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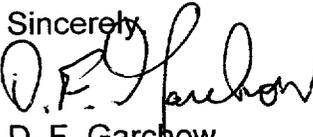
LRN-01-0083

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

Gentlemen:

**SPECIAL REPORT 311/01-002  
SALEM GENERATING STATION - UNIT 2  
FACILITY OPERATING LICENSE NO. DPR-75  
DOCKET NO. 50-311**

This Special Report "Failure to comply with the requirements of the Salem Fire Protection program during testing" is being submitted pursuant to the requirements of the Salem Unit 2 Technical Specifications License Condition 2 I, and Salem Units 1 and 2 Technical Specifications 6.9.3. The attached Special Report contains no commitments.

Sincerely,  
  
D. F. Garchow  
Vice President -  
Operations

Attachment

/EHV

C Distribution  
LER File 3.7

IE22

**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information

FACILITY NAME (1)

SALEM UNIT 2

DOCKET NUMBER (2)

05000311

PAGE (3)

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TITLE (4)

**Failure To Comply With The Requirements of The Salem Fire Protection Program During Testing**

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 NAME	DOCKET NUMBER	
02	27	01	01	002	00	03	13	01	Salem Unit 1	05000272	
									FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 11: (Check one or more) (11)									
1		20.2201(b)			20.2203(a)(2)(v)			50.73(a)(2)(i)		50.73(a)(2)(viii)	
POWER LEVEL (10)		20.2203(a)(1)			20.2203(a)(3)(i)			50.73(a)(2)(ii)		50.73(a)(2)(x)	
100		20.2203(a)(2)(i)			20.2203(a)(3)(ii)			50.73(a)(2)(iii)		73.71	
		20.2203(a)(2)(ii)			20.2203(a)(4)			50.73(a)(2)(iv)		X OTHER	
		20.2203(a)(2)(iii)			50.36(c)(1)			50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A	
		20.2203(a)(2)(iv)			50.36(c)(2)			50.73(a)(2)(vii)			

**LICENSEE CONTACT FOR THIS LER (12)**

NAME

E. H. Villar, Licensing Engineer

TELEPHONE NUMBER (Include Area Code)

(856) 339-5456

**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

**SUPPLEMENTAL REPORT EXPECTED (14)**

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

YES (If yes, complete EXPECTED SUBMISSION DATE).

X NO

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

Preventive Maintenance (PM) work orders were issued to perform an 8 hour discharge test on the Appendix R self contained battery powered emergency lights units {FH}(ELU) for Salem Units 1 and 2. From February 24 through 27, 2001, a total of 189 ELUs were tested. After performance of the test, it was noted that the unit's charger might require up to 72 hours to restore the units battery to full capacity. With the ELUs capacity not being fully restored, the ELUs are not operable. With the ELUs inoperable, compensatory action should have been taken to ensure that the Fire Protection Program requirements for the Salem Units 1 and 2 were met. Failure to establish the appropriate compensatory requirements resulted in a violation of the Salem Fire Protection Program, and therefore is reportable. The apparent cause is attributed to failure to comply with the administrative procedure requirement governing the ELU testing, specifically to test only a fraction of the ELU's. Corrective actions taken were: (1) Battery powered hand held lights were provided as supplement to the self contained battery powered emergency lighting units, (2) the implementing procedure was placed on hold, (3) fire protection personnel were coached, and (4) this condition has been entered into the corrective action program. This Special Report is being made pursuant to the requirements of License condition 2.I, which requires that a 14-day report be submitted for cases where the provisions of the approved fire protection program are not maintained. Furthermore, Technical Specification 6.9.3 states "violations of the fire protection program ... which would have adversely affected the ability to achieve and maintain safe shutdown in the event of a fire shall be submitted ... via the Licensee Event Report System within 30 days." This report satisfies both of these requirements.

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**TEXT** (If more space is required, use additional copies of NRC Form 366A) (17)

**PLANT AND SYSTEM IDENTIFICATION**

Westinghouse – Pressurized Water Reactor

\* Energy Industry Identification System {EIS} codes and component function identifier codes appear as (SS/CCC)

Fire Protection Appendix R Emergency Lights {FH}  
Lighting features {LF}

**CONDITIONS PRIOR TO OCCURRENCE**

Salem Units 1 and 2 were in Mode 1 at 100% reactor power.

**DESCRIPTION OF OCCURRENCE**

Preventive Maintenance (PM) work orders were issued to perform an 8-hour discharge test on the self-contained battery powered emergency light units {FH}(ELU) for Salem Units 1 and 2. Salem Units 1 and 2 provide two different means to comply with the requirements of 10 CFR 50 Appendix R; Section III, Subsection J for emergency lighting: (1) the self-contained battery powered emergency light units, and (2) 16 emergency hand-held battery operated units to be used as compensatory action for the self-contained battery powered emergency light units. Either one or two above satisfies the Appendix R requirements.

From February 24 through 27, 2001, a total of 189 ELUs were tested. During performance of this test, by PSEG non-licensed personnel, it was noted that following an 8 hour discharge test a charger may require up to 72 hours to restore a battery to full capacity. With the ELUs capacity not being fully restored, the ELUs are not operable. During this same period of time seven out of sixteen hand-held battery operated lights were also inoperable due to their batteries being low, thus placing the Station in a non-compliance condition with respect to 10 CFR 50 Appendix R.

