

**Virginia Electric and Power Company  
North Anna Power Station  
P. O. Box 402  
Mineral, Virginia 23117**

April 27, 2007

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

Serial No.: 07-0280  
NAPS: JHL  
Docket No.: 50-339  
License No.: NPF-7

Dear Sirs:

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

Report No. 50-339/2007-002-00

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

Sincerely,



D. G. Stoddard, Site Vice President  
North Anna Power Station

Enclosure

Commitments contained in this letter: None

cc: United States Nuclear Regulatory Commission  
Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street, SW, Suite 23T85  
Atlanta, Georgia 30303-8931

Mr. J. T. Reece  
NRC Senior Resident Inspector  
North Anna Power Station

JE22

**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: 50 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 Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0066), 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> NORTH ANNA POWER STATION , UNIT 2	<b>2. DOCKET NUMBER</b> 05000 339	<b>3. PAGE</b> 1 OF 4
--	--------------------------------------	--------------------------

**4. TITLE**  
Automatic Start of 2H EDG on Loss of "B" Reserve Station Service Transformer Due To Cable Fault

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIA L NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCUMENT NUMBER
03	07	2007	2007	-- 002 --	00	04	27	2007	FACILITY NAME	DOCUMENT NUMBER
										05000
										05000

<b>9. OPERATING MODE</b>  1	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (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)	
<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 checked="" 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 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 M. D. Sartain, Director Station Safety and Licensing	TELEPHONE NUMBER (Include Area Code) (540) 894-2108
---	--

**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	EA	CBL	K080	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 06	DAY 30	YEAR 07
--	-------------------------------------	-------------	-----------	------------

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

On March 7, 2007, at 0305 hours, with North Anna Unit 2 operating at 100% power (Mode 1), the "B" Reserve Station Service Transformer (RSST) tripped and locked out. The Unit 2 "H" Emergency Diesel Generator (EDG) automatically started on a Degraded Voltage/Under Voltage signal due to the loss of the "B" RSST. The Unit 2 "H" EDG loaded onto the Unit 2 "H" emergency bus as designed. Condition "A" of Technical Specification (TS) 3.8.1 was entered due to the inoperable RSST. An 8-hour Non-Emergency Report was made to the NRC at 0611 hours, in accordance with 10 CFR 50.72 (b)(3)(iv)(A), for an event that results in valid actuation of an EDG. The trip and lockout of the "B" RSST was caused by a fault on one of the "B" phase cables associated with the low side on the "B" RSST. On March 7, 2007, at 1929 hours, the power sources were realigned and the Unit 2 "H" EDG was shutdown and placed in automatic, clearing Condition "A" of TS 3.8.1. This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) for an event that resulted in the automatic actuation of an EDG. No significant safety implications existed since the Unit 2 "H" EDG started as designed and re-energized the emergency bus. Therefore, the health and safety of the public were not affected at any time during the event.

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

FACILITY NAME (1)  NORTH ANNA POWER STATION UNIT 2	DOCKET  05000 - 339	LER NUMBER (6)			PAGE (3)  2 OF 4
		YEAR  2007	SEQUENTIAL NUMBER  --002 --	REVISION NUMBER  00	

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

**1.0 DESCRIPTION OF THE EVENT**

On March 7, 2007, at 0305 hours, with North Anna Unit 2 operating at 100% power (Mode 1), Control Room Operations personnel received several annunciators (EIS Component ANN) simultaneously that indicated that the "B" Reserve Station Service Transformer (RSST) (EIS System EA, Component XFMR) tripped and locked out. The Unit 2 "H" Emergency Diesel Generator (EDG) (EIS System EK, Component DG) automatically started on a Degraded Voltage/Under Voltage signal due to the loss of the "B" RSST. Operations personnel entered appropriate abnormal procedures and stabilized the plant. Condition "A" of Technical Specification (TS) 3.8.1 was entered due to the inoperable RSST. The Unit 2 "H" EDG loaded onto the Unit 2 "H" emergency bus (EIS System EB, Component BU) as designed.

An 8-hour Non-Emergency Report was made to the NRC at 0611 hours, in accordance with 10 CFR 50.72 (b)(3)(iv)(A), for an event that results in valid actuation of an EDG. On March 7, 2007, at 1929 hours, the power sources were realigned and the Unit 2 "H" EDG was shutdown and placed in automatic clearing Condition "A" of TS 3.8.1.

