

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

August 16, 2013

U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555-0001

Serial No.: 13-395
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. 50-281/2013-002-00

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,



N. L. Lane,
Site Vice President
Surry Power Station

Enclosure

Commitment contained in this letter: None

*LE22
NHL*

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

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 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 Surry Power Station, Unit 2	2. DOCKET NUMBER 05000-281	3. PAGE 1 OF 4
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4. TITLE
Partially Open Valve Results in Pump Inoperability that Exceeded Technical Specifications Actions

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
06	23	13	2013	002	00	08	16	2013	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE N	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)											
	<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)								
10. POWER LEVEL 100	<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 N.L. Lane, Site Vice President	TELEPHONE NUMBER (Include Area Code) (757) 365-2001
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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
B	BA	ISV	G153	Y					

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

At 21:00 on June 23, 2013, with both Unit 1 and Unit 2 operating at 100%, an operator identified a discrepancy with the valve position on the Unit 2 Turbine Driven Auxiliary Feedwater Pump turbine trip throttle valve. The apparent cause of the Unit 2 trip throttle valve abnormal position is thread wear between the screw spindle (stem) and sliding nut. The vibrations from infrequently running adjacent equipment caused the valve to move in a closed direction. The trip throttle valve was returned to open and the handwheel secured in the open position. Due to partial closure of the trip throttle valve, the Unit 2 Turbine Driven Auxiliary Feedwater Pump was determined to be inoperable for greater than the Technical Specification limiting condition of operation and therefore, this report is being submitted, pursuant to 10 CFR 50.73(a)(2)(i)(B) for operation prohibited by Technical Specifications. Based on an assessment of this event, the risk impact was determined to be very small and, as a result, the health and safety of the public were not affected.

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NARRATIVE

1.0 DESCRIPTION OF THE EVENT

At 21:00 on June 23, 2013, with both Unit 1 and Unit 2 operating at 100%, and while preparing for an emergency diesel generator maintenance package, an operator identified a discrepancy with the valve position on the Unit 2 Turbine Driven Auxiliary Feedwater Pump (TDAFWP) turbine trip throttle valve [EISS-BA-ISV]. The Unit 2 trip throttle valve stem position appeared to not be fully withdrawn from the valve body. At 21:30 a troubleshooting plan was initiated and the diesel generator maintenance package was delayed. On June 24, 2013 at 01:15, the Unit 2 TDAFWP [EISS-BA-P] was taken out of service for troubleshooting and at 01:23 the Unit 2 trip throttle valve was determined not to be in the fully open position.

At 03:05 on June 24, 2013, the trip throttle valve was returned to open, the handwheel was secured in the open position, and the Unit 2 TDAFWP was returned to service. At 14:45, a test was conducted on the Unit 2 TDAFWP to determine whether vibrations from the pump caused the trip throttle valve to rotate. At 17:03, it was noted the trip throttle valve did not change position during the pump run and the device used to secure the handwheel was removed.

An apparent cause evaluation was initiated and interviews conducted to determine if the valve could have been repositioned by personnel working in the area. An operator noted the Unit 2 trip throttle valve to be in the open position during his rounds on June 18, 2013, at 20:09. A review of plant history noted the Unit 2 'B' Motor Driven Auxiliary Feedwater (MDAFW) pump operated between 13:47 and 14:09 on June 20, 2013, prior to finding the trip throttle valve partially closed on June 23. On July 3, 2013, the Unit 2 'B' MDAFW pump was run and the trip throttle valve was observed to rotate toward the closed direction due to the vibration from the MDAFW pump. A temporary modification was implemented to secure the trip throttle valve in the open position and the Unit 2 TDAFWP was returned to service at 19:35 on July 3, 2013.

Based on the most recent Unit 2 'B' MDAFW pump run and the initial installation of the device to secure the Unit 2 TDAFWP turbine trip throttle valve handwheel, the Unit 2 TDAFWP was determined to be inoperable from 14:09 on June 20, 2013 to 03:05 on June 24, 2013. The Unit 2 trip throttle valve was fully opened on June 24, 2013 and the Unit 2 TDAFWP was available, however, since the handwheel was not secured in the open position, vibrations from adjacent equipment could have had an effect on the position of the trip throttle valve. Therefore, until further evaluation, the Unit 2 TDAFWP was also considered inoperable from June 24 to July 3, 2013. These timeframes exceed the Technical Specification 72-hour limiting condition of operation. Therefore, this report is being submitted, pursuant to 10 CFR 50.73(a)(2)(i)(B) for operation prohibited by Technical Specifications.

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2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

During the period when the Unit 2 TDAFWP was inoperable, both Unit 2 MDAFW pumps were operable, except from 15:57 to 16:33 on July 3, 2013, when the Unit 2 'B' MDAFW pump was inoperable, but available, during testing. The Unit 2 Auxiliary Feedwater (AFW) System can also be cross-connected to the Unit 1 AFW System to supply the affected unit. In addition, the Unit 2 TDAFWP turbine trip throttle valve could have been manually restored to the open position which would have returned the Unit 2 TDAFWP to full service. Based on an assessment of this event, the risk impact was determined to be very small and, as a result, the health and safety of the public were not affected.

3.0 CAUSE

The apparent cause of the Unit 2 TDAFWP turbine trip throttle valve abnormal position is thread wear between the screw spindle (stem) and sliding nut. The vibrations from infrequently running adjacent equipment, in combination with the lack of handwheel closing resistance and weight of the disc and stem assembly, caused the valve to move in a closed direction.

4.0 IMMEDIATE CORRECTIVE ACTION(S)

Troubleshooting was initiated, ambient vibration readings were taken, and the Unit 2 TDAFWP was run to determine whether vibrations from the pump caused the trip throttle valve to rotate. The TDAFWP vibrations did not cause the trip throttle valve to rotate.

5.0 ADDITIONAL CORRECTIVE ACTIONS

Procedures used to latch or line-up the Unit 2 TDAFWP turbine trip throttle valve were revised to eliminate random vibrations from causing handwheel rotation by installing a securing device on the handwheel following latching in the open position.

6.0 ACTIONS TO PREVENT RECURRENCE

The thread fit between the spindle and sliding nut on the Unit 2 TDAFWP turbine trip throttle valve will be inspected and repaired as necessary to restore fit and the valve will be reinstalled with a securing device on the handwheel following latching in the open position.

7.0 SIMILAR EVENTS

None

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8.0 MANUFACTURER/MODEL NUMBER

Gimpel Corp (Gimpel Machine Works, Inc.)/P3435

9.0 ADDITIONAL INFORMATION

Unit 1 was unaffected by this event, however, as a precautionary measure, a securing device will be installed on the Unit 1 TDAFWP turbine trip throttle valve handwheel to preclude a similar event. Similar revisions will be made to Unit 1 procedures used to latch or line-up the Unit 1 TDAFWP turbine trip throttle valve.