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

Gentlemen:

LER 272/03-003-00  
SALEM - UNIT 1  
FACILITY OPERATING LICENSE NO. DPR-70  
DOCKET NO. 50-272

This Licensee Event Report, "Shutdown Required by Technical Specification 3.0.3," is  
being submitted pursuant to the requirements of the Code of Federal Regulations  
10CFR50.73(a)(2)(i)(A).

The attached LER contains no commitments.

Sincerely,

A handwritten signature in black ink, appearing to be "R. J. ...", written over the word "Sincerely,".  

Plant Manager - Salem

Attachment

/EHV

C     Distribution  
      LER File 3.7

TE22

## 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 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to bis1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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

1. FACILITY NAME SALEM GENERATING STATION UNIT 1	2. DOCKET NUMBER 05000272	3. PAGE 1 OF 4
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4. TITLE  
Shutdown Required by Technical Specification 3.0.3

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	15	2003	2003	003	00	12	05	2003	FACILITY NAME	DOCKET NUMBER
9. OPERATING MODE		1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)							
10. POWER LEVEL		100	20.2201(b)			20.2203(a)(3)(ii)			50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)
			20.2201(d)			20.2203(a)(4)			50.73(a)(2)(iii)	50.73(a)(2)(x)
			20.2203(a)(1)			50.36(c)(1)(i)(A)			50.73(a)(2)(iv)(A)	73.71(a)(4)
			20.2203(a)(2)(i)			50.36(c)(1)(ii)(A)			50.73(a)(2)(v)(A)	73.71(a)(5)
			20.2203(a)(2)(ii)			50.36(c)(2)			50.73(a)(2)(v)(B)	OTHER
			20.2203(a)(2)(iii)			50.46(a)(3)(ii)			50.73(a)(2)(v)(C)	Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		x	50.73(a)(2)(i)(A)			50.73(a)(2)(v)(D)	
			20.2203(a)(2)(v)			50.73(a)(2)(i)(B)			50.73(a)(2)(vii)	
			20.2203(a)(2)(vi)			50.73(a)(2)(i)(C)			50.73(a)(2)(viii)(A)	
			20.2203(a)(3)(i)			50.73(a)(2)(ii)(A)			50.73(a)(2)(viii)(B)	

## 12. LICENSEE CONTACT FOR THIS LER

NAME E. Villar, Licensing Engineer	TELEPHONE NUMBER (Include Area Code) 856-339-5456
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## 13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
Foreign Material	JB	FCV	SPX-Copes	Yes					

## 14. SUPPLEMENTAL REPORT EXPECTED

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO
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## 15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

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

On October 15, 2003, at approximately 0316, the Salem Unit 1 nuclear control operator (NCO) (licensed operator) noticed that the 14BF19 (main feedwater regulating valve) {JB/FCV} was not moving with changing demand (both in automatic and manual). The valve appeared to be approximately 71% open.

Initial local inspection of the valve and prior experience indicated that the problem with the valve was the actuator and not the feedwater isolation function, thus the valve was still operable. Further investigation confirmed the valve to be immovable.

Technical Specification 3.0.3 was entered and a plant shutdown was initiated in accordance with procedures.

After the plant shutdown, the valve was opened and inspected. Foreign material was found lodged between the valve plug and the inside diameter of the cage. This resulted in the valve not being able to move. As a result of the inspection a level one condition report was initiated to evaluate the root cause of this and other issues with the foreign material control program. The level one root cause is in progress and corrective actions will be taken as necessary to enhance the foreign material control program. An extent of condition evaluation concluded that the other feedwater valves were not affected.

This event is reportable per the requirements of 10 CFR 50.73 (a) (2)(i)(A), completion of any nuclear plant shutdown required by the plant's Technical Specifications.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Salem Generating Station Unit 1	05000272	2003	- 003	- 00	2 OF 4

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

**PLANT AND SYSTEM IDENTIFICATION**

Westinghouse – Pressurized Water Reactor

Feedwater Steam Generator level Control {JB/FCV}\*(BF)

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

**IDENTIFICATION OF OCCURRENCE**

Event Date: October 15, 2003

Discovery Date: October 15, 2003

**CONDITIONS PRIOR TO OCCURRENCE**

The plant was in MODE 1 (POWER OPERATION) at the time of the event. No other structures, systems or components were inoperable at the start of this event that contributed to the event.

