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

February 14, 2023

Jamie Coleman
Regulatory Affairs Director
Southern Nuclear Operating Company
7825 River Road, BIN 63031
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 3 – INTEGRATED INSPECTION REPORT 05200025/2022007

Dear Ms. Coleman:

On December 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Vogtle Electric Generating Plant, Unit 3. On January 25, 2023, the NRC inspectors discussed the results of this inspection with Mr. Glen Chick, Vogtle Electric Generating Plant (VEGP), Units 3 & 4 Executive Vice President, and other members of your staff. The results of this inspection are documented in the enclosed report.

Two findings of very low safety significance (Green) are documented in this report. Two of these findings involved violations of NRC requirements. We are treating these violations as non-cited violations (NCVs) consistent with Section 2.3.2 of the Enforcement Policy.

A licensee-identified violation which was determined to be of very low safety significance is also documented in this report. We are treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy.

If you contest the violations or the significance or severity of the violations documented in this inspection report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement; and the NRC Resident Inspector at VEGP, Units 3 & 4.

If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; and the NRC Resident Inspector at VEGP, Units 3 & 4.

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,

Bradley J Davis Signed by Davis, Bradley on 02/14/23

Bradley J. Davis, Chief
Construction Inspection Branch 2
Division of Construction Oversight

Docket No. 05200025
License No. NPF-91

Enclosure:
As stated

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DATED: February 14, 2023

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U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report

Docket Number:	05200025
License Number:	NPF-91
Report Number:	05200025/2022007
Enterprise Identifier:	I-2022-007-0000
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Vogtle Electric Generating Plant, Unit 3
Location:	Waynesboro, GA
Inspection Dates:	October 1, 2022, to December 31, 2022
Inspectors:	B. Kemker, Senior Resident Inspector J. Eargle, Senior Resident Inspector B. Griman, Resident Inspector B. Caballero, Senior Operations Engineer S. Egli, Senior Construction Inspector R. Elliott, Resident Inspector C. Even, Senior Construction Inspector T. Fredette, Reactor Operations Engineer G. Khouri, Construction Project Manager R. Mathis, Senior Construction Inspector J. Parent, Resident Inspector S. Ray, Senior Electrical Engineer
Approved By:	Bradley J. Davis, Chief Construction Inspection Branch 2 Division of Construction Oversight

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring the licensee's performance by conducting an integrated inspection at Vogtle Electric Generating Plant, Unit 3, 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. A licensee-identified non-cited violation is documented in report section: 71153.

List of Findings and Violations

Failure to Adequately Implement Containment Closeout Resulting in Loose Debris and Unanalyzed Materials Left in Containment			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Mitigating Systems	Green NCV 05200025/2022007-01 Open/Closed	[H.2] - Field Presence	71111.20
The inspectors identified a finding of very low significance (Green) with an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The licensee failed to properly implement containment cleanliness and material control closeout procedures prior to and after Unit 3 entering Mode 4.			

Inadequate Procedure for Restoring IDS 72-Hour Division B DC Bus			
Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green NCV 05200025/2022007-02 Open/Closed	[H.12] - Avoid Complacency	71153
A finding of very low safety significance (Green) with an associated NCV of Technical Specification (TS) 5.4.1.a was self-revealed for the licensee's failure to have written maintenance procedures appropriate to the circumstances when restoring the Class 1E direct current (DC) and uninterruptable power supply system (IDS) division B 72-hour DC bus.			

Additional Tracking Items

Type	Issue Number	Title	Report Section	Status
LER	05200025/2022-001-00	LER 2022-001-00 for Vogtle Electric Generating Plant (VEGP), Unit 3, Automatic Reactor Trip Signal due to Inadequate Procedure Guidance Causing Incorrect Opening of Division B DC Supply Breaker	71153	Closed
LER	05200025/2022002-00	LER 2022-002-00 for Vogtle Electric Generating Plant (VEGP), Unit 3, Automatic Depressurization System Stage 4 Flow Paths Inoperable During Mode 6 with Upper Internals in Place due to Inadequate Work Processes	71153	Discussed

