

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

June 29, 2007

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

Serial No.: 07-0280A
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. 50-339/2007-002-01

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

IE22
NRR

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.

1. FACILITY NAME NORTH ANNA POWER STATION , UNIT 2	2. DOCKET NUMBER 05000 339	3. PAGE 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 --	01	06	29	2007	FACILITY NAME	DOCUMENT NUMBER
										05000
										05000

9. OPERATING MODE 1	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: <i>(Check all that apply)</i>									
	<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)						
10. POWER LEVEL 100%	<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	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
B	EA	CBL	K080	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:
--	--

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 event was caused by damage during original construction installation due to a hole in the cable jacket allowing moisture intrusion resulting in corrosion and then breakage of the zinc shield tape 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 01	

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. The root cause of the event was damage during original construction installation that resulted in a hole in the cable jacket allowing moisture intrusion, which resulted in corrosion and then breakage of the zinc shield tape.

The faulted section of the cable was shipped to the manufacturer where it was subjected to laboratory examination and dissection. The examination determined

**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 01	

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

that the cable jacket must have had a hole in it, which resulted in the zinc tape shield corroding. With the zinc tape shield corroded, subsequent movement of the cable led to the tape breaking. The zinc tape shield original overlap had also separated due to movement and the vertical run. With the zinc tape shield broken and separated, this led to an electrical discontinuity (gap) in the shield. There was then a potential difference across the gap that resulted in current flow. The current flowed across material contaminated with water and corrosion products, leading to the underlying dacron fabric and insulation degrading. The insulation degradation reached the threshold where the normal cable voltage resulted in a conductor to ground short, failing the cable.

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

A temporary modification was implemented to remove the failed portion of the "B" RSST cable from service. The "B" RSST was returned to operable.

Part of the failed "B" phase cable was replaced, including the entire South side Turbine Building vertical run and the temporary modification was cleared.

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.

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 RSST cables, at the vertical grip locations, on the south side of the Turbine Building for damage. No problems were identified.

6.0 ACTIONS TO PREVENT RECURRENCE

Additional corrective actions are being tracked in the Corrective Action Program and will be implemented as required.

**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 01	

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

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.

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