**DESCRIPTION OF OCCURRENCE**

On October 15, 2003, at approximately 0316, the Salem Unit 1 nuclear control operator (NCO) (licensed operator) noticed that the 14BF19 (main feedwater regulating valve) {JB/FCV} was not moving with changing demand (both in automatic and manual). The valve appeared to be approximately 71% open. Initial local visual inspection of the valve showed no signs of binding. Based on the results of the initial visual inspection of the valve and prior experience, our initial assessment was that the problem with the valve was the actuator and not the feedwater isolation function, thus the valve was still operable.

Further investigation confirmed the valve to be immovable. Technical Specification 3.0.3 was entered at 1505 because the feedwater isolation functioned was affected and the valve would not have closed if demanded by either train of solid state protection (i.e., the requirements of Technical Specifications 3.3.2.1 could not be met). Technical Specification 3.0.3 requires that within one hour action shall be initiated to place the unit in a MODE in which the specification does not apply.

A power reduction was initiated at 16:03 in accordance with procedures and to comply with the requirement of Technical Specifications 3.0.3.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Salem Generating Station Unit 1	05000272	2003	- 003	- 00	3 OF 4

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

**DESCRIPTION OF OCCURRENCE (continued)**

The plant was stabilized in Mode 3 and all systems responded as expected.

This event is reportable per the requirements of 10 CFR 50.73 (a) (2)(i)(A), completion of any nuclear plant shutdown required by the plant's Technical Specifications.

**CAUSE OF OCCURRENCE**

The valve was opened and inspected. Foreign material was found lodged between the valve plug and the inside diameter of the cage. This resulted in the valve not being able to move.

Although the object was severely deformed, an analysis of the foreign material was performed and the results of the analysis indicated that the object was a stud that was not from a system component. The stud prevented the plug from freely moving inside the cage.

**PREVIOUS OCCURRENCES**

A review of reportable events for Salem and Hope Creek in the last two years did not identify any similar several events where foreign material intrusion resulted in a plant shutdown.

**SAFETY CONSEQUENCES AND IMPLICATIONS**

There were no safety consequences associated with this event.

At Salem there are two valves in each main feed line that serve to isolate main feedwater flow following a steamline break; (1) the main feedwater regulator valve (BF19), which receives dual, separate train trip signals from the Plant Protection System on any safety injection signal and closes within 10 seconds (including instrument delays), and (2) the feedwater isolation valve (BF13) that also receives dual, separate train trip signals from the reactor protection system following a safety injection signal. The BF13 valves are motor operated and close within 32 seconds (including instrument delays). Additionally, the main feed water pumps receive dual, separate train trips from the protection system following a steam line break.

Failure of the main feedwater regulator valve a (BF19) to close results in an additional 22 seconds during which feedwater from the Condensate Feed System may be added to the faulted steam generator. This failure of a BF19 to close has been analyzed with acceptable results and it is fully described in Chapter 15.4 of the Salem Final Safety Analysis Report.

This event constitutes a Safety System Functional Failure (SSFF) as defined in NEI 99-02

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Salem Generating Station Unit 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
		2003	- 003	- 00	

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

**CORRECTIVE ACTIONS**

The plant was shutdown and the valve was opened and inspected. The foreign material was removed and the valve was returned to an operable status. No damaged was done to the valve by the stud.

An extent of condition evaluation was performed. For the affected loop, the evaluation included performance of diagnostic air test and boroscope (eight feet on either side of the 14BF19 valve). Similarly, a diagnostic air test, valve stroke test, and monitoring of the metal impact monitoring system were performed for the other three feedwater loops. Based on the results of these evaluations and the conclusion that the source of the material was not from a system component, the evaluation concluded that it was unlikely that foreign material would still exist in the feedwater loops.

As a result of the inspection a level one condition report was initiated to evaluate the root cause of this and other issues with the foreign material control program. The level one root cause is in progress and corrective actions will be taken as necessary to enhance the foreign material control program.

**COMMITMENTS**

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