _____
Initiated By: (Sign/Date) _____

IMMEDIATELY NOTIFY SENIOR PLANT STAFF MEMBER

Person Notified: (Name) _____
Date/Time Notified: (Date/Time) _____
Notified By: (Sign) _____

ADDITIONAL ACTION/TEST COMMENTS:

If any entry is made in Additional Action/Test Comments Section, person making initial entry sign here

8410160358 841012 (Sign/Date) _____
PDR ADOCK 05000352
A PDR

1.0 PURPOSE

To inspect and measure any leakage of RHR system components that are directly associated with system piping that could carry contaminated fluids during a serious accident or transient. This inspection shall be implemented while the RHR loop is operating in the Shutdown Cooling Mode or in the test mode.

2.0 REFERENCES

- 2.1 8031-M-51, Residual Heat Removal, Sheet 1
- 2.2 8031-M-51, Residual Heat Removal, Sheet 2
- 2.3 NUREG-0737

3.0 TEST EQUIPMENT

- 3.1 Graduated cylinder(s)
- 3.2 One-liter bottle(s)
- 3.3 Assorted funnels
- 3.4 Stopwatch
- 3.5 Inspection mirror with handle
- 3.6 Radioactive disposal containers as needed

4.0 PRECAUTIONS & LIMITATIONS

- 4.1 If a procedural step cannot be completed, make a comment in the Additional Action/Test Comments section of the Data Sheet.
- 4.2 Signoff steps marked "SO" in the left-hand margin of the body of the procedure require a signoff on the Data Sheet or Procedure Cover Sheet.

- 4.3 Leakage rates of greater than 5 drops per min (.25 cc/min) shall be quantified. Put ".25 cc/min" on Data Sheet Attachment A for components with leakage rates of 5 drops per min or less.
- 4.4 Data Sheet steps marked (*) are specific Tech. Spec. requirements which will fail the test if not completed satisfactorily.
- 4.5 If any component exhibits excessive leakage notify SSVN immediately.

5.0 PREREQUISITES

- 5.1 Request RWP and HP assistance when needed.
- 5.2 Inspector is familiar with the RHR system layout and location.
- 5.3 Obtain a copy of the previous inspection's Data Sheet Attachment A.
- 5.4 RHR piping is at operating pressure during this inspection for ST-6-051-232-1 or per Operating Procedures S51.8.A and S51.8.B.
- 5.5 Coordinate with Operator running the system to allow pump run durations to be extended for the inspection.
- 5.6 If ST-1-051-701-1 for the "A" Loop RHR System Contaminated Piping Inspection ~~is not performed in the Shutdown Cooling Mode during this outage this test must be performed in the Shutdown Cooling Mode.~~
W/M
LAH
does not include inspection of the Shutdown Cooling Section during this outage this test must perform inspection of the Shutdown Cooling Section.

6.0 PROCEDURE

IT IS THE RESPONSIBILITY OF THE PERSON OR PERSONS PERFORMING THIS TEST TO ENSURE ALL BLANKS AND DATA SHEETS ARE CORRECTLY AND COMPLETELY FILLED IN.

6.1 Preparation

- SO 6.1.1 Verify all prerequisites are satisfied.
- 6.1.2 Record appropriate information for each piece of measurement and test equipment used with a PECO number and verify the equipment is within it's calibration period.

6.2 Shift Permission to Test

- SO 6.2.1 Obtain Shift Supervision's (SSVN's) permission to start test.
- SO 6.2.2 Obtain Assistant Control Room Operator's permission to start test.

6.3 RHR System Contaminated Piping Inspection

ACTUAL LEAKAGE RATE MEASUREMENT METHODS WILL BE LEFT TO THE DISCRETION OF THE INSPECTOR. THE ONLY GUIDELINES BEING THAT ALL DATA WILL BE A MEASURED QUANTITY OF FLUID OVER TIME USING A STOPWATCH. DROPS PER MINUTE CAN BE USED AS A MEASUREMENT WHERE 20 DROPS = 1CC. ALL RECORDED DATA SHALL BE IN CUBIC CENTIMETERS PER MIN. (CC/MIN.)

