

PSEG Nuclear LLC  
P.O. Box 236, Hancocks Bridge, NJ 08038-0236



10CFR50.73

NOV 18 2011  
LR-N11-0353

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington DC 20555-001

LER 272/2011-004  
Salem Nuclear Generating Station Unit 1  
Facility Operating License No. DPR-70  
NRC Docket No. 50-272

**SUBJECT: 11 Component Cooling Water Pump Inoperable For Greater Than Allowed  
By Technical Specifications**

This letter is being issued to correct the LER number for LER 272/2011-003 issued on October 21, 2011. This LER should have been numbered LER 272/2011-004. No changes were made to the contents of the LER only the number of the LER was corrected.

The attached corrected LER contains no commitments. Should you have any questions or comments regarding this submittal, please contact Mr. Brian Thomas at 856-339-2022.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Fricker", written over the word "Sincerely,".  

Carl J. Fricker  
Site Vice President – Salem

Attachments (1)

JE22  
NRC

NOV 18 2011

cc Mr. W. Dean, Administrator, Region I, NRC  
Mr. R. Ennis, Licensing Project Manager – Salem, NRC  
Mr. D. Schroeder, USNRC Senior Resident Inspector, Salem (X24)  
Mr. P. Mulligan, Manager IV, NJBNE  
L. Marabella, Corporate Commitment Tracking Coordinator  
H. Berrick, Salem Commitment Tracking Coordinator

# LICENSEE EVENT REPORT (LER)

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 Records and FOIA/Privacy Section (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 1	<b>2. DOCKET NUMBER</b> 05000272	<b>3. PAGE</b> 1 of 3
--	-------------------------------------	--------------------------

**4. TITLE**  
11 Component Cooling Water Pump Inoperable For Greater Than Allowed By Technical Specifications

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
08	22	2011	2011	0 0 4	0	10	21	2011		DOCKET NUMBER

<b>9. OPERATING MODE</b>  1	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§:</b> <i>(Check all that apply)</i>			
<b>10. POWER LEVEL</b>  100%	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

FACILITY NAME Brian Thomas, Senior Compliance Engineer	TELEPHONE NUMBER (Include Area Code) (856) 339 -2022
---	---

**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
B	CW	P	G200	Y					

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

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

This report is being made in accordance with 10CFR50.73(a)(2)(i)(B), "any event or condition which was prohibited by the plant's Technical Specification."

On August 22, 2011, during the performance of rounds, an equipment operator found one of the two outboard pedestal mounting bolts for the 11 Component Cooling Water (CCW) pump dislodged and the other outboard mounting bolt was backed out approximately 1-inch. At 0217, the 11 CCW pump was declared inoperable and Technical Specification Action Statement (TSAS) 3.7.3.1 was entered. The 11 CCW pump was in service at the time of discovery. The pump was stopped and the 12 CCW pump placed in service. The 11 CCW pump pedestal bolts were replaced and torqued. The 11 CCW pump was retested satisfactory. The pump was returned to operable status on August 23, 2011 at 0057 hours and TSAS 3.7.3.1 exited.

The cause of the loose bolting was the original vendor supplied pedestal bolting was not adequately torqued during factory assembly of the 11 CCW pump and pedestal. Once torqued properly the bolts should have remained captured due to adequate bolt stretch and preload. Corrective actions include replacement and torque of the 11 CCW pump pedestal bolts, a walk down of the similar type pumps (CCW, Containment Spray and Spent Fuel Cooling) and the validation of pedestal bolts torque values for the Containment Spray, Spent Fuel Cooling, and the remaining CCW pumps.

**LICENSEE EVENT REPORT (LER)**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Salem Generating Station Unit 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 of 3
		2011 - 0 0 4 - 00			

**NARRATIVE**

**PLANT AND SYSTEM IDENTIFICATION**

Westinghouse – Pressurized Water Reactor (PWR/4)

Component Cooling Water {CC/-}

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

**IDENTIFICATION OF OCCURRENCE**

Event Date: August 22, 2011

Discovery Date: August 22, 2011

**CONDITIONS PRIOR TO OCCURRENCE**

Salem Unit 1 was in Operational Mode 1. No additional structures, systems or components were inoperable at the time of the discovery that contributed to the event.