The Salem Updated Final Safety Analysis Report (UFSAR) states in part, "Areas of the plant requiring operator access for the safe shutdown are provided with self-contained emergency lights. These units are battery powered and have an 8-hour capacity." This statement is consistent with the requirements of 10 CFR 50 Appendix R, Section III, Subsection J for emergency lighting that partially states, "Emergency lighting units with at least an 8 hour battery power supply shall be provided in all area needed for operations of safe shutdown equipment and in access and egress routes thereto."

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**DESCRIPTION OF OCCURRENCE (cont'd)**

License condition 2.C. (10) of the Salem Unit 2 Technical Specifications (TS) states in part, "PSEG Nuclear LLC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report...."

License condition 2. I of the Salem Unit 2 TS states in part, "PSEG Nuclear LLC shall report any violation of the requirements contained in Section 2, item C. (3) through (25)....., with a written-follow-up report within within 14 days."

Salem Units 1 and 2 TS 6.9.3 states in part, "Violations of the requirements of the fire protection program described in the Updated Final safety Analysis Report which would have adversely affected the ability to achieve and maintain safe shutdown in the event of fire shall be submitted to ...NRC ...via the Licensee Event Report System within 30 Days."

Although there are no specific operability requirements (surveillance tests) within the Salem Units 1 and 2 TS to demonstrate the operability of the ELUs, the discharge test of the self-contained battery powered emergency light units is conducted to verify proper operation of the ELUs in accordance with the Fire Protection Program requirements, and 10 CFR 50 Appendix R, Section III, Subsection J. However, having performed the discharge test with seven out of sixteen hand-held battery operated lights inoperable, resulted in the failure to meet and comply with the requirements of the Fire Protection Program and thus violated License condition 2.C. (10) for Unit 2 and TS 6.9.3 for Units 1 and 2.

Therefore this event is being reported in accordance with the requirements of Salem Units 1 and 2 TS 6.9.3 and Salem Unit 2 License condition 2. I.

**CAUSE OF OCCURRENCE**

The apparent cause has been attributed to failure to comply with administrative procedure requirements governing the ELU testing, specifically to test only a fraction of the ELU's.

During review of the applicable testing documentation by fire protection personnel, it was noted that a discrepancy existed between the surveillance test procedure, and the administrative procedure that controls the surveillance test procedure.

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**CAUSE OF OCCURRENCE (cont'd)**

Specifically, the administrative procedure shows that the discharge test is to be performed preferably during the unit's outage and only a fraction (5%) of the units should be tested. The 5% testing limit is not included in the surveillance test procedure. Furthermore, the procedure does not contain a requirement to declare the tested units inoperable and implement the required compensatory measures until full capacity has been restored to ensure compliance with the fire protection program requirements.

**PRIOR SIMILAR OCCURRENCES**

A review of 1998 through 2000 LERs and Special Reports for both Salem and Hope Creek identified no similar occurrences. Investigative activities to date have revealed that 100% of the ELU's for Salem Units 1 and 2 were tested in February of 1998 and September of 1999. The testing performed in 1998 was intended to be a one-time test to determine the effectiveness of the preventative maintenance program. Records of the 1999 monthly surveillance check of the portable lights indicate that they were all operable during the August 1999 performance. The monthly surveillance did not exist prior to the February 1998 discharge test, however there is no indication that the hand-held lights were inoperable at the time.

**SAFETY CONSEQUENCES AND IMPLICATIONS**

There were no safety consequences associated with this event. As stated above, Salem station provides two different means to comply with the requirements of 10 CFR 50 Appendix R; (1) the self-contained battery powered emergency light units, and (2) 16 emergency hand-held battery operated units. Although the ELUs were inoperable for up to the 72 hours that were needed to restore the batteries to full capacity, other means of providing illumination existed. Most personnel working within the power block (licensed and non-licensed operators, as well as technicians) receive battery-operated flashlights as part of their normal working equipment.

Although not credited for the purpose of satisfying the requirements of the fire protection program, they were available and could have been used in case of need. Furthermore, nine hand-held lights were operable and available to provide emergency lighting.

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**SAFETY CONSEQUENCES AND IMPLICATIONS (cont'd)**

Additionally, the fire protection program uses defense in depth with multiple levels of protection to prevent fires. The multiple levels of protection include limiting combustibles and ignition sources in plant design, administrative control of transient combustibles and ignition sources, detectors for prompt detection of fires, automatic suppression in areas with high fire loads, fire barriers to provide for the separation and containment of fires, and an on-site fire department which responds and extinguishes fires upon detection. All these different levels of protection were operable and available.

Based on the above there was no impact to the health and safety of the public.

**CORRECTIVE ACTIONS**

1. Battery powered hand-held lights were provided as supplement to the self contained battery powered emergency lighting units.
2. The implementing surveillance test procedures have been placed on "hold" until completion of the root cause investigation.
3. All Fire Protection shift supervisors and staff personnel have been coached by department management to reference the administrative program requirements prior to performing implementing procedures. Additionally, a night order has been issued to ensure fire protection systems under test are declared inoperable with compensatory measures in place during testing.
4. This condition has been entered into the corrective action program and a level one-root cause analysis is being performed. Additional corrective actions to improve the Fire Protection testing program may be taken, as necessary, at the completion of the investigation. If at the completion of the root cause evaluation the apparent cause stated in this report changes significantly, a supplement to this report will be issued.

**COMMITMENTS**

The corrective actions cited in this Special Report are voluntary enhancements and do not constitute commitments.