

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Salem Generating Station - Unit 1										DOCKET NUMBER (2) 0 5 0 0 0 2 7 2				PAGE (3) 1 OF 5									
TITLE (4) Containment Isolation Valve 11MS18 - Inoperable																							
EVENT DATE (5)			LER NUMBER (6)				REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)													
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES				DOCKET NUMBER(S)										
1	1	0	7	8	4	8	4	0	2	6	0	0	1	2	2	1	8	4	0	5	0	0	0
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																					
3		20.402(b)				20.405(e)				50.73(a)(2)(iv)				73.71(b)									
POWER LEVEL (10)		0 0 0				20.405(a)(1)(i)				50.73(a)(2)(v)				73.71(e)									
		20.405(a)(1)(ii)				50.73(a)(2)(vi)				OTHER (Specify in Abstract below and in Text, NRC Form 308A)													
		20.405(a)(1)(iii)				50.73(a)(2)(vii)(A)																	
		20.405(a)(1)(iv)				50.73(a)(2)(vii)(B)																	
		20.405(a)(1)(v)				50.73(a)(2)(viii)																	
LICENSEE CONTACT FOR THIS LER (12)																							
NAME J.L. Rupp										TELEPHONE NUMBER													
										AREA CODE 6 0 9 3 3 9 - 4 3 0 9													
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																							
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC													
B	S	B	I	S	V	M	1	2	0	Y													
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR							
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)												<input checked="" type="checkbox"/> NO											
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																							
<p>On November 7, 1984, during Mode 3 operation, No. 12 West Low Pressure Turbine rupture disk was found to be issuing steam. The disk ruptured as a result of condenser pressurization caused by seat leakage on Main Steam Stop Valve Bypass Valve 11MS18. Upon discovery, Technical Specification Action Statement 3.6.3.1.a was entered at 0100 hours. At 0500 hours, when the valve was not yet restored to an operable status, Action Statement 3.6.3.1.a was terminated and 3.6.3.1.d was entered, which required the unit to be placed in Mode 5 within the following thirty hours. At 1640 hours, 11MS18 was returned to an operable status and Action Statement 3.6.3.1.d was terminated. The event was initially classified as non-reportable. However, on November 21, a subsequent review revealed that the action requirements were not followed verbatim, since specification 3.6.3.1 requires a redundant isolation valve to be maintained in an operable status, and the penetration containing 11MS18 contains no redundant valve. The event was then reclassified as reportable in accordance with 10CFR 50.73(a)(2)(i)(B). It is felt that the specification is too restrictive, and that the intent of the specification was met because the steam generator tubes constitute a valid primary pressure boundary. The specification and FSAR requirements will be reviewed, with a probable License Change Request to follow.</p>																							
8412270006 841221 PDR ADCK 05000272 S PDR																							

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PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

IDENTIFICATION OF OCCURRENCE:

Containment Isolation Valve 11MS18 - Inoperable

Event Date: 11/07/84

Reportability Determination: 11/21/84

Report Date: 12/21/84

This report was initiated by Incident Report No. 84-186

CONDITIONS PRIOR TO OCCURRENCE:

Mode 3 - Rx Power 000 % - Unit Load 0000 MWe

DESCRIPTION OF OCCURRENCE:

On November 7, 1984, during hot standby (Mode 3) operations, steam was discovered to be issuing from No. 12 West Low Pressure Turbine rupture disk. Investigation revealed that the occurrence was caused by leakage past 11MS18 (Main Steam Stop Valve Bypass Valve), resulting in the pressurization of the steam header when the Unit was shutdown the previous day. With no condenser vacuum, leakage past various steam traps apparently resulted in the slow pressurization of the condenser and ultimately a damaged turbine rupture disk.

Technical Specification 3.6.3.1 requires the containment isolation valves listed in Table 3.6-1 to be operable in Modes 1, 2, 3 and 4. With one or more of the isolation valves inoperable, the specification requires at least one isolation valve (in each affected penetration that is open) to be maintained in an operable status, and either:

- restore the inoperable valve(s) to operable status within four (4) hours, or
- isolate each affected penetration within four (4) hours by use of at least one deactivated automatic valve secured in the isolation position, or
- isolate each affected penetration within four (4) hours by use of at least one closed manual valve or blind flange, or

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DESCRIPTION OF OCCURRENCE: (cont'd)

- d. be in at least hot standby (Mode 3) within the next six (6) hours and in cold shutdown (Mode 5) within the following thirty (30) hours.

With the discovery of the 11MS18 seat leakage, Technical Specification Action Statement 3.6.3.1.a was entered at 0100 hours, November 7, 1984. At 0500 hours, when 11MS18 was not yet returned to an operable status, Action Statement 3.6.3.1.a was terminated and Action Statement 3.6.3.1.d was entered. 11MS18 was stroke tested; the valve stroked fully and within the time specified by the Technical Specifications. The valve actuator spring was tightened to increase seat pressure, and the valve leakage was eliminated. The valve was returned to an operable status and Action Statement 3.6.3.1.d was terminated at 1640 hours, November 7, 1984.