- SO 6.3.1 Mark in the Data Sheet the mode of operation for the "B" Loop during this inspection.
- 6.3.2 For all in line components that exhibit leakage, within boundaries of Attachment B, record on the Data Sheet the leakage rate and a description of the location of the leak. Pay particular attention to system components identified as having exhibited measurable leakage in the previous inspection.
- SO 6.3.3 ~~If this test is being run in the Shutdown Cooling Mode also include the components within the dashed boundaries of Attachment B.~~
- 6.3.4 From the leakage rate data on Attachment A, calculate the total system leakage rate and document the results on the Data Sheet Section 6.3.

WMA 9/15/14
LAK

6.4 Test Results Evaluation

- SO 6.4.1 Compare the leakage rate limit in 8.1 to the total system leakage rate. If the limit is exceeded prepare a MRF to reduce the system leakage rate so that it is within the limit.
- 6.4.2 If any component's leakage rate has increased significantly since the last inspection prepare a MRF to repair the component.
- 6.4.3 If any component's leakage is a major portion of the overall system leakage limit prepare a MRF for its repair.

WMA 9/15/14
LAK

To Test for leakage in the Shutdown Cooling System Suction, have the system running in the Shutdown Cooling mode or have the suction piping filled with the vessel near or above normal level and

7.0 RETURN TO NORMAL

SO 7.1 Inform SSVN ACO the inspection is complete

8.0 ACCEPTANCE CRITERIA

8.1 The "B" RHR system shall not exhibit a total leak rate of greater than (Later).

AT TEST COMPLETION, ENSURE COVER SHEET IS CORRECTLY AND COMPLETELY FILLED IN.

"B" RHR LOOP CONTAMINATED PIPING INSPECTION

DATA SHEET (1 of 2)

ACTION REQUIRED

INITIALS

6.0 PROCEDURE

6.1 Preparation

6.1.1 All prerequisites satisfied

MPS

6.1.2 Test Equipment

MPS

<u>INSTRUMENT</u>	<u>MFR./MODEL</u>	<u>SER. NO.</u>	<u>CAL. DUE DATE</u>
<u>STOPWATCH</u>	<u>Victor WyleR</u>	<u>53-0030</u>	<u>8/3/85</u>
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

6.2 Shift Permission to Test

6.2.1 SSVN permission obtained

MPS

6.2.2 ACO permission to test

JK
CO/ACO

9-13-84/5⁰⁰PM
Date Time

6.3 "B" RHR Loop Contaminated Piping Inspection

6.3.1 Inspection of "B" RHR Loop is being performed while the system is operating per Full Flow Test

MPS

LAB WITH

6.3.3 *Inspection includes Shutdown Cooling Suction*
6.3.4 RHR Loop "B" total leak rate:

MPS

13.25 CC/MIN

.0035 GAL/MIN
(1 cc/min = .000264 gal/min)

MPS

"B" RHR LOOP CONTAMINATED PIPING INSPECTION

DATA SHEET (2 of 2)

ACTION REQUIRED

INITIALS

6.4 Test Results Evaluation

6.4.1 The total "B" RHR system leakage rate is within Acceptable Limits

mjs

7.0 RETURN TO NORMAL

7.1 SSVN and ACO informed of test completion.

mjs

IF ANY ENTRY IS MADE IN THIS SECTION, SIGN COVER SHEET IN APPROPRIATE SPACE.

