

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Salem Generating Station - Unit 2	DOCKET NUMBER (2) 050003111	PAGE (3) 1 OF 04
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TITLE (4)
T. S. 3.7.11 Non-Compliance - Discovery of Fire Barrier Impairment

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)
05	11	1987	87	007	000	06	08	1987			05000

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 088	20.402(b)	20.406(c)	50.73(a)(2)(iv)	73.71(b)						
	20.406(a)(1)(i)	50.38(c)(1)	50.73(a)(2)(v)	73.71(c)						
	20.406(a)(1)(ii)	50.38(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	20.406(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)							
	20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)							
20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)								

LICENSEE CONTACT FOR THIS LER (12)

NAME M. J. Pollack - LER Coordinator	TELEPHONE NUMBER 6109 339 - 4022
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On May 11, 1987 an unsealed penetration between the Unit 2 84' Elevation Switchgear Room and the 100' Elevation Relay Room (for the non-segregated bus duct which connects the reactor trip breakers {JC} to the rod control cabinets {AA}) was discovered. Since the two elevations are separate fire areas, a Fire Protection Impairment Permit was initiated and in accordance with Technical Specification Action Statement 3.7.11.a, a one hour roving fire watch was established. Investigation revealed the Unit 1 identical penetration was also not properly sealed resulting in the same action. Investigations indicate the impaired penetrations have been in existence for an undetermined period of time. Corrective Action includes maintaining the fire watch until the penetrations are filled with an approved 3 hour fire rated barrier sealing material during the next outage of sufficient duration due to the feasibility of a Unit trip. A complete review of all fire barrier penetration seals will be conducted. It will provide traceable identification of the adequacy of the penetration seals as rated fire barrier seals.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Salem Generating Station	DOCKET NUMBER	LER NUMBER	PAGE
Unit 2	05000311	87-007-00	2 of 4

PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as {xx}

IDENTIFICATION OF OCCURRENCE:

Technical Specification 3.7.11 Non-Compliance - Discovery of Fire Barrier Impairment

Discovery Date: 05/11/87

Report Date: 06/08/87

This report was initiated by Incident Report Nos. 87-188 and 87-190

CONDITIONS PRIOR TO OCCURRENCE:

Unit 1 - Mode 1 Reactor Power 100% - Unit Load 1054 MWe

Unit 2 - Mode 1 Reactor Power 88% - Unit Load 1000 MWe

DESCRIPTION OF OCCURRENCE:

On May 11, 1987 an unsealed penetration between the Unit 2 84' Elevation Switchgear Room and the 100' Elevation Relay Room was discovered. The penetration is for the non-segregated bus duct which connects the reactor trip breakers {JC} to the rod control cabinets {AA}. Since the two elevations are separate fire areas, a Fire Protection Impairment Permit was initiated and in accordance with Technical Specification Action Statement 3.7.11.a, a one hour roving fire watch was established.

Upon discovery of the Unit 2 fire barrier impairment, Unit 1 penetration was checked. Since there was no air flow on 100' elevation, it was initially determined the seal was adequate. However, later investigation by Site Protection revealed the seal was not adequate. Therefore, a one hour roving fire watch was established for the Unit 1 penetration in accordance with Technical Specification Action Statement 3.7.11.a.

Unit 1 Technical Specification 3.7.11 states:

"All fire penetrations (including cable penetration barriers, fire doors and fire dampers), in fire zone boundaries, protecting safety related areas shall be OPERABLE."

Action Statement 3.7.11.a states:

"With one (1) or more of the above required fire barrier penetrations inoperable, within one (1) hour either establish a

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Salem Generating Station	DOCKET NUMBER	LER NUMBER	PAGE
Unit 2	05000311	87-007-00	3 of 4

DESCRIPTION OF OCCURRENCE: (cont'd)

continuous fire watch on at least one (1) side of the affected penetration, or verify the OPERABILITY of fire detectors on at least one (1) side of the inoperable fire barrier and establish an hourly fire watch patrol. Restore the inoperable fire barrier penetration(s) to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next (30) days outlining the action taken, the cause of the inoperable penetration and plans and schedule for restoring the fire barrier penetration(s) to OPERABLE status."

Note - Unit 1 Technical Specification 3.7.11 differs from Unit 2. The Unit 2 words "OPERABLE" and "inoperable" are replaced by the words "functional" and "non-functional".