All incidents, either reportable or non-reportable, are routinely reviewed and analyzed by PSE&G as part of a program designed to identify root causes and institute corrective actions, if necessary, to prevent recurrence. This event had initially been classified as non-reportable; however, a subsequent review revealed that although the intent of Technical Specification 3.6.3.1 was met, the Technical Specification Action Requirements were not followed verbatim. Since the penetration containing 11MS18 does not contain a redundant isolation valve, one valve in the affected penetration could not be maintained in an operable status as required by the Technical Specification. Consequently, on November 21, 1984, the event was subsequently determined to be reportable, and was reclassified as such in accordance with the requirements of the Code of Federal Regulations, 10CFR 50.73(a)(2)(i)(B).

APPARENT CAUSE OF OCCURRENCE:

The Senior Shift Supervisor, knowing that the penetration in question did not contain a redundant valve, and knowing that the steam generator tubes constitute a boundary, believed that he was meeting the intent of the Technical Specification.

ANALYSIS OF OCCURRENCE:

The operability of the containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a Loss of Coolant Accident (LOCA).

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ANALYSIS OF OCCURRENCE: (cont'd)

As defined in 10CFR 50.2(v), the steam generator tubes constitute a Reactor Coolant System [AB] pressure boundary. Because of this, 10CFR 50, Appendix J, and the Technical Specifications do not require containment isolation valves in the Main Steam [SB] and Feedwater [SJ] Systems to be periodically Type "C" leak rate tested. In addition, the Final Safety Analysis Report (FSAR), when referring to containment isolation, takes credit for pressure boundaries. These pressure boundaries do not consist of valves alone, but also include pressure vessels, piping and pumps. Certain Main Steam and Feedwater System valves (including 11MS18) are classified as containment isolation valves to provide containment isolation in the event of a primary to secondary system leak. Because the steam generator primary tubes constituted a valid primary system pressure boundary, 11MS18 seat leakage involved no undue risk to the health or safety of the environment or the public. Due to non-verbatim compliance with the Technical Specification (as written) the event is reportable in accordance with 10CFR 50.73(a)(2)(i)(B).

CORRECTIVE ACTION:

As previously stated, testing of 11MS18 verified that the valve was stroking fully and within the prescribed time specified by Technical Specification 3.6.3.1. Increasing the tension on the actuator spring seated the valve more tightly and eliminated the leakage. However, following a subsequent Unit shutdown on November 11, 1984, 11MS18 again exhibited seat leakage. Following that shutdown, the Unit was cooled down to Mode 5 and the valve was disassembled for inspection. Investigation revealed that the valve would not seat properly following operation. The valve was refurbished utilizing a new seat ring and cage assembly; subsequent testing verified proper valve operation.

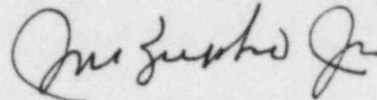
The penetration containing 11MS18 does not contain a redundant isolation valve, and the Technical Specification, as presently written, does not take credit for Primary Coolant System pressure boundaries other than valves. Consequently, in the event of 11MS18 inoperability, the Action Statements cannot be followed. The only alternative is to enter Technical Specification 3.0.3, which requires that the Unit be placed in a mode in which the Technical Specification does not apply; in this case, Mode 5. Because these requirements are believed to be too restrictive, and the belief that the intent of the Technical Specification was met by considering the steam generator tubes as a pressure boundary, a detailed review of Unit 1 and Unit 2 Technical Specifications (3.6.3.1 and 3.6.3 respectively) and their associated FSAR requirements will be performed. If the Technical Specifications are determined to be too restrictive, License Change Requests will be submitted.

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CORRECTIVE ACTION: (cont'd)

In addition, a Technical Specification interpretation will be written and included in Operations Directive OD-12, to ensure that all personnel understand and comply with Unit 1 Technical Specification 3.6.3.1 and Unit 2 Technical Specification 3.6.3 as written.



General Manager-
Salem Operations

JLR:tns

SORC Mtg 84-173



Public Service Electric and Gas Company P.O. Box E Hancocks Bridge, New Jersey 08038

Salem Generating Station

December 21, 1984

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-70
DOCKET NO. 50-272
UNIT NO. 1
LICENSEE EVENT REPORT 84-026-00

This Licensee Event Report is being submitted pursuant to the requirements of 10CFR 50.73(a)(2)(i)(B). This report is required within thirty (30) days of reportability determination.

Sincerely yours,

J. M. Zupko, Jr.
General Manager -
Salem Operations

JR:tcs

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The Energy People