PLANT STATUS

On October 13, the licensee began initial fuel load, with Unit 3 entering Mode 6 (Refueling) for the first time when the first fuel assembly entered the reactor vessel. The licensee completed initial fuel load on October 17. On October 31, the licensee completed assembly of the reactor and the unit entered Mode 5 (Cold Shutdown). On December 8, the licensee completed required testing and established conditions to begin plant heat up and the unit entered Mode 4 (Safe Shutdown). On December 13, the licensee completed additional required testing and continued plant heat up for the unit to enter Mode 3 (Hot Standby). On December 20, the licensee performed plant cool down to about 300 degrees Fahrenheit (°F) (re-entering Mode 4) for planned testing per 3-GEN-ITPS-640, "Remote Shutdown Workstation Startup Test Procedure." Operators further cooled the plant to about 230°F to perform maintenance prior to returning the plant to normal operating temperature and pressure (re-entering Mode 3) on December 22. At the end of this inspection period, the licensee was performing pre-critical testing in preparation for plant start up.

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 performed activities described in IMC 2515, Appendix D, “Plant Status,” observed risk significant activities, and completed on-site portions of IPs. 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.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Seasonal Extreme Weather Sample (IP Section 03.01) (1 Sample)

(1) The inspectors evaluated readiness for seasonal extreme weather conditions prior to the onset of seasonal cold conditions for the following Unit 3 systems during the week of December 12, 2022:

- passive containment cooling system (PCS)
- special process heat tracing system (EHS)

71111.04 - Equipment Alignment

Complete Walkdown Sample (IP Section 03.02) (1 Sample)

The inspectors evaluated system configurations during a complete walkdown of the following Unit 3 system:

(1) Passive core cooling system (PXS) during the week of December 4, 2022.

71111.05 - Fire Protection

Fire Area Walkdown and Inspection Sample (IP Section 03.01) (1 Sample)

The inspectors evaluated the implementation of the fire protection program by conducting a walkdown and performing a review to verify program compliance, equipment functionality, material condition, and operational readiness of the following fire areas:

(1) PXS A & B and normal residual heat removal system (RNS) valve rooms on December 6, 2022.

71111.11A - Licensed Operator Requalification Program and Licensed Operator Performance

Requalification Examination Results (IP Section 03.03) (2 Samples)

(1) Annual Review of Licensee Requalification Examination Results:On July 29, 2022, the facility licensee completed the annual requalification operating tests required to be administered to all licensed operators in accordance with Title 10 of the Code of Federal Regulations 55.59(a)(2), “Requalification Requirements,” of the NRC’s “Operator’s Licenses.” During the week of November 11, 2022, the inspectors performed an in-office review of the overall pass/fail results of the individual operating examinations and the crew simulator operating examinations in accordance with IP 71111.11, “Licensed Operator Requalification Program.” These results were compared to the thresholds established in Section 03.03, “Requalification Examination Results,” of IP 71111.11.
(2) The inspectors reviewed and evaluated the licensed operator examination failure rates for the requalification annual operating test administration, which the facility licensee completed on July 29, 2022.

71111.11Q - Licensed Operator Requalification Program and Licensed Operator Performance

Licensed Operator Performance in the Actual Plant/Main Control Room (IP Section 03.01) (1 Sample)

(1) On December 19 and 20, the inspectors observed licensed operators demonstrate plant cooldown from normal operating temperature and pressure of 557°F and 2235 pounds per square inch gage (psig) to about 300°F, and transition the unit to shutdown cooling operation from the remote shutdown workstation for planned testing per 3-GEN-ITPS-640, "Remote Shutdown Workstation Startup Test Procedure."

Licensed Operator Requalification Training/Examinations (IP Section 03.02) (1 Sample)

(1) The inspectors observed licensed operators during simulator training on November 14, 2022. The inspectors assessed the operators’ performance of the simulated events focusing on alarm response, command and control of crew activities, communication practices, and procedural adherence. The inspectors also observed the operations training staff’s post-evaluation critique to assess the ability of the licensee’s evaluators to identify performance deficiencies. The crew’s performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements.