ADDITIONAL ACTION/TEST COMMENTS _____

"B" RHR LOOP CONTAMINATED PIPING INSPECTION

3843070090

ATTACHMENT A

Inspector: M.P. GALLAGHER

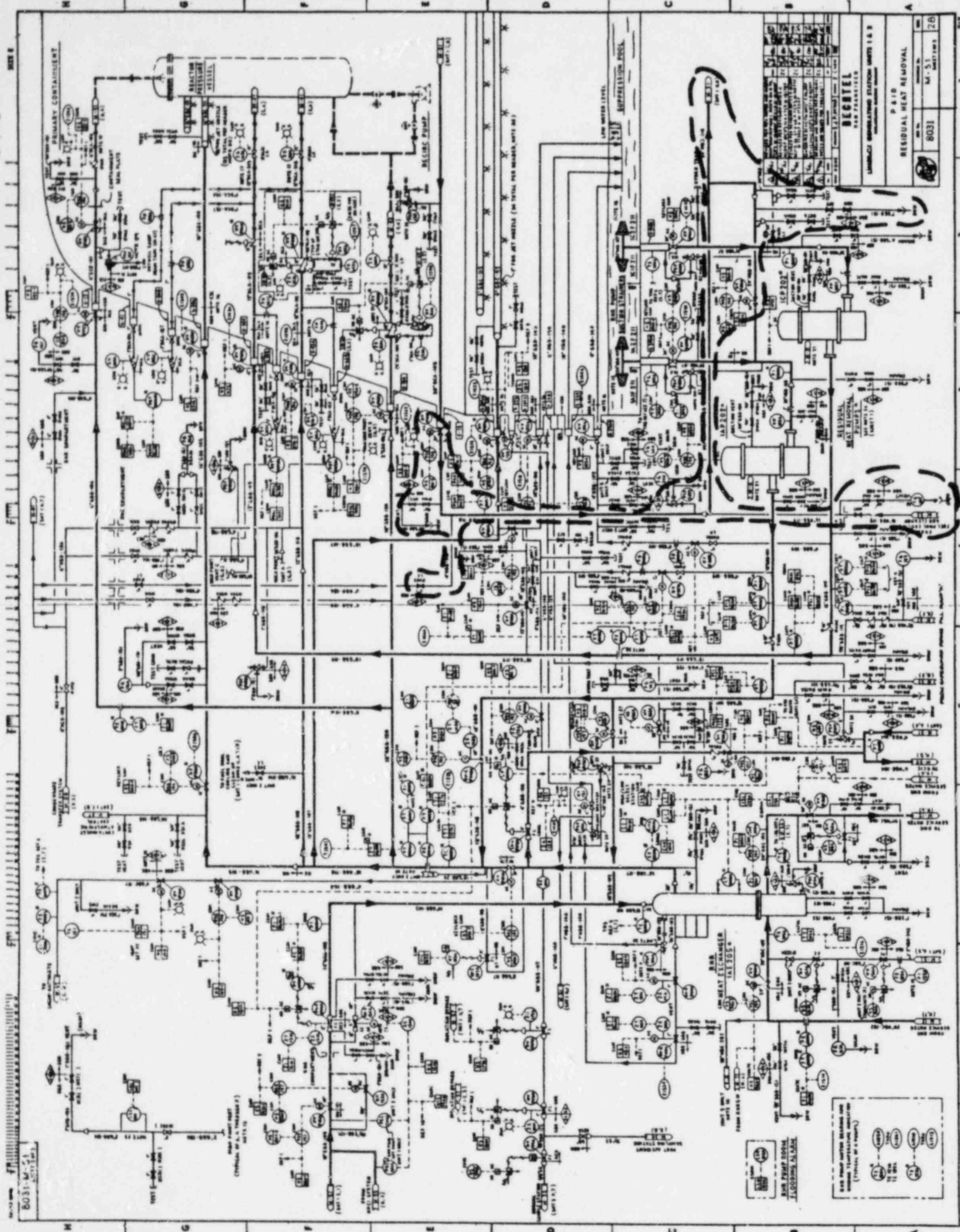
System Mode Full Flow Test Date: 9/13/84