APPARENT CAUSE OF OCCURRENCE:

The fire barrier penetration impairment (both Units) has apparently existed for the life of the plants. The Unit 2 penetration impairment was identified by Quality Control personnel who noted air flowing from 84' elevation to 100' elevation (Unit 2). Investigation revealed partial removal of the damming board, which covers the elevation 84' side opening. Subsequent investigation revealed the inadequacy of the Unit 1 penetration fire barrier seal.

The Unit 2 84' Elevation Switchgear Room and 100' Elevation Relay Room fire barrier penetration successfully passed inspection on May 07, 1986 by Site Protection Personnel. This inspection is strictly visual. The damming board from the floor of Elevation 84' appeared to be an adequate penetration seal. The inspector did not climb to get a better look so as not to risk a Unit trip. The Unit was operating at power. Therefore, the damming board was apparently removed between the time of the inspection and discovery of the impairment. It could not be positively identified when or by whom the damming board section was removed. Unit 1 was last inspected under the old Fire Protection Program by Maintenance Department personnel. Its damming board is still intact.

ANALYSIS OF OCCURRENCE:

The functional integrity of the penetration fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire involving several areas of the facility. The penetration fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections. However, because the fire barrier was impaired for an undetermined length of time with no posted permanent or one hour

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Salem Generating Station	DOCKET NUMBER	LER NUMBER	PAGE
Unit 2	05000311	87-007-00	4 of 4


ANALYSIS OF OCCURRENCE: (cont'd)

roving fire patrol (as per Technical Specification Action Statement 3.7.11.a) this event is reportable in accordance with Code of Federal Regulations 10CFR 50.73(a)(2)(i)(B). This report also satisfies the reporting requirements of Technical Specification Action Statement 3.7.11.a pursuant to Technical Specification 6.9.2 since the time between discovery and eventual repair of the fire barrier impairment is greater than seven (7) days. Appropriate actions were taken in accordance with the requirements of Technical Specification Action Statement 3.7.11.a to establish a one hour roving fire watch for the impaired fire barrier once the impairment was identified.

With the penetration unsealed it cannot be assured a fire in one area would not affect the adjacent fire area. Both areas contain detection and an independent suppression system in addition to the roving fire watch patrol. Therefore, it is reasonable to assume that a fire in either area would be detected and extinguished before it could involve the adjacent area. With the internal of the bus not sealed there is no protection from a fire in the cabinets, on either end of the bus, involving the other. Since there is no detection or suppression within the duct the potential exists for a fire in the duct to go undetected until damage occurs. A fire in the cabinets on either end, i.e., the reactor trip breaker switchgear or the rod control power cabinets, would result in the same plant transient. A fire would most likely result in a loss of power to the control rod drives resulting in a reactor shutdown due to dropped control rods. The plant would end up in Hot Standby. This is an analyzed transient (i.e, reactor trip from power). The spread of fire from the bus duct, albeit a remote possibility, would not result in an additional plant transient. It does, however, present the possibility of a fire involving more than one fire area. This occurrence therefore involved no undue risk to the health or safety of the public.

CORRECTIVE ACTION:

A one hour roving fire watch was established (in accordance with Technical Specification Action Statement 3.7.11.a). Due to the feasibility of a Unit trip, the penetrations will be filled with approved three (3) hour fire rated barrier sealing material during the next outage of sufficient duration. Long term corrective action includes a complete review of all fire barrier penetration seals in order to provide traceable identification of their adequacy as rated fire barrier seals.


General Manager -
Salem Operations

MJP:pc

SORC Mtg. 87-040



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

Salem Generating Station

June 8, 1987

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

Dear Sir:

SALEM GENERATING STATION
LICENSE NO. DPR-75
DOCKET NO. 50-311
UNIT NO. 2
LICENSEE EVENT REPORT 87-007-00

This Licensee Event Report is being submitted pursuant to the requirements of 10CFR 50.73(a)(2)(i). This report is required within thirty (30) days of discovery. Additionally, this report satisfies the reporting requirement of Technical Specification Action Statement 3.7.11.a pursuant to Technical Specification 6.9.2.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "J. M. Zupko, Jr.", written in a cursive style.

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

MJP:pc

Distribution

The Energy People

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