71111.12 - Maintenance Effectiveness

Maintenance Effectiveness (IP Section 03.01) (5 Partial Samples)

The inspectors evaluated the effectiveness of maintenance to ensure the following structures, systems, and components (SSCs) remain capable of performing their intended function:

(1) Protection and safety monitoring system (PMS) including RNS valve control, cable pulls, and software heartbeat diagnosis, during the weeks of September 19, October 10, and November 21, 2022.
(2) IDS including transducer calibration, electrical penetration repair, battery charger voltage levels, electrical panel repairs, battery specific gravity readings and flame arrestors, during the weeks of September 19, and October 3, 2022.
(3) PXS including squib valve conduit repair during the week of October 10, 2022
(4) Conduit support installation for PCS, spent fuel pool cooling system (SFS), and liquid radwaste system (WLS), during the week of September 19, 2022
(5) SFS including maintenance support for the performance of 3-SFS-OTS-10-001, during the week of September 19, 2022.

71111.15 - Operability Determinations and Functionality Assessments

Operability Determination or Functionality Assessment (IP Section 03.01) (3 Samples)

The inspectors evaluated the licensee's justifications and actions associated with the following operability determinations and functionality assessments:

(1) Condition report (CR) 50157188, CR 50158104, and CR 50150106, "IEEE Cable Separation."
(2) CR 5015976, "PMS Roxtec Gland Functionality."
(3) CR 50155712, "Non-conservative Locked Rotor Current Nameplate Values for Class 1E Motor-Operated Valve."

71111.19 - Post-Maintenance Testing

Post-Maintenance Test Sample (IP Section 03.01) (2 Samples)

The inspectors evaluated the following post-maintenance testing activities to verify system operability and/or functionality:

(1) 3-PXS-V021B (PXS accumulator B vent valve) during the week of December 11, 2022.
(2) RNS pump A seal replacement during the week of December 11, 2022.

71111.20 - Refueling and Other Outage Activities

Refueling/Other Outage Sample (IP Section 03.01) (1 Sample)

(1) Unit 3 Initial Fuel Loading and Initial Plant Startup Activities

The inspectors evaluated the licensee's conduct of outage activities to assess the control of plant configuration and management of shutdown risk for initial fuel load as well as initial plant start up testing activities from entry into Mode 6 through Mode 3.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance testing activities to verify system operability and/or functionality:

Surveillance Tests (other) (IP Section 03.01) (2 Samples)

(1) 3-ECS-OTS-17-003, "Ancillary AC Diesel Generator 10 Year Operational Test," during the week of October 3, 2022.
(2) 3-PXS-OTS-20-002, "PRHR HX IRWST Gutter Visual Inspection," during the week of December 4, 2022.

Inservice Testing (IP Section 03.01) (1 Sample)

(1) 3-PXS-OTS-10-005, "Passive Core Cooling System Check Valve Exercise," during the week of October 7, 2022.

OTHER ACTIVITIES – BASELINE

71153 - Follow Up of Events and Notices of Enforcement Discretion

Event Report (IP Section 03.02) (1 Sample)

(1) Licensee Event Report (LER) 05200025/2022–001–00, “Automatic Reactor Trip Signal due to Inadequate Procedure Guidance Causing Incorrect Opening of Division B DC Supply Breaker” (ADAMS Accession No. ML22336A125) on October 6, 2022. The circumstances surrounding this LER are documented in the Inspection Results section of this report (NCV 05200025/2022007-02).

Reporting (IP Section 03.05) (1 Sample)

The inspectors evaluated the following event for reportability:

(1) LER 05200025/2022–002–00, Automatic Depressurization System Stage 4 Flow Paths Inoperable During Mode 6 with Upper Internals in Place Due to Inadequate Work Processes (ADAMS Accession No. ML22353A593) on October 22, 2022. The circumstances surrounding this LER are documented in the Inspection Results section of this report as Licensee-Identified Non-Cited Violation and Minor Violation. This LER will remain open pending review of the licensee's corrective actions to address the reporting discrepancy.