**DESCRIPTION OF OCCURRENCE**

On August 22, 2011, during the performance of rounds, an equipment operator found one of the two outboard pedestal mounting bolts for the 11 Component Cooling Water (CCW) pump {CC/P} dislodged and the other outboard mounting bolt was backed out approximately 1-inch. At 0217, the 11 CCW pump was declared inoperable and Technical Specification Action Statement (TSAS) 3.7.3.1 was entered. The 11 CCW pump was in service at the time of discovery. The pump was stopped and the 12 CCW pump placed in service. Additional inspection determined that 1 of the 2 inboard mounting bolts had backed out. The 11 CCW pump pedestal bolts were replaced and torqued. The 11 CCW pump was retested satisfactory. The pump was returned to operable status on August 23, 2011 at 0057 hours and TSAS 3.7.3.1 exited.

Although the exact time of when the 11 CCW pump mounting bolts became loose and dislodged can not be determined, it is conservatively assumed that this condition existed for longer than the 72-hour allowed outage time for one inoperable CCW loop.

**CAUSE OF OCCURRENCE**

The cause of the loose bolting was the original vendor supplied pedestal bolting was not adequately torqued during factory assembly of the 11 CCW pump and pedestal. Properly torqued bolts will remain captured due to adequate bolt stretch and preload. Per discussion with the vendor, the bolts should come torqued to the proper value so they do not come loose during operation. The 11 CCW pump is a Goulds pump model 3405L split casing single stage pump.

**LICENSEE EVENT REPORT (LER)**

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Salem Generating Station Unit 1	05000272	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 of 3
		2011	- 0 0 4 -	00	

**NARRATIVE**

**PREVIOUS OCCURRENCES**

A review of LERs at Salem Station dating back to 2008 identified the following previous occurrence related to bolting. Salem Unit 2 LER 311/2009-002 was issued for the 22 CCW heat exchanger being inoperable for greater than the allowed outage time. The cause of this event was use of lower strength bolts and the torque value specified in the installation procedure was lower than the torque specified in the vendor manual. The corrective actions associated with 22CCW heat exchanger were specific to that event and would not have prevented the current event from occurring.

**SAFETY CONSEQUENCES AND IMPLICATIONS**

There was no actual safety consequence associated with this event. This condition only impacted the 11 CCW pump during a seismic event. The 11 CCW pump would have functioned during a design basis accident. Although the as-found condition of the 11 CCW pump could not be evaluated as acceptable during a seismic event, the bolts became loose over time. The exact time that the bolts became loose could not be determined; however, work activities in the area during the last refueling outage would have discovered a missing bolt. Therefore the significance of having the 11 CCW pump inoperable due to seismic conditions was assessed for the past operating cycle. For the past operating cycle, a review was performed to determine if the 12 and 13 CCW pumps were removed from service at the same time. This review determined that if the 11 CCW pump was considered inoperable for the entire cycle, either the 12 or 13 CCW pumps were operable and capable of shutting down the plant during a seismic event. Use of one CCW pump increases the time to shut down the plant.

A review of this event determined that a Safety System Functional Failure (SSFF) as defined in NEI 99-02, Regulatory Assessment Performance Indicator Guidelines, did not occur. This event did not result in a condition that would have prevented the fulfillment of a safety function of a system needed to shutdown the reactor and maintain it in a safe shutdown condition, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.

**CORRECTIVE ACTIONS**

1. All four of the 11 CCW pump pedestal bolts were replaced and torqued.
2. A walk down of the similar pumps (CCW, Containment Spray and Spent Fuel Cooling) in Salem Unit 1 and 2 was performed to visually verify the tightness of the pedestal bolts. This walk down determined that two of the four pedestal bolts for the 23 CCW pump could be turned 1/4 flat and 1/2 flat respectively. An assessment by engineering determined that the 23 CCW pump would have been able to perform its safety function during a seismic event in the as-found condition. No issues were identified with the remaining pumps as a result of the walk down.
3. The torque values of the pedestal bolts for the Containment Spray, Spent Fuel Cooling, and the remaining CCW pumps will be validated and tracked in accordance with PSEG's corrective action program.

**COMMITMENTS**

No commitments are made in this LER.