*LAM
WIP 10/14*

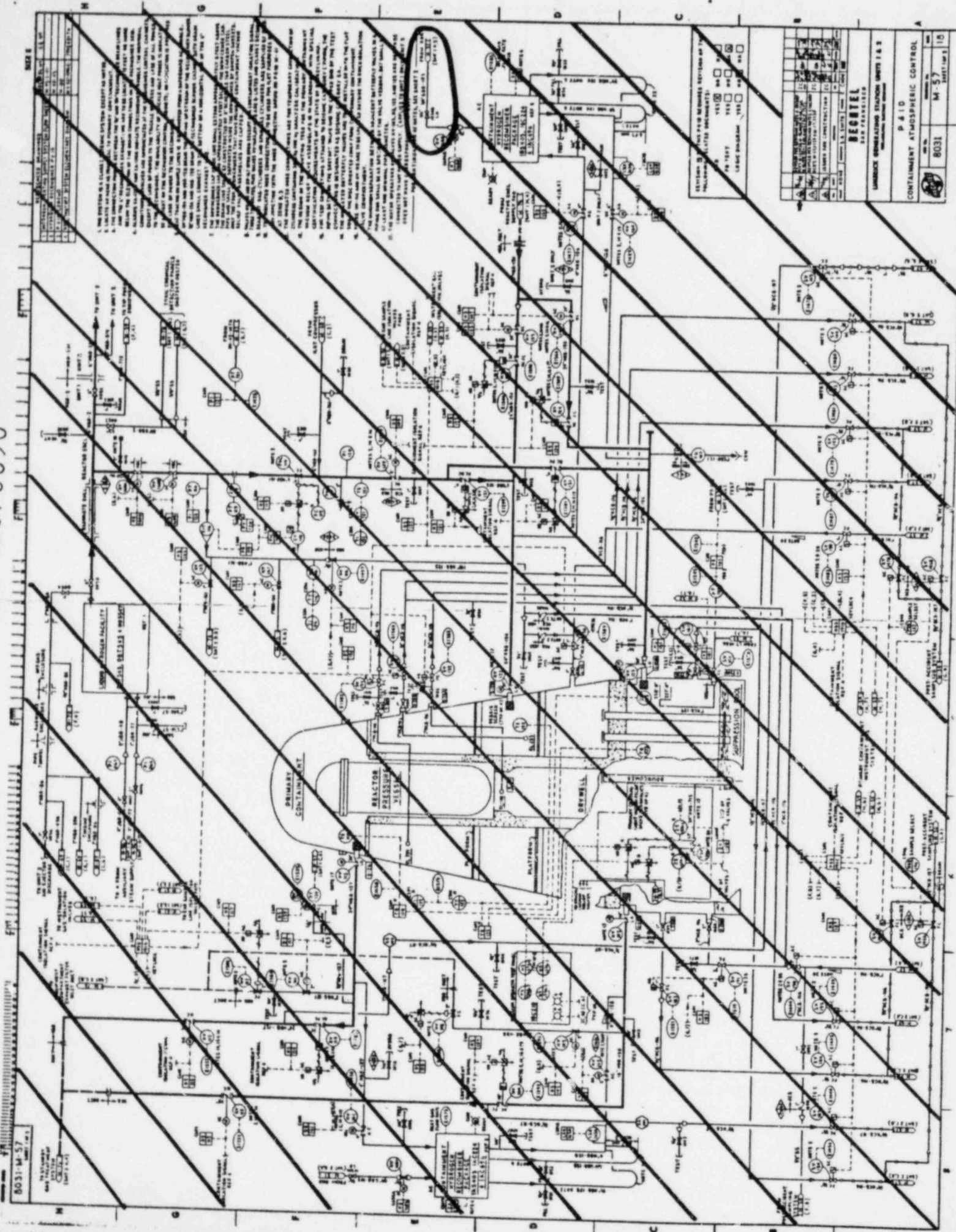
Shutdown Cooling Suction Inspected yes/no YES

Component No.	Component Description	Comp. Mode (on/off) (open/shut)	Leak Rate	Corrective Action Date	Remarks
SV-51-1F027B	SUPPRESSION POOL SPRAY VALVE	CLOSED	5cc/min		
HV-51-1F047B	INLET TO RH HTX	CLOSED	2cc/min		
HVC-51-1F048B	HTX BYPASS	OPEN	2cc/min		
HV-51-1B2B	RHR CROSSTIE	CLOSED	4cc/min		
1F006B		CLOSED	<.25cc/min		

3843070090



3843070090



1. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...
 2. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...
 3. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...
 4. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...
 5. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...
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 9. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...
 10. THE SYSTEM IS A CLASS 1 SYSTEM DESIGNED AS A...