INSPECTION RESULTS

<table>
<tr><td colspan="4">Failure to Adequately Implement Containment Closeout Resulting in Loose Debris and Unanalyzed Materials Left in Containment</td></tr>
<tr><td>Cornerstone</td><td>Significance</td><td>Cross-Cutting Aspect</td><td>Report Section</td></tr>
<tr><td>Mitigating Systems</td><td>Green
NCV 05200025/2022007-01
Open/Closed</td><td>[H.2] - Field Presence</td><td>71111.20</td></tr>
<tr><td colspan="4">The inspectors identified a finding of very low significance (Green) with an associated NCV of 10 CFR 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings.” The licensee failed to properly implement containment cleanliness and material control closeout procedures prior to and after Unit 3 entering Mode 4.</td></tr>
<tr><td colspan="4">Description: After the licensee had completed containment cleanliness activities in accordance with procedures 3-CNS-SOP-001 Attachment 4, “Containment Closeout Inspection,” and B-GEN-ENG-032, “Containment Cleanliness and Sampling Program,” the inspectors identified loose debris and materials that were not allowed to be inside containment during operation without an evaluation by the licensee in accordance with its procedures. The primary purpose of these procedures was to ensure no loose debris/materials were left in containment prior to plant start up from an outage that could either contribute to recirculation sump screen blockage during a design basis accident or get transported into a direct vessel injection or a cold leg LOCA break that becomes submerged during a design basis accident. In addition, the procedures required any temporary materials not removed from containment (such as scaffolding, temporary instrumentation, lead blankets, etc.) be identified and evaluated to be acceptable to leave in containment with unit operation in Modes 1 through 4. Items evaluated and allowed to be left in containment were required to be documented and evaluated per B-GEN-ENG-032-002, “Control of Unattended Temporary Material in Containment in Modes 1-4.”

The inspectors began containment closeout inspections on December 5 and continued inspections over the course of about 1 week while the licensee completed additional containment closeout cleanliness activities to address issues identified by the inspectors. At first, the licensee did not document loose debris/materials identified by the inspectors in its corrective action program (CAP) and it did not collect and retain the debris/materials for evaluation. In response to the inspectors’ questions, the licensee then began documenting the loose debris/materials identified during subsequent containment closeout inspections in its CAP and it began collecting and retaining the loose debris/materials found in containment for evaluation.

After the licensee took actions to correct inspector-identified issues, Unit 3 entered Mode 4 on December 8. On December 12 and 13, the inspectors conducted additional inspections of the containment and found more loose debris/materials, some of which was introduced in containment after the inspectors had completed their containment cleanliness inspections prior to Mode 4 entry. The inspectors noted the licensee was not tracking materials brought into containment by plant workers to ensure everything was removed or approved to remain during unit operation in Modes 1 through 4. The inspectors concluded the licensee had not adequately implemented foreign material exclusion administrative controls for the containment and brought this concern to the licensee’s attention. The licensee documented the issues in several CRs, including CR 10930976.</td></tr>
</table>

The licensee completed an evaluation of the potential operational impact of the loose materials/debris found both after it initially completed its containment cleanliness and material control closeout prior to Mode 4 and after Mode 4. The licensee's evaluation concluded the additional loose materials/debris it assessed would not have affected operability of the core heat removal function during a design basis accident.

Corrective Actions: The licensee entered this violation into its CAP as CR 10930976 to evaluate the cause and to identify appropriate corrective actions. The licensee took immediate corrective actions to remove the debris found by the inspectors and conducted further inspections for additional debris.

Corrective Action References: CR 10930976

Performance Assessment:

Performance Deficiency: The inspectors determined the licensee's failure to perform an adequate containment cleanliness and material control closeout prior to and after Unit 3 entering Mode 4 in accordance with procedures 3-CNS-SOP-001 Attachment 4 and B-GEN-ENG-032 was a licensee performance deficiency warranting a significance evaluation.

Screening: Consistent with the guidance in IMC 0612, "Issue Screening," Appendix B, "Issue Screening Directions," dated August 8, 2022, the inspectors determined the performance deficiency was a finding of more than minor significance because it was associated with the equipment performance attribute of the mitigating systems cornerstone, and adversely affected the cornerstone objective to ensure availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, loose materials/debris in containment could result in the materials/debris being transported to the recirculation sump screens in the event of design basis accident and adversely affect the sump performance or get transported into a direct vessel injection or a cold leg LOCA break that becomes submerged during a design basis accident and collect in reactor core flow channels. The inspectors also reviewed the examples of minor issues in IMC 0612, Appendix E, "Examples of Minor Issues," dated January 1, 2021, and found no examples related to this issue.

