UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

July 23, 2021

Ms. Cheryl A. Gayheart
Regulatory Affairs Director
Southern Nuclear Operating Co., Inc.
3535 Colonnade Parkway
Birmingham, AL 35243

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000424/2021010 AND 05000425/2021010

Dear Ms. Gayheart:

On June 25, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Vogtle Electric Generating Plant and discussed the results of this inspection with Mr. Drayton Pitts and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

Finally, the team reviewed the station's programs to establish and maintain a safety-conscious work environment and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

No findings or violations of more than minor significance were identified during this inspection.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document

Room in accordance with Title 10 of the *Code of Federal Regulations* 2.390, “Public Inspections, Exemptions, Requests for Withholding.”

Sincerely,

/RA/

Alan J. Blamey, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos. 05000424 and 05000425
License Nos. NPF-68 and NPF-81

Enclosure:
As stated

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SUBJECT: VOGTLE ELECTRIC GENERATING PLANT – BIENNIAL PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000424/2021010 AND 05000425/2021010 – DATED July 23, 2021

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NAME	N. Peterka	D. Mas-Peneranda	J. Hickman	M. Singletary	S. Teh-Chiun	A. Blamey
DATE	7/13/2021	7/13/2021	7/13/2021	7/14/2021	7/22/2021	7/23/2021

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Numbers:	05000424 and 05000425
License Numbers:	NPF-68 and NPF-81
Report Numbers:	05000424/2021010 and 05000425/2021010
Enterprise Identifier:	I-2021-010-0020
Licensee:	Southern Nuclear Operating Co., Inc.
Facility:	Vogtle Electric Generating Plant
Location:	Waynesboro, GA
Inspection Dates:	June 07, 2021 to June 25, 2021
Inspectors:	J. Hickman, Senior Resident Inspector D. Mas-Penaranda, Resident Inspector N. Peterka, Fuel Facility Inspector M. Singletary, Reactor Inspector T. Su, Reactor Inspector
Approved By:	Alan J. Blamey, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting a biennial problem identification and resolution inspection at Vogtle Electric Generating Plant, in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to https://www.nrc.gov/reactors/operating/oversight.html for more information.

List of Findings and Violations

No findings or violations of more than minor significance were identified.

Additional Tracking Items

None.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

Starting on March 20, 2020, in response to the National Emergency declared by the President of the United States on the public health risks of the coronavirus (COVID-19), inspectors were directed to begin telework. In addition, regional baseline inspections were evaluated to determine if all or a portion of the objectives and requirements stated in the IP could be performed remotely. If the inspections could be performed remotely, they were conducted per the applicable IP. In some cases, portions of an IP were completed remotely and on site. The inspections documented below met the objectives and requirements for completion of the IP.

OTHER ACTIVITIES – BASELINE

71152B - Problem Identification and Resolution

Biennial Team Inspection (IP Section 02.04) (1 Sample)

(1) The inspectors performed a biennial assessment of the licensee's corrective action program, use of operating experience, self-assessments and audits, and safety conscious work environment (SCWE).

- Corrective Action Program Effectiveness: The inspectors assessed the corrective action program's effectiveness in identifying, prioritizing, evaluating, and correcting problems. The inspectors also conducted an in-depth CAP review of the 125 VDC System, Reactor Protection System and Alternating Current (AC) Power System including 480 V and 4160 V Safety Related AC Power.

- Operating Experience: The inspectors assessed the effectiveness of the station's processes for use of operating experience, audits and self-assessments.

- Self-Assessments and Audits: The inspectors assessed the effectiveness of the licensee's self-assessments and audits.

- Safety Conscious Work Environment (SCWE): The inspectors assessed the effectiveness of the station's programs to establish and maintain a safety-conscious work environment.

INSPECTION RESULTS

Assessment	71152B

1. Corrective Action Program Effectiveness

Problem Identification: The team determined that the licensee was effective in identifying problems and entering them into the corrective action program and that there was a low threshold for entering issues into the corrective action program. This conclusion was based on a review of the requirements for initiating condition reports as described in licensee procedure NMP-GM-002, "Corrective Action Program," and management's expectation that employees were encouraged to initiate condition reports. Additionally, site management was actively involved in the corrective action program and focused appropriate attention on significant plant issues.

Problem Prioritization and Evaluation: Based on the review of condition reports, the team concluded that problems were prioritized and evaluated in accordance with the condition report significance determination guidance in procedure NMP-GM-002. The team determined that adequate consideration was given to system or component operability and associated plant risk. The team determined that plant personnel had conducted cause evaluations in compliance with the licensee's corrective action program procedures and that cause determinations were appropriate, and considered the significance of the issues being evaluated.

Corrective Actions: Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the team determined that corrective actions were mostly timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence. The team reviewed condition reports and effectiveness reviews to verify that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence were sufficient to ensure corrective actions were properly implemented and were effective.