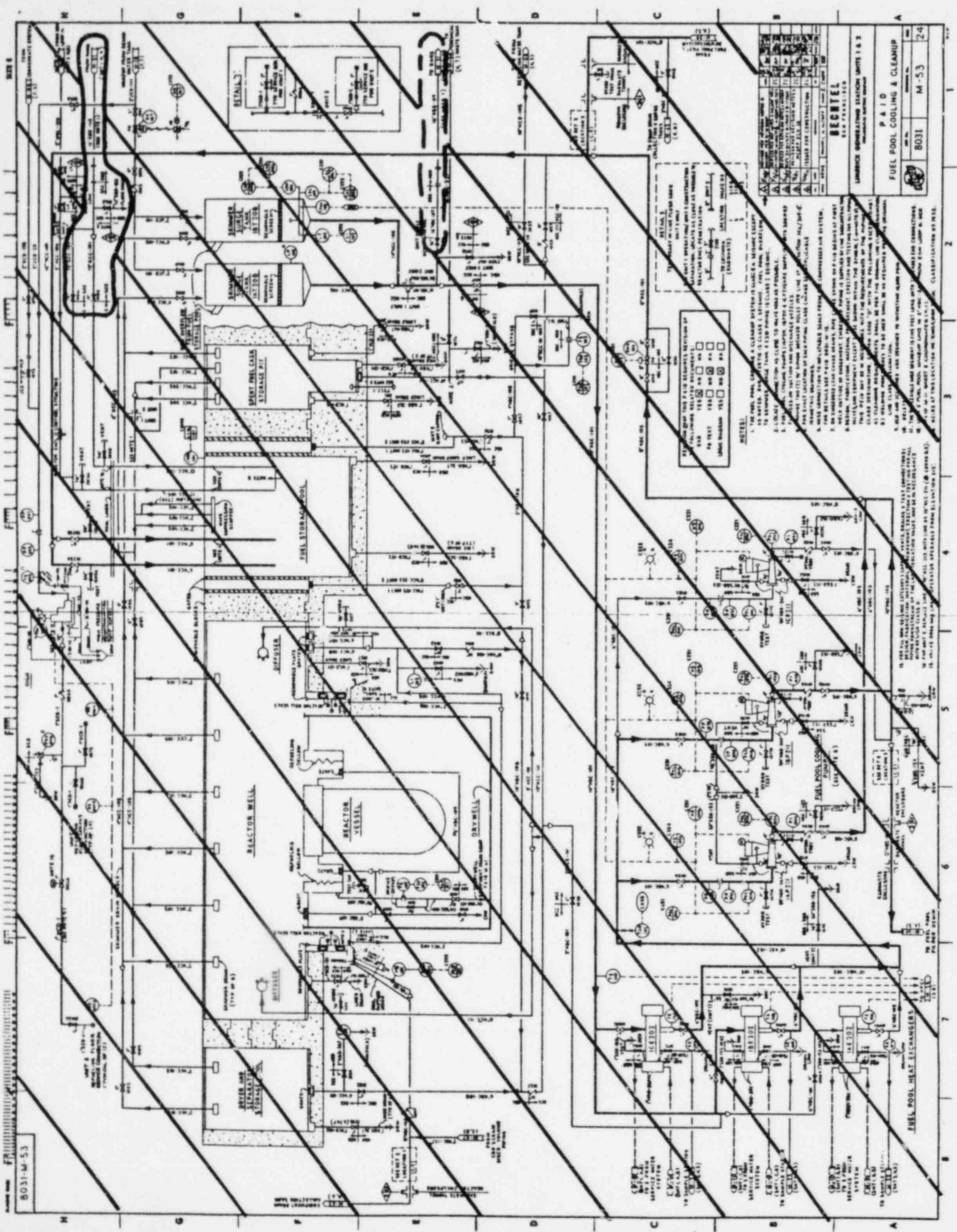
SECTION 3 HAS FOUR NUMBERS REFERENCE TO THE...
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REACTOR
 REACTOR PRESSURIZER
 LANSING GENERATING STATION UNITS 1 & 2

P 610
 CONTAINMENT ATMOSPHERIC CONTROL

8031-M-57
 M-57
 10

3843070090



8031-M-53

REACTOR	
UNIT NO.	8031
REV.	M-53
REACTOR LUMBER OPERATING STATION UNITS 1 & 3 SAN FRANCISCO	
P A I D FUEL POOL COOLING & CLEANUP	
NO.	24

NOTES:

1. THE FUEL POOL COOLING AND CLEANUP SYSTEM IS BASICALLY A STEAM SYSTEM.
2. THE FUEL POOL COOLING AND CLEANUP SYSTEM IS BASICALLY A STEAM SYSTEM.
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REACTOR

1. THE FUEL POOL COOLING AND CLEANUP SYSTEM IS BASICALLY A STEAM SYSTEM.

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