

3843070090

ST-1-051-704-1, Rev. 0

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KSK/RSE:mjl

*Gray*  
1/31/84PHILADELPHIA ELECTRIC COMPANY  
LIMERICK GENERATING STATION  
SURVEILLANCE TEST

ST-1-051-704-1 'D' RHR LOOP CONTAMINATED PIPING INSPECTION

Test Freq.: 18 Months

-OR- Initiating Events: 1. Reason Initial Run

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)

Keith Kuper 8/13/84

Performed By:

(Sign/Date)

Informed Test Complete: (ACO or CO)

(Sign/Date)

(Time)

Ralph Hall 9/14/84  
8:29

Reviewed By: (SSVN or STA)

(Sign/Date)

W. L. Drees 9/15/84B. 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 here8410160373 841012  
PDR ADDCK 05000352  
A PDR

(Sign/Date)

## 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 locations.
- 5.3 Obtain a copy of the previous inspections Data Sheet Attachment A.
- 5.4 RHR piping is at operating pressure during this inspection for ST-6-051-234-1 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.

## 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.)

- 6.3.1 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.
- 6.3.2 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.
- SO 6.3.3 Verify that Attachment A is complete.

## 6.4 Test Results Evaluation

- SO 6.4.1 Compare the leakage 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.

7.0 RETURN TO NORMAL

SO 7.1 Inform SSVN ACO the inspection is complete

8.0 ACCEPTANCE CRITERIA

8.1 The "D" 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.



'D' RHR LOOP CONTAMINATED PIPING INSPECTIONDATA SHEET (1 of 2)ACTION REQUIREDINITIALS6.0 PROCEDURE

## 6.1 Preparation

6.1.1 All prerequisites satisfied

KSK

6.1.2 Test Equipment

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<u>INSTRUMENT</u>	<u>MFR./MODEL</u>	<u>SER. NO.</u>	<u>CAL. DUE DATE</u>
<u>stop watch</u>		<u>53-0030</u>	<u>8/3/85</u>

## 6.2 Shift Permission to Test

6.2.1 SSVN permission obtained

KSK

6.2.2 ACO permission to test

/KJC  
CO/ACO9/14/84 12:01 AM  
Date Time

## 6.3 'D' RHR Loop Contaminated Piping Inspection

6.3.2 RHR LOOP 'D' total leak rate:

5.0 CC/MIN.00132 GAL/MIN

(1 cc/min = .000 264 gal/min)

'D' RHR LOOP CONTAMINATED PIPING INSPECTIONDATA SHEET (2 of 2)ACTION REQUIREDINITIALS

## 6.4 Test Results Evaluation

6.4.1 The total RHR system leakage  
rate is within Acceptable  
Limits

NA (\*)

7.0 RETURN TO NORMAL

7.1 SSVN and ACO informed of test completion.

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

ADDITIONAL ACTION/TEST COMMENTS

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'D' RHR LOOP CONTAMINATED PIPING INSPECTION

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DATA SHEET (3 of 3)

## ATTACHMENT A

Inspector: Keith KemperSystem Mode FULL FLOW TEST Date: 9/13/84

Component No.	Component Description	Comp. Mode (on/off) (open/shut)	Leak Rate	Corrective Action Date	Remarks
HV-51-182B 10E 11421) 10401) LSL-51-110D	RHR CROSS TIE	CLOSED	4 CC/MIN <.25 CC/MIN <.25 CC/MIN <.25 CC/MIN <.25 CC/MIN		



