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

Vogtle Electric Generating Plant – Unit 2
Licensee Event Report 2017-001-00

Power Supply Failure Results in Operation in a Condition Prohibited by Technical Specifications

Ladies and Gentlemen:

In accordance with the requirements of 10 CFR 50.73(a)(2)(i)(B), Southern Nuclear Operating Company is submitting the enclosed Licensee Event Report, 2017-001-00 for Vogtle Electric Generating Plant Unit 2. This letter contains no NRC commitments. If you have any questions, please contact Dom Sutton at (706) 848-1428.

Respectfully submitted,

B. Keith Taber
Vice President – Plant Vogtle Units 1&2 - SNC

BKT/KCW

Enclosure: Unit 2 Licensee Event Report 2017-001-00

cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
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RType: CVC7000

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**Vogtle Electric Generating Plant – Unit 2
Licensee Event Report 2017-001-00
Power Supply Failure Results in Operation in a Condition Prohibited by Technical Specifications**

Enclosure

Unit 2 Licensee Event Report 2017-001-00

NRC FORM 366 (04-2017)	U.S. NUCLEAR REGULATORY COMMISSION LICENSEE EVENT REPORT (LER) (See Page 2 for required number of digits/characters for each block)	APPROVED BY OMB: NO. 3150-0104 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.	EXPIRES: 03/31/2020
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1. FACILITY NAME Vogtle Electric Generating Plant	2. DOCKET NUMBER 05000425	3. PAGE 1 OF 3
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4. TITLE
Power Supply Failure Results in Operation in a Condition Prohibited by Technical Specifications

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
3	9	2017	2017	- 001	- 00	4	27	2017		05000
									FACILITY NAME	DOCKET NUMBER
										05000

9. OPERATING MODE 1	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)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
10. POWER LEVEL 100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<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)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<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)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT Dom Sutton, Regulatory Affairs Manager, Vogtle Electric Generating Plant	TELEPHONE NUMBER (Include Area Code) 706-848-1428
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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	ED	RJX	A121	Y					

14. SUPPLEMENTAL REPORT EXPECTED	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
<input checked="" type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE)	<input type="checkbox"/> NO	06	30	2017

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

On January 19, 2017, a power supply that supports operation of one of two ventilation supply fans for the 2-A Emergency Diesel Generator (EDG) failed. The Vogtle Electric Generating Plant (VEGP) Technical Specifications (TS), 3.8.3 Condition F requires that if a ventilation supply fan is inoperable, it must be restored within 14 days or the associated EDG must be declared inoperable. This condition was not identified by operators at the time of occurrence due to no failure indication is available. Therefore, the power supply was not repaired within the required completion time and the EDG should have declared inoperable and TS 3.8.1. Condition B entered. On February 16, 2017, because the completion time for TS 3.8.1 Condition B expired, the unit should have placed in Mode 3 within 6 hours and Mode 4 within 12 hours. These actions were not taken and Unit 2 operated in a condition prohibited by TS.

On February 22, 2017, the second power supply failed on this EDG resulting in the second ventilation supply fan being inoperable. Because both power supplies and therefore both ventilation supply fans were inoperable, the required TS 3.8.3 action is to immediately declare the EDG inoperable. However, this condition was not identified by the operators since no failure indication is available. On March 8, 2017, the completion time expired and the unit operated in a condition prohibited by TS. During a monthly surveillance run on March 8, the EDG tachometer was discovered not working, the EDG was shutdown, declared inoperable, and troubleshooting revealed the power supplies were failed. Both power supplies were replaced on March 9, 2017 and the EDG was restored to operable status.



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

(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/>)

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.