Based on the samples reviewed, the team determined that the licensee's corrective action program complied with regulatory requirements and self-imposed standards. The licensee's implementation of the corrective action program adequately supported nuclear safety.

2. Operating Experience

The team determined that the station's processes for the use of industry and NRC operating experience information and for the performance of audits and self-assessments were effective and complied with all regulatory requirements and licensee standards. The implementation of these programs adequately supported nuclear safety. The team concluded that operating experience was adequately evaluated for applicability and that appropriate actions were implemented to address lessons learned as needed.

3. Self-Assessments and Audits

The team determined that the licensee effectively perform self-assessments and audits to identify issues at a low level, properly evaluated those issues, and resolved them commensurate with their safety significance.

Self-assessments were generally detailed and critical. The team verified that condition reports (CRs) were created to document areas for improvement and findings resulting from self-assessments and verified that actions had been completed consistent with those recommendations. Audits of the quality assurance program appropriately assessed performance and identified areas for improvement. Generally, the licensee performed evaluations that were technically accurate.

4. Safety Conscious Work Environment

Based on interviews with plant staff and reviews of the latest safety culture survey results to assess the safety conscious work environment on site, the team found no evidence of challenges to the safety conscious work environment. Employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

EXIT MEETINGS AND DEBRIEFS

The inspectors verified no proprietary information was retained or documented in this report.

- On June 25, 2021, the inspectors presented the biennial problem identification and resolution inspection results to Mr. Drayton Pitts and other members of the licensee staff.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71152B	Corrective Action Documents	106091117	1B Sequencer Trouble Alarm	05/09/2019
		Condition Reports (CRs)	10574132, 10576714, 10578821, 10581018, 10596729, 10605455, 10606308, 10609273, 10610150, 10610565, 10610582, 10610586, 10611294, 10611826, 10611966, 10614567, 10616757, 10621148, 10621884, 10623946, 10624291, 10624913, 10624928, 10628474, 10630409, 1063736, 10639744, 10650332, 10661586, 106631175, 10665156, 10665477, 10668922, 10670982, 10674888, 10676556, 10676870, 10677350, 10684511, 10687999, 10689059, 10691131, 10692583, 10695648, 10696902, 10698949, 10699985, 10702019, 10706950, 10708715, 10718138, 10722011, 10723078, 10725277, 10726201, 10734519, 10735075, 10738957, 10739998, 10742315, 10742502, 10742675, 10745502, 10746171, 10748044, 10748916, 10749689, 10751488, 10752698, 10752936, 10753578, 10753852, 10753974, 10755315, 10758197, 10762502, 10764608, 10766557, 10773708, 10774361, 10778217, 10789823, 10786197, 10792118, 10877264, 10789823, 10795987, 10796431	Various
		Corrective Action Reports (CARs)	275705, 276034, 276123, 276492, 276501, 276561, 276681, 276692, 277356, 277358, 277403, 277442, 277476, 277580, 278172, 278237, 278594, 278688, 278721, 278752, 278754, 278755, 276893, 278614, 279054	Various
	Corrective Action Documents Resulting from Inspection	10804385	NRC comment during PI&R inspection; editorial correction required OS-BP-001	06/09/2021
		10807506	Battery Room HVAC Insulation Damage	06/21/2021
		10808407	NRC observation on Operator Concerns	06/24/2021
		10808417	NRC Identified Improvement: CAR 278784 Emergency Diesel Generator Governor Actuator	06/24/2021
	Drawings	1X-3D-AA-H01A	One Line Diagram 125V DC Class 1E Distribution Train A	18.00
		1X3AE03-00082	Field Connected Terminal Arrangement 9N57-5 Rear 3TB25 To 3TB 36	9.0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		1X3D-AA-G01A	Main One Line Class 1E 125V DC and 120V Vital AC Systems	11.0
		1X3D-CE-HO4F	Wiring Diagram SF Sequencer Board Train A 1-1821-U3-001	6
		2X3D-AA-G01A	Main One Line Class 1E 125V DC and 120V Vital AC Systems	8.0
	Engineering Changes	SNC953976	U1 Emergency Diesel Generator 701 Governor DCP	2
	Engineering Evaluations	10 CFR 50.59 Evaluation for SNC1062133	Eliminate SPVs from MSIV control circuits for Normally Energized MDR relays and micro switches	1.0
		Technical Evaluations (TEs)	1050312, 1050731, 1055454, 1055609, 1057896, 1062240, 10742502, 1074866	
	Miscellaneous		Vogtle Living (a)(3) Documentation Package	12/31/2019
			Technical Specifications Vogtle Electric Generating Plant Unit Nos. 1 and 2 Docket Nos. 50-424 and 50-425 Appendix A to License Nos. NPF-68 and NPF-81	Amendment No. 204 (Unit 1) Amendment No. 187 (Unit 2)
		701	Employee Concerns Program	11/20/2019
		AX3AA01-00081	On-Line Transformer Monitor Operation & Maintenance Guide	1.0
		CAP Fleet Metrics	January 2021, January 2020, October 2019, October 2020, November 2019, November 2021	Various
		CNOS-19-149	FLEET-RGA-2019 AUDIT PACKAGE	06/26/2019
		EN #54318	AUTOMATIC START OF EMERGENCY DIESEL GENERATOR AND AUXILLIARY FEEDWATER SYS	10/9/19
		EN #54995	Automatic Reactor Trip	11/12/2020
		Fleet OPS-2020	Fleet 2020 Operations Audit Package	08/03/2020
		Fleet-ENG-2020	2020 Fleet Engineering Complete Audit Package	12/01/2020
		Fleet-EP-2020	Fleet Emergency Preparedness 2020 Complete Audit Package	2/28/2020
		Fleet-FP-2020	2020 Fleet Fire Protection Complete Audit Package	10/13/2020
		INPO 19-002	Industry Reporting and Information System (IRIS)	02/01/2021

