Virginia Electric and Power Company Surry Power Station 5570 Hog Island Road Surry, Virginia 23883

August 1, 2011

U. S. Nuclear Regulatory Commission Attention: Document Control Desk Washington, D. C. 20555-0001 Serial No.: 11- 400 SPS: JSA Docket No.: 50-281 License No.: DPR-37

Dear Sirs:

Pursuant to 10CFR50.73, Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to Surry Power Station Unit 2.

Report No. 50-281/2011-003-00

This report has been reviewed by the Station Facility Safety Review Committee and will be forwarded to the Management Safety Review Committee for its review.

Very truly yours,

Gerald T. Bischof, Site Vice President Surry Power Station

Enclosure Commitment contained in this letter: None

JEda

cc: U.S. Nuclear Regulatory Commission, Region II Marquis One Tower, Suite 1200 245 Peachtree Center Ave., NE Atlanta, GA 30303-1257

NRC Senior Resident Inspector Surry Power Station

NRC FORM 366			U.S. NUCLEAR REGULATORY COMMISSION					APPROVED BY OMB: NO. 3150-0104 EXPIRES 10/31/2013									
(10-2011) LICENSEE EVENT REPORT (LER) (See reverse 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 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 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 NUMBER				3. PAGE						
Surry Power Station, Unit 2							05000 - 281 1 OF 3										
4. TITLE Isolation of Main Feedwater Pump Results in Auxiliary Feedwater Actuation																	
5. E	VENT D	ATE	6. LER NUMBER			7. REPORT DAT		E 8. OTHER FAC			FACILI	LITIES INVOLVED					
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10. POWER LEVEL			20.2203(a)(2)(ii)         20.2203(a)(2)(iii)         20.2203(a)(2)(iv)         20.2203(a)(2)(v)         20.2203(a)(2)(v)         20.2203(a)(2)(v)			50.36(c)(1)(ii)(A)         50.36(c)(2)         50.46(a)(3)(ii)         50.73(a)(2)(i)(A)         50.73(a)(2)(i)(B)				×       50.73(a)(2)(iv)(A)         50.73(a)(2)(v)(A)         50.73(a)(2)(v)(B)         50.73(a)(2)(v)(C)         50.73(a)(2)(v)(D)			<ul> <li>50.73(a)(2)(x)</li> <li>73.71(a)(4)</li> <li>73.71(a)(5)</li> <li>OTHER</li> <li>Specify in Abstract below or in NRC Form 366A</li> </ul>				
12. LICENSEE CONTACT FOR THIS LER																	
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NRC FORM 366A U. S. NUCLEAR REGULATORY COMMISS (10-2011) LICENSEE EVENT REPORT (LER) CONTINUATION SHEET										
1. FACILITY NAME	1. FACILITY NAME 2. DOCKET 6. LER NUMBER									
		YEAR	SEQUENTIAL NUMBER	REV NO.	2 of 3					
Surry Power Station	05000 - 281	2011	_ 003 .	00	2010					

NARRATIVE

# 1.0 DESCRIPTION OF THE EVENT

On May 30, 2011, at 0808 hours, with Surry Power Station Unit 1 at 100% power and Unit 2 at intermediate shutdown (ISD) (~ 405°F and ~ 823 psig) following a scheduled refueling, securing of Unit 2 A Main Feedwater (MFW) pump [EIIS-SJ-P] resulted in Auxiliary Feedwater (AFW) [EIIS-BA] actuation. The Unit 2 B MFW pump was undergoing maintenance for seal replacement when the running A MFW pump outboard motor bearing experienced high temperature due to low oil flow. Operators secured the A MFW pump and the Unit 2 motor driven AFW pumps automatically started, as expected.

A decision was made to secure the A MFW pump to prevent bearing damage with the knowledge that AFW would automatically start. The pump motor breakers for the A MFW pump were opened at 0808 hours and the Unit 2 motor driven AFW pumps automatically started as expected and fed the Unit 2 steam generators (SGs). The plant was subsequently realigned to feed the SGs with the condensate pumps [EIIS-SD-P] and the motor driven AFW pumps were secured at 0821 hours.

Alternative actions that were considered to avoid AFW pump start would have taken additional time and would have extended operation of the A MFW pump at high temperatures. An 8 hour notification for the automatic actuation of AFW was made pursuant to 10CFR50.72(b)(3)(iv)(A).

This report is being submitted pursuant to 10CFR50.73(a)(2)(iv)(A) for automatic actuation of the AFW system.

# 2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

Plant equipment responded as designed and there was no challenge to normal plant operation. An evaluation determined this event to be of very low safety significance. The unit was maintained stable at ISD. There were no radiation releases due to these events. Therefore, the health and safety of the public were not affected at any time during this event.

# 3.0 <u>CAUSE</u>

When the Unit 2 A MFW pump outboard bearing increasing temperature was identified, Operations personnel made a decision to secure the MFW pump and allow the AFW actuation. The action was taken to protect plant equipment when the rapid increase in bearing temperature was noted. A cause evaluation determined debris was present in the Unit 2 A MFW pump lube oil system and caused the low oil flow to the A MFW pump outboard motor bearing.

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LICENSEE EVENT REPORT (LER)

# **CONTINUATION SHEET**

1. FACILITY NAME	2. DOCKET		6. LER NUMBER	3. PAGE		
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Surry Power Station	05000 - 281	2011 _	. 003 _	. 00	0010	

## 4.0 **IMMEDIATE CORRECTIVE ACTION(S)**

When AFW actuated, operators realigned condensate pumps to feed the SGs. The AFW pumps were then secured.

# 5.0 ADDITIONAL CORRECTIVE ACTIONS

The lube oil system for the Unit 2 A MFW pump was disassembled, cleaned, flushed, tested and placed back into service at 0817 hours on June 11, 2011.

## 6.0 **ACTIONS TO PREVENT RECURRENCE**

The action to secure the A MFW pump and the resulting AFW pump actuation was needed to prevent further damage to the pump.

#### 7.0 SIMILAR EVENTS

None

## 8.0 MANUFACTURER/MODEL NUMBER

Main Feedwater Pump: Sulzer Bingham Pumps, Inc./CD

### 9.0 **ADDITIONAL INFORMATION**

Unit 1 was at 100% power and remained unaffected by the Unit 2 AFW actuation. Unit 2 continued with the scheduled refueling outage.