

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. Kapple
Manager - Salem Generating Station

SORC Meeting No. 70-79

7909180 417

LICENSEE EVENT REPORT

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

CONTROL BLOCK: _____ 1

0 1	N	J	S	G	S	1	2	0	0	-	0	0	0	0	0	-	0	0	3	4	1	1	1	1	4	5
LICENSEE CODE							LICENSE NUMBER										LICENSE TYPE					57 CAT 58				

0 1	L	0	5	0	0	0	2	7	2	7	0	8	3	1	7	9	8	0	9	1	4	7	9	9
REPORT SOURCE					DOCKET NUMBER					EVENT DATE					REPORT DATE									

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES ⁽¹⁰⁾

0 2 | In response to a NRC question on Salem Unit 2 regarding RHR Pump NPSH during post-

0 3 | LOCA operation, tests performed on Unit 2 RHR System indicated the RHR Pump flow

0 4 | exceeded the design runout flow. Since Unit 1 has an identical configuration as

0 5 | Unit 2, this unacceptable condition exists on Unit 1. Engineering Department is

0 6 | evaluating this condition and a supplemental report will be submitted. This is the

0 7 | first occurrence of this type.

0 9	C	F	11	B	12	A	13	Z	Z	Z	Z	Z	Z	14	Z	15	Z	16
SYSTEM CODE			CAUSE CODE			CAUSE SUBCODE			COMPONENT CODE					COMP SUBCODE		VALVE SUBCODE		

17	7	9	21	—	23	0	5	6	24	26	—	27	0	1	28	29	T	30	—	31	0	32
LER RO REPORT NUMBER		EVENT YEAR		SHUTDOWN METHOD		SEQUENTIAL REPORT NO.		HOURS		OCCURRENCE CODE		ATTACHMENT SUBMITTED		REPORT TYPE		PRIME COMP. SUPPLIER		REVISION NO.		COMPONENT MANUFACTURER		

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS ⁽²⁷⁾

1 0 | It is evident by test results that the RHR System flow resistance is low. A Design

1 1 | Change to increase flow resistance by resizing the orifices in the flow elements

1 2 | upstream and downstream of the heat exchanger is in preparation. Estimated time to

1 3 | complete this change is three weeks.

1 5	G	0	0	0	29	N/A	30	C	31	Test to respond to NRC Question	32	
FACILITY STATUS			% POWER			OTHER STATUS		METHOD OF DISCOVERY		DISCOVERY DESCRIPTION		

1 6	Z	33	Z	34	N/A	35	N/A	36		
ACTIVITY RELEASED		CONTENT RELEASED OF RELEASE			AMOUNT OF ACTIVITY			LOCATION OF RELEASE		

1 7	0	0	0	37	Z	38	N/A	39	
PERSONNEL EXPOSURES NUMBER		TYPE			DESCRIPTION			39	

1 8	0	0	0	40	N/A	41	
PERSONNEL INJURIES NUMBER		DESCRIPTION					41

1 9	Z	42	N/A			43	
LOSS OF OR DAMAGE TO FACILITY TYPE		DESCRIPTION					43

2 0	Z	44	N/A			45	
ISSUED PUBLICITY		DESCRIPTION					45

POOR ORIGINAL

961344