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		NMP-GM-024-F04	Nuclear Safety Culture Leadership Team Report Template, Vogtle	1/27/2021
		NUMARC 93-01	INDUSTRY GUIDELINE FOR MONITORING THE EFFECTIVENESS OF MAINTENANCE AT NUCLEAR POWER PLANTS	4A
		NUREG-1920	Safety Evaluation Report Related to the License Renewal of Vogtle Electric Plant, Units 1 and 2	04/01/2009
		PRA Measures Report	Vogtle 1 & 2 Internal Events (w/ internal flooding) PRA Basic Event Importances	Living
		Self Assessmeents	V-2019-05, V-2019-06a, V-2019-04b, V-2019-07a, TRN-2019-03V1-2, V-2019-07b, V-2019-06b, V-2019-23, V-2019-24, V-2019-75, V-2019-76, V-2019-09, V-2019-10, V-2019-29	Various
		Site KPI Report	Site KPI Report	05/14/2021
	Operability Evaluations	Operability Determination	10639744, 10687999, 10786143, PDO 2-20-001, 10772305, 10787293, 10790958, OD-1-2019-001 Rev. 2	Various
	Procedures	13540B-1	SAFETY FEATURES SEQUENCER SYSTEM - TRAIN B	3.4
		17037-1	ANNUNCIATOR RESPONSE PROCEDURES FOR ALB 37 ON EAB PANEL	21
		NMP-002-GL03	Cause Analysis and Corrective Actions Guideline	30.2
		NMP-AD-012	Operability Determinations	14.0
		NMP-AD-012-GL04	Mission Times	1.1
		NMP-AD-034	Key Performance Indicators	11.0
		NMP-ES-002	System Monitoring and Health Reporting	25.4
		NMP-ES-002-006	System Vulnerability Review Process	3.4
		NMP-ES-006	Preventive Maintenance Implementation and Continuing Equipment Reliability Improvement	12.2
		NMP-ES-006-002	Preventive Maintenance Change Requests	9.0
		NMP-ES-027	Maintenance Rule Program	10.4
		NMP-GM-002	Corrective Action Program	16.0
		NMP-GM-002-001	Corrective Action Program Instructions	40.0
		NMP-GM-002-	Effectiveness Review Instructions	5.3

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		002		
		NMP-GM-002-GL03	Cause Analysis and Corrective Actions Guideline	30.2
		NMP-GM-003	Self-Assessment and Benchmark Procedure	28.0
		NMP-GM-006-GL11	Work Prioritization Screening	4.0
		NMP-GM-008	Operating Experience Program	23.0
		NMP-GM-008-004	Industry Reporting and Information System (IRIS)	7.0
		NMP-GM-008-006	Leverage Internal OE	5.1
		NMP-GM-027	Plant Health Process	15.3
		NMP-MA-055	Conduct of FIN	2.1
		NMP-OS-006-002	Aggregate Operator Impact Review Instruction	3.0
		NMP-OS-007	Conduct of Operations	17.0
		NMP-OS-007-003	Plant Operating Orders	3.1
		NMP-OS-007-007	Rounds	5.2
		OS-BP-001	Operations Performance Indicators	5.1
	Self-Assessments	Fleet-SEC-2020	2020 Fleet Security Audit	06/26/2020
		TE 1076818	CISA	6/12/2020
		TE 1076818	CISA1R22 End of Cycle Review	10/29/2020
	Work Orders		SNC1031381, SNC1050000, SNC1059443, SNC1070325, SNC1072688, SNC1085973, SNC1087365, SNC1087882, SNC1089987, SNC1094916, SNC543069, SNC691794, SNC802998, SNC840546, SNC876925, SNC1124508, SNC1115409, SNC1127963, SNC1116738	
		SNC1131860	2403, 22403G4002, 2B Emergency Diesel Generator (EDG) Inoperable- Governor Oil Level Low	12//5/2020
		SNC1133619	2403 - 12403G4001GOV - Replace Mech Governor w/New Model from ESI	12/16/2020