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NARRATIVE

A. Event Description

On March 15, 2017 during a review of past events with the Unit 2 A-Train, Emergency Diesel Generator (EDG)[DG], it was discovered that a power supply that supports the "B" ventilation supply fan [VJ] failed on January 19, 2017. The EDG has two power supplies supporting a common speed sensing circuit and one ventilation fan each. The EDG can successfully operate with one power supply supporting the speed sensing circuit. The "A" ventilation fan immediately starts upon EDG start. The "B" ventilation fan enters stand-by on EDG start and operates once thermostat temperature reaches 93F. Per Vogtle TS 3.8.3 Condition F, if a ventilation supply fan is not operable, the fan must be restored operable within 14 days or the associated EDG must be declared inoperable. This restoration time was not met as the condition was not identified by operators because no indication is available to reveal the failure while the EDG is in standby. Per TS 3.8.3, Condition G, operators should have declared the associated EDG inoperable on February 2, 2017 and entered TS 3.8.1, Condition B. TS 3.8.1 allows for an extended completion time if certain conditions are met in Condition B.6. A review of the actions required to support this extended completion time of 14 days was completed and all conditions could be met during this time, therefore, use of this extended completion time is appropriate.

On February 16, 2017, the TS 3.8.1 completion time for Condition B.6 expired. Operators should have taken action, as required in Condition H, to place the unit in Mode 3 in 6 hours and Mode 4 in 12 hours. Because the power supply was not identified as failed, these actions were not taken and the plant operated in a condition prohibited by TS from February 16, 2017 until the power supply was replaced on March 9, 2017.

Subsequently, on February 22, 2017, the second power supply failed resulting in both ventilation supply fans being inoperable. This condition was also not identified by the operators due to no indication being available to reveal the failure. The TS required action for this condition (TS 3.8.3 Condition G) is to immediately declare the associated EDG inoperable. Declaration by the operators of the 2A EDG being inoperable would have allowed the additional 14-day completion time as discussed earlier, and the actions that were required to be taken, could have been taken during this time and would have allowed for this 14-day completion time.

On March 8, the 2A EDG was started for a monthly surveillance; however, the local tachometer indication was not working and the operators shut down the EDG and declared it inoperable. During troubleshooting, the two power supplies were found failed and both were replaced March 9, 2017. Once the work was complete, the 2A EDG ran successfully. The power supplies on the B-Train EDG and the Unit 1 EDGs were checked and none of them were failed.

The unit operated in Mode 1 at 100 percent power during the entire time of these events.

Because the unit operated in a condition prohibited by Technical Specifications, these events are reportable as required by 10 CFR 50.73(a)(2)(i)(B).

B. Cause of Event

The cause of the operation in a condition prohibited by TS was a failure to recognize that the power supply had failed and rendered the ventilation supply fans inoperable.

C. Safety Assessment

During the first condition prohibited by Tech Specs, the EDG was able to start and load its associated safety related electrical bus because the second power supply was still available. As discussed in the Tech Spec Bases, except in extreme temperatures, only one fan is needed to keep the temperature in the EDG room below the limit of 120F. During the time that this fan was inoperable, the outside temperatures remained well below the 93F limit for single fan operation as listed in the TS Bases. Because the EDG could perform its required safety function during this time, the safety significance of this event was very low.

For the second condition prohibited by Tech Specs, the EDG would have started but would not have automatically loaded the electrical bus due to an electrical permissive from the speed sensing circuit powered by the failed



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power supplies. During this time, the opposite train EDG was fully operable and both power supplies were verified to be operational. This would have allowed an electrical safety bus to be powered during an accident. Additionally, all required offsite electrical sources were available and the combustion turbines with blackstart capabilities, adequate fuel, along with the associated underground power line at Plant Wilson were available and were within their required reliability parameters. Because of these additional measures for supplying the safety related electrical bus, the safety significance of this event was low.

D. Corrective Actions

Both power supplies for the 2A EDG were replaced when it was recognized that they were failed and additional investigation is ongoing as to the cause of the power supply failure and additional corrective actions will be taken once the cause is found. Monitoring equipment has been installed on the 2A EDG to monitor this power supply while the investigation is ongoing.

E. Previous Similar Events:

None