**2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS**

North Anna utilizes three RSSTs to supply offsite power to the four emergency busses (EIS Component BUS) and as a backup supply for the six station services busses. The "B" RSST is the normal supply of the 2H emergency bus and 1G bus and a backup supply for the 1B and 2B station service busses.

There were no nuclear safety consequences as a result of this event since the Unit 2 "H" EDG started as designed and re-energized the emergency bus. Also, the Unit 2 "J" EDG and "2J" emergency bus remained operable. The Unit 1 "G" bus automatically transferred to the "C" RSST. Therefore, the health and safety of the public were not affected at any time during the event. This event is reportable pursuant to 10 CFR 50.73(a)(2)(iv)(A) for an event that resulted in the automatic actuation of an EDG.

**3.0 CAUSE**

The trip and lockout of the "B" RSST were caused by a fault on one of the "B" phase cables (EIS Component CBL) associated with the low side on the "B" RSST. Visual inspection identified the fault location to be on the upper portion of the vertical run on the south side of the Turbine Building. The root cause of the faulted cable is under investigation. Based on observations completed to-date, the most probable cause of the cable failure is mechanical wear or damage associated with the vertical run of cable.

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

FACILITY NAME (1)  NORTH ANNA POWER STATION UNIT 2	DOCKET  05000 - 339	LER NUMBER (6)			PAGE (3)  3 OF 4
		YEAR  2007	SEQUENTIAL NUMBER  --002 --	REVISION NUMBER  00	

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

**4.0 IMMEDIATE CORRECTIVE ACTION(S)**

Operations personnel entered appropriate abnormal procedures and stabilized the plant.

Operations personnel entered Condition "A" of Technical Specification (TS) 3.8.1 due to the inoperable RSST. On March 7, 2007, at 1929 hours, the power sources were realigned and the Unit 2 "H" EDG was shutdown and placed in automatic. This allowed clearing Condition "A" of TS 3.8.1.

**5.0 ADDITIONAL CORRECTIVE ACTIONS**

An inspection was performed on the "B" RSST cables, at the vertical grip locations, on the south side of the Turbine Building for damage. The inspection identified that the failed cable and some of the other RSST cables appear to have slipped down vertically in the cable trays. The cables in the horizontal cable tray runs on top of the Turbine Building appear to have moved as a result of the vertical slip of the cables.

An inspection of the "B" RSST cables identified missing tie-wraps. The missing tie-wraps on the "B" RSST cables were replaced.

An inspection was performed on the "B" phase cables adjacent to the failure location to ensure there was no damage that could affect the shield or interior of the cables. No problems were identified.

Part of the failed "B" phase cable was replaced, including the entire South side Turbine Building vertical run. The "B" RSST was returned to operable. Following the return to service of "B" RSST, a thermographic survey was conducted on the transformer and cable-to-bus-bar connections. All temperatures are satisfactory.

A section of the failed cable has been sent to the cable manufacturer for analysis. Analysis results will be included in the cause evaluation being performed.

**6.0 ACTIONS TO PREVENT RECURRENCE**

Additional actions will be determined and implemented, as required, upon completion of the final root cause evaluation.

**7.0 SIMILAR EVENTS**

Licensee Event Report No. 50-339/1990-002-00, dated August 30, 1990, documents the automatic start of the Unit 2 "H" EDG due to failure of the "B" RSST.

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

FACILITY NAME (1)  NORTH ANNA POWER STATION UNIT 2	DOCKET  05000 - 339	LER NUMBER (6)			PAGE (3)  4 OF 4
		YEAR  2007	SEQUENTIAL NUMBER  --002 --	REVISION NUMBER  00	

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

**8.0 ADDITIONAL INFORMATION**

At the time of this event, North Anna Unit 1 was operating at 100 percent power. The Unit 1 "G" bus automatically transferred to the "C" RSST, therefore, Unit 1 was not affected by this event.

Component Information

Manufacturer: Kerite

Component: 2000 kcmil 5kV copper shielded cable

Model No.: HTK 90 degree C, EPR insulation with CSPE jacket