Significance: In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated December 20, 2019, Table 3, "SDP [Significance Determination Process] Appendix Router," the inspectors determined this finding would require review using IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process," dated January 8, 2020, since the reactor was in Mode 4. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Initial Screening and Characterization of Findings," dated May 20, 2022, and determined this finding was of very low safety significance (Green) based on "No" answers to all of the Exhibit 3 – Mitigating Systems Screening Questions.

Cross-Cutting Aspect: H.2 - Field Presence: Leaders are commonly seen in the work areas of the plant observing, coaching, and reinforcing standards and expectations. Deviations from standards and expectations are corrected promptly. Senior managers ensure supervisory and management oversight of work activities, including contractors and supplemental personnel. The inspectors determined the finding had a cross-cutting aspect of Field Presence in the Human Performance area because the licensee failed to ensure adequate supervisory and

management oversight of the containment closeout process was conducted to ensure proper performance of containment cleanliness and material control closeout procedures prior to and after Unit 3 entered Mode 4.

Enforcement:

Violation: 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings" states, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

B-GEN-ENG-032, "Containment Cleanliness and Sampling Program," Version 1.0, in part, established the licensee's administrative controls for its Containment Cleanliness and Sampling Program, an activity affecting quality. B-GEN-ENG-032, Step 4.2.4, states: "During exit from containment in Mode 5, in preparation of Mode 4 entry, 3/4-CNS-SOP-001, Attachment 4, 'Containment Closeout Inspection,' should be utilized and the following should be considered:

- All equipment and materials in containment prior to entering Mode 4 from Mode 5, that are not approved to be left in containment, should be documented per B-GEN-ENG-032-002.
- Equipment and materials expected to remain in containment after Mode 4 entry should comply with requirements of B-GEN-ENG-032-002.
- Inspections of all accessible areas of containment should be made for loose debris which could be transported to the containment emergency sump."

3-CNS-SOP-001, Attachment 4, Step 4.5.a states: "Locally check loose debris is NOT present in accessible areas of containment. IF loose debris is present in containment, THEN perform one of the following:

- Remove debris

  OR
- Document presence of debris per B-GEN-ENG-032-002, 'Control of Unattended Temporary Material in Containment in Modes 1-4.'"

Contrary to the above, from December 5 through 13, 2022, NRC inspectors identified loose materials/debris, including fibrous materials, left unattended in the Unit 3 containment without it having been documented or evaluated as acceptable to remain in containment per B-GEN-ENG-032-002.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

Inadequate Procedure for Restoring IDS 72-Hour Division B DC Bus

Cornerstone	Significance	Cross-Cutting Aspect	Report Section
Initiating Events	Green NCV 05200025/2022007-02 Open/Closed	[H.12] - Avoid Complacency	71153

A finding of very low safety significance (Green) with an associated NCV of TS 5.4.1.a was self-revealed for the licensee's failure to have written maintenance procedures appropriate to the circumstances when restoring the IDS division B 72-hour DC bus.

Description: On October 6, 2022, with the reactor defueled, the licensee was restoring the IDS division B 72-hour DC bus following maintenance in accordance with system operating procedure 3-IDSB-SOP-001, "Class 1E DC System - Division B." The procedure included instructions within the same attachment for both the 24-hour and 72-hour DC subsystems. The restoration of the 24-hour and 72-hour batteries were different and required the operator to perform different steps for each battery. The procedure included no instructions based on the configuration the system could be in, and instructed the operator to open the division B 24-hour distribution panel breaker while performing a lineup to establish initial conditions, which resulted in a loss of power to division B powered safety-related air-operated valves causing the valves to reposition to their fail safe, loss-of-power safety position. One of these valves was the passive residual heat removal heat exchanger outlet flow control valve, 3-PXS-V108B, which caused a reactor trip signal to be generated from the reactor protection system (RPS). This was a valid reactor trip signal, but it did not affect the plant because the reactor trip breakers were already open due to the reactor being defueled at that time. The operators used approved procedures and restored power to the 24-hour DC distribution panel.

The licensee completed a notification call (Event Number 56147) on October 6, at 10:06 p.m. to report the event in accordance with 10 CFR 50.73(a)(2)(iv)(A) due to the automatic actuation of the RPS.

The licensee submitted LER 05200025/2022-001-00 to report the event in accordance with 10 CFR 50.73(a)(2)(iv)(A) as an event or condition that resulted in manual or automatic actuation of the RPS, including a reactor trip.

Corrective