

Report Number: 79-56/01T  
Report Date: 9/14/79  
Occurrence Date: 8/31/79  
Facility: Salem Generating Station  
Public Service Electric & Gas Company  
Hancock's Bridge, New Jersey 08038

IDENTIFICATION OF OCCURRENCE:

RHR Pump Exceeds Design Runout Flow

CONDITIONS PRIOR TO OCCURRENCE:

Operational Mode 5

DESCRIPTION OF OCCURRENCE:

In response to a NRC question on Salem Unit 2 regarding RHR Pump NPSH during post-LOCA recirculation mode, a Unit 2 RHR Pump was tested for the highest runout flow for the worst hydraulic configuration. This configuration is when one RHR Pump is feeding two charging pumps, two safety injections pumps and also directly into two cold legs. Test results indicated that the RHR Pump flow exceeded the design runout flow. Since the RHR Pump is required to operate under LOCA conditions, the RHR piping configuration existing on Salem Unit 1, which is identical to Unit 2, is unacceptable.

DESIGNATION OF APPARENT CAUSE OF OCCURRENCE:

As indicated by the Unit 2 test results, it would appear that the Unit 1 RHR System flow resistance is low and the pump would runout under the accident mode of operation.

ANALYSIS OF OCCURRENCE:

The Engineering Department evaluation of this condition will be submitted in a supplemental report.

CORRECTIVE ACTION:

A Design Change is in preparation by the Engineering Department which would increase the system flow resistance by resizing the orifices on the flow elements upstream and downstream of the RHR heat exchangers. The Design Change has been accepted by Westinghouse. The estimated time to make this change is approximately three weeks and should be completed during the present outage.

FAILURE DATA:

Not Applicable

961343

Prepared by A. W. Kapple

*A. J. Infelmer*  
Manager - Salem Generating Station

SORC Meeting No. 70-79

7909180 417

# LICENSEE EVENT REPORT

CONTROL BLOCK: 1

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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CON'T  
01 L 6 0 5 0 0 0 2 7 2 7 0 8 3 1 7 9 3 0 9 1 4 7 9 9

## EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

02 In response to a NRC question on Salem Unit 2 regarding RHR Pump NPSH during post-  
03 LOCA operation, tests performed on Unit 2 RHR System indicated the RHR Pump flow  
04 exceeded the design runout flow. Since Unit 1 has an identical configuration as  
05 Unit 2, this unacceptable condition exists on Unit 1. Engineering Department is  
06 evaluating this condition and a supplemental report will be submitted. This is the  
07 first occurrence of this type.

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17 7 9 0 5 6 0 1 T 0

F 18 Z 19 Z 20 0 0 0 0 22 Y 23 N 24 L 25 Z 9 9 9 26

## CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

13 It is evident by test results that the RHR System flow resistance is low. A Design  
14 Change to increase flow resistance by resizing the orifices in the flow elements  
15 upstream and downstream of the heat exchanger is in preparation. Estimated time to  
16 complete this change is three weeks.

15 G 28 0 0 0 29 N/A 30 C 31 Test to respond to NRC Question 32

16 Z 33 Z 34 N/A 35 N/A 36

17 0 0 0 37 Z 38 N/A 39

18 0 0 0 40 N/A 41

19 Z 42 N/A 43

20 Z 44 N/A 45

NAME OF PREPARER A. W. Kapple

PHONE (609) 365-7000 Salem Ext. 628

POOR ORIGINAL

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