10CFR50.73

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

DEC 1 0 2018

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

Serial No.: 18-421
SPS: TSC
Docket No.: 50-280
License No.: DPR-32

Dear Sir or Madam:

Pursuant to 10CFR50.73, Virginia Electric and Power Company hereby submits the following Licensee Event Report applicable to Surry Power Station Unit 1.

Report No. 50-280 / 2018-002-00

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

Very truly yours,

F. Mladen
Site Vice President
Surry Power Station

Enclosure

Commitment contained in this letter: None

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

IE22
NRR

NRC FORM 366 (04-2017) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 03/31/2020

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 Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by 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.

LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Surry Power Station, Unit 1	05000 280	1 OF 3

4. TITLE

Windblown Debris Caused Transformer Fault Resulting in Auto-Start of Emergency Diesel Generator

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
10	11	2018	2018	- 002	- 00	12	10	2018	Surry Power Station, Unit 2	05000 281
									FACILITY NAME	DOCKET NUMBER 05000

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: *(Check all that apply)*			
N	☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
	☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
	☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
	☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☑ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
10. POWER LEVEL	☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
100	☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(C)	☐ 73.77(a)(1)
	☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 73.77(a)(2)(i)
	☐ 20.2203(a)(2)(vi)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(ii)
		☐ 50.73(a)(2)(i)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT	TELEPHONE NUMBER *(Include Area Code)*
Barry Garber	(757) 365-2725

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
X	TM	LNR	D831	Y					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☑ NO				

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

On October 11, 2018, at 23:04 hours, with Units 1 and 2 at 100% power, 'A' Reserve Station Service Transformer pilot wire lockout signal caused an undervoltage condition of the 1J emergency bus and the subsequent automatic start of the #3 Emergency Diesel Generator (EDG). The #3 EDG energized the 1J emergency bus loads as designed. At the time of the event, the site was experiencing rain and strong winds associated with Tropical Storm Michael.

On October 12, 2018, after the high winds had passed, inspections and functional tests determined that no repairs to the electrical service system were required. Normal alignment of the #3 EDG and the primary off-site power supply to the 1J emergency bus were reestablished within 24 hours. Both Units 1 and 2 remained at 100% power. All equipment operated as designed.

An eight-hour non-emergency event notification was made to the NRC pursuant to 10 CFR 50.72(b)(3)(iv)(A) due to a valid actuation of the #3 EDG. This report is being made pursuant to 10 CFR 50.73(a)(2)(iv)(A) due to a valid actuation of the #3 EDG.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
Surry Power Station, Unit 1	05000- 280	2018	- 002	- 00

NARRATIVE

1.0 DESCRIPTION OF THE EVENT

On October 11, 2018, the site was experiencing rain and strong winds associated with Tropical Storm Michael. At 23:04 hours, with Units 1 and 2 operating at 100% power, a 'B' phase to ground pilot wire lockout signal on the 'A' RSST [EIIS-EA-XFMR] resulted in electrical isolation of the 'A' RSST, the 'D' Transfer Bus, and the Unit 1 'J' Emergency Bus. Emergency bus 1J [EIIS-EK-BU] was de-energized due to the normal bus supply breaker [EIIS-EK-BKR] opening on the UV signal. The UV signal initiated the automatic start sequence for the #3 Emergency Diesel Generator (EDG) [EIIS-EK-DG] and energized the 1J bus, as designed. All 1J emergency bus loads were verified to be in proper alignment. All equipment performed as expected.

At the time of the pilot wire lockout signal, an individual witnessed a flash in the area of the RSSTs. A piece of charred roofing insulation was found in the area, but no smoke or flames were observed. It was subsequently determined that roofing material had become airborne during the storm and contacted the bus work associated with 'A' RSST initiating the lockout signal.

Post event testing of the 'A' RSST was completed satisfactorily, and no repairs were required. On October 12, 2018, at 22:05 hours, after the 1J 4160 V emergency bus normal power supply was reestablished, the #3 EDG was secured and returned to normal automatic standby alignment.

An eight-hour non-emergency event notification was made to the NRC pursuant to 10 CFR 50.72(b)(3)(iv)(A) due to a valid actuation of the #3 EDG. This report is being made pursuant to 10 CFR 50.73(a)(2)(iv)(A) due to a valid actuation of the #3 EDG.

2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

During the event, the redundant 1H 4160 V emergency bus was supplied by normal off-site power. Also, the Unit 2 4160 V emergency busses, 2H and 2J, were supplied by normal off-site power. The #1, #2, and #3 Emergency Diesel Generators remained available to supply power to emergency bus loads. All equipment performed as designed, and the normal equipment alignment was restored by the Operations team in a timely manner. Therefore this event is of minimal safety significance.

3.0 CAUSE OF THE EVENT

It was determined that the roofing material which had contacted the RSST had originated from a breach in the roofing system on the northwest end of the Unit 1 Turbine Building. The roof is constructed with a foam insulation layer covered by a Hypalon elastomeric liner, which is held in place at a parapet with adhesive and mechanical fasteners. During the storm, winds peeled back the roof parapet flashing cap, exposing the Hypalon liner edges. The wind induced air pressure lifted the liner and mechanical fasteners from the roof uncovering the insulation sheets. The insulation became airborne and contacted the 'A' RSST causing the lockout signal. The roof insulation material matched the charred material found near the RSST.

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NARRATIVE

4.0 IMMEDIATE CORRECTIVE ACTIONS

Roof repairs were made by removing the damaged liner, replacing the insulation sheets, and installing a new EPDM (ethylene propylene diene monomer) roof membrane liners with new anchoring strips and fasteners. New parapet wall flashing was seamed onto new EPDM liner.

5.0 ADDITIONAL CORRECTIVE ACTIONS

Additional periodic inspections will be performed on the turbine building roof until long term corrective actions are completed.

6.0 ACTIONS TO PREVENT RECURRENCE

Long term actions recommended by the cause evaluation will be implemented by the corrective action program.

7.0 SIMILAR EVENTS

LER 2013-001-00, Bird Contacting Power Lines Results in Emergency Diesel Generator Auto-Start
LER 2006-002-00, Spurious Actuation Results in Unit 2 Trip and Loss of Offsite Power

8.0 MANUFACTURER/MODEL NUMBER

D831 Dow Corning (J.P. Stevens) Hypalon roofing

9.0 ADDITIONAL INFORMATION

Unit 2 remained at 100 percent power during this event. While #3 EDG was loaded on the 1J 4160 V emergency bus, Technical Specification (TS) action statements associated with Unit 2 emergency electrical systems were reviewed, and associated TS clocks were entered. The event did not cause any additional reportable condition. All Unit 2 TS action statements associated with Unit 2 emergency electrical systems were exited when the #3 EDG was returned to normal alignment at 22:05 hours on 10/12/2018.

There were no other structures, systems, or components that were inoperable at the start of the event that contributed to the event.