Southern Nuclear

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Docket No: 50-424

NL-19-0351

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

Vogtle Electric Generating Plant – Unit 1
Licensee Event Report 2019-001-00
Engineered Safety Feature Chiller inoperability causes operation in a Condition Prohibited by Tech Specs

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, 2019-001-00 for Vogtle Electric Generating Plant Unit 1. This letter contains no NRC commitments. If you have any questions, please contact Matthew Horn at (706) 848-1544.

Respectfully submitted,

B. Keith Taber
Vice President
Fleet Operations

BKT/KCW

Enclosure: Unit 1 Licensee Event Report 2019-001-00

Cc: Regional Administrator
NRR Project Manager – Vogtle 1 & 2
Senior Resident Inspector – Vogtle 1 & 2
RType: CVC7000

Vogtle Electric Generating Plant – Unit 1
Licensee Event Report 2019-001-00
Engineered Safety Feature Chiller inoperability causes operation in a Condition Prohibited by Tech Specs

Enclosure

Unit 1 Licensee Event Report 2019-001-00

NRC FORM 366 (04-2018) 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
Vogtle Electric Generating Plant, Unit 1	05000424	1 OF 2

4. Title

Engineered Safety Feature Chiller inoperability causes Operation in a Condition Prohibited by TS.

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
									N/A	05000
02	10	2019	2019	- 001	- 00	04	10	2019	Facility Name N/A	Docket Number 05000

9. Operating Mode	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: *(Check all that apply)*			
1	☐ 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)
100	☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
	☐ 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)(ii)
	☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 73.77(a)(2)(iii)
		☐ 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)
Vogtle Electric Generating Plant, Matthew Horn, Regulatory Affairs Manager	706-848-1544

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable To ICES	Cause	System	Component	Manufacturer	Reportable To ICES
X	KM	CHU	T265	Y	N/A				

14. Supplemental Report Expected	15. Expected Submission Date	Month	Day	Year
☐ Yes (If yes, complete 15. Expected Submission Date) ☒ No		N/A	N/A	N/A

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

At approximately 0317 EST on February 7, 2019 while the unit was in Mode 1 and 100 percent power, the Unit 1 A-train Engineered Safety Feature Chiller was stopped after a post maintenance run. When the chiller was restarted on February 12, 2019 at 0026 EST it immediately tripped on high condenser pressure. During post-event analysis, it was determined that the chiller was inoperable immediately after being shut down from the post-maintenance run until it was repaired and declared operable on February 14, 2019 at 0436 EST. This resulted in the chiller being inoperable for approximately 169.3 hours, which is longer than the Technical Specification allowed out of service time of 72 hours. This resulted in the unit operating in a Condition Prohibited by Technical Specifications which is reportable under 10 CFR 50.73(a)(2)(i)(B). This event had no adverse effects on the health and safety of the public and is of very low safety significance.

NRC FORM 366A (04-2018) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 3/31/2020

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.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO
Vogtle Electric Generating Plant, Unit 1	05000424	2019	- 001	- 00

NARRATIVE

A. Event Description

On Feb 4, 2019, with Unit 1 in Mode 1 and 100 percent power, the Unit 1 A-train Engineered Safety Feature (ESF) Chiller was taken out of service for planned maintenance. On Feb 6, 2019 it was started for the 10-hour post-maintenance run at maximum loading. The chiller ran satisfactorily for the duration of the test and was shut down at 0317 EST on Feb 7, 2019. Immediately after the test run, the pump out compressor, which removes non-condensable gases from the chiller automatically started and ran for 1345 minutes of the 1440 minutes in a 24-hour period. The continuous running of the pump out compressor indicates that significant air in leakage was present. This air in leakage caused the condenser vacuum to degrade and the chiller was not able to perform it's required function. When the chiller was restarted on Feb 12 at 0026 EST, it tripped on high condenser pressure. The chiller was declared inoperable and repair work began. The chiller was evacuated and purged with nitrogen gas to facilitate leak checks. Leaks were identified and sealed, and the chiller was declared operable on February 14 at 0436. The total time that the chiller was inoperable was 169.3 hours or 7 days, 1 hour, and 19 minutes. The Technical Specification allowed outage time for this chiller is 72 hours. Because the chiller was inoperable for longer than the time allowed by Technical Specifications, this event is reportable under 10 CFR 50.73(a)(2)(i)(B).

During the time while the Unit 1 A-train ESF chiller was inoperable due to air in leakage, the Unit 1 B-train ESF chiller was taken out of service on Feb 10, 2019 for 3 minutes when the Control Room handswitch was taken to stop for planned surveillance testing. The B-train chiller was available, but not Operable. During this time there were no ESF chillers Operable on Unit 1, however both chillers were not out of service for longer than the 1-hour completion time in Technical Specification 3.7.14 Condition B.

B. Cause of Event

The cause of the event was inadequate sealing of the ESF chiller which allowed air in leakage that degraded the condenser vacuum. This allowed air into the condenser, which is normally operated below atmospheric pressure, and caused the chiller to trip.

C. Safety Assessment

The safety significance of this event is very low. No system actuations occurred due to this failure and the reactor was maintained at 100 percent power. During the time the chiller was inoperable, it's critical attribute to maintain the Nuclear Service Cooling Water pressure boundary, as defined in the ESF chiller 10 CFR 50.69 categorization, was maintained. Also, during this time, the other chiller was operable and able to provide its safety function except during the 3 minutes when it was taken out of service on February 10. However, the chiller was only inoperable because of the handswitch position in the Control Room and could have been started manually in the event it was needed.

D. Corrective Actions

The chiller was purged with nitrogen and sniffed to find areas were leaks were present. Once these leaks were discovered they were sealed. The other train chiller on Unit 1 and the other two chillers on Unit 2 were monitored and no leakage points were identified.

E. Previous Similar Events

None