

**JAN 22 2016**



LR-N16-0009

10 CFR 50.73

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Salem Nuclear Generating Station Unit 2  
Renewed Facility Operating License No. DPR-75  
NRC Docket No. 50-311

Subject: Licensee Event Report 311/2015-003-000, "Both Trains of High Head Safety Injection Inoperable Due to a Relief Valve Failure"

In accordance with the requirements of 10 CFR 50.73(a)(2)(v)(D), PSEG Nuclear LLC is submitting the enclosed Licensee Event Report (LER) 2015-003-000, "Both Trains of High Head Safety Injection Inoperable Due to a Relief Valve Failure."

If you have any questions or require additional information, please contact Mr. Thomas Cachaza at 856-339-5038.

There are no regulatory commitments contained in this letter.

Sincerely,

A handwritten signature in black ink that reads "John F. Perry".

John F. Perry  
Site Vice President  
Salem Generating Station

Attachment: Licensee Event Report 311/2015-003-000

cc Mr. D. Dorman, Administrator – Region 1, NRC  
Ms. C. Sanders, Licensing Project Manager – Salem, NRC  
Mr. P. Finney, USNRC Senior Resident Inspector, Salem (X24)  
Mr. P. Mulligan, Manager IV, NJBNE  
Mr. R. Braun, President and Chief Nuclear Officer – Nuclear  
Mr. T. Cachaza, Salem Commitment Tracking Coordinator  
Mr. L. Marabella, Corporate Commitment Tracking Coordinator



**LICENSEE EVENT REPORT (LER)**

(See Page 2 for required number of digits/characters for each block)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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 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 collection.

<b>1. FACILITY NAME</b> Salem Generating Station – Unit 2	<b>2. DOCKET NUMBER</b> 05000311	<b>3. PAGE</b> 1 OF 3
--	-------------------------------------	--------------------------

**4. TITLE**  
Both Trains of High Head Safety Injection Inoperable Due to a Relief Valve Failure

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
11	23	2015	2015	003	000	01	22	2016		05000
									FACILITY NAME	DOCKET NUMBER
										05000

<b>9. OPERATING MODE</b>	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)</b>			
3	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
0%	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A	

**12. LICENSEE CONTACT FOR THIS LER**

LICENSEE CONTACT Thomas J. Cachaza, Senior Regulatory Compliance Engineer	TELEPHONE NUMBER (Include Area Code) 856 - 339 - 5038
--	--

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	BQ	RV	C710	Y					

<b>14. SUPPLEMENTAL REPORT EXPECTED</b> <input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO	<b>15. EXPECTED SUBMISSION DATE</b>	MONTH 02	DAY 19	YEAR 2016
--	-------------------------------------	-------------	-----------	--------------

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

At 2136 on November 23, 2015, the Boron Injection Tank (BIT) relief valve 2SJ10 lifted during the performance of troubleshooting to determine the cause of low BIT pressure. The lifting of 2SJ10 initiated a Reactor Coolant System (RCS) leak greater than 10 gallons per minute (gpm). Technical Specification (TS) 3.4.7.2.b action b was entered for RCS unidentified leakage greater than 1 gpm.

The BIT was isolated at 2137 and the leakage was stopped. Excessive leakage through 2SJ10 rendered both trains of high head safety injection inoperable, requiring entry into TS 3.0.3.

This report is being made in accordance with 10CFR50.73 (a)(2)(v)(D) "Any event or condition that could have prevented the fulfillment of the safety functions of structures or systems that are needed to mitigate the consequences of an accident."



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

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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 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 collection.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Salem Generating Station – Unit 2	05000311	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 3
		2015	- 003	- 000	

**NARRATIVE**

**PLANT AND SYSTEM IDENTIFICATION**

Westinghouse - Pressurized Water Reactor {PWR/4}

Emergency Core Cooling System / Relief Valve {BQ/RV}

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

**IDENTIFICATION OF OCCURRENCE**

Event Date: November 23, 2015

Discovery Date: November 23, 2015

**CONDITIONS PRIOR TO OCCURRENCE**

Salem Unit 2 was in operational Mode 3, the RCS was at normal operating temperature and pressure. No additional structures, systems or components were inoperable at the time of the event that contributed to this event.

**DESCRIPTION OF OCCURRENCE**

At 2136 on November 23, 2015, the Boron Injection Tank (BIT) relief valve 2SJ10 lifted during the performance of troubleshooting to determine the cause of low BIT pressure. The lifting of 2SJ10 initiated a Reactor Coolant System (RCS) leak greater than 10 gallons per minute (gpm). Technical Specification (TS) 3.4.7.2.b action b was entered for RCS unidentified leakage greater than 1 gpm.

The BIT was isolated at 2137 and the leakage was stopped. Excessive leakage through 2SJ10 rendered both trains of high head safety injection inoperable, requiring entry into TS 3.0.3.

On November 24, 2015 At 0252 Salem Unit 2 entered Mode 4, and at 0920 Salem Unit 2 achieved Mode 5, Cold Shutdown.

An eight-hour NRC Event Notification was required by 10 CFR 50.72(b)(3)(v)(D) for an event that could have prevented the fulfillment of a safety function of structures or systems that are needed to mitigate the consequences of an accident. EN 51563 was completed on November 23, 2015, at 0446. This LER is being made pursuant to the reporting requirements of 10 CFR 50.73(a)(2)(v)(D).



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

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@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 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 collection.

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Salem Generating Station – Unit 2	05000311	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 3
		2015	- 003	- 000	

**NARRATIVE**

**CAUSE OF EVENT**

A cause evaluation is in progress and will be reported in a supplement to this LER.

**SAFETY CONSEQUENCES AND IMPLICATIONS**

This event did not result in a release of radioactivity or an increase of offsite dose rates, and there were no personnel injured or damage to any other safety related equipment. The excessive unidentified leakage was quickly terminated. TS 3.0.3 was entered and the plant was placed in Mode 5, Cold Shutdown. A further review of the safety consequences will be performed after the cause analysis is completed.

**SAFETY SYSTEM FUNCTIONAL FAILURE**

A review for Safety System Functional Failure (SSFF) as defined in NEI 99-02, Regulatory Assessment Performance Indicator Guidelines, will be performed after the cause analysis is complete.

**PREVIOUS OCCURRENCES**

A review of Salem Unit 1 and 2 Licensee Event Reports for the previous three years identified a similar event requiring entry into TS 3.0.3 when both trains of intermediate head ECCS were rendered inoperable. That event was reported in LER 272/2014-005 "Technical Specification 3.0.3 Entry; Two ECCS Subsystems Inoperable," dated August 27, 2014.

**CORRECTIVE ACTIONS**

- 1) The 2SJ10 relief valve was replaced and retested with no identified leakage.
- 2) A cause evaluation is in progress. Additional corrective actions will be determined upon completion of the evaluation.

**COMMITMENTS**

There are no regulatory commitments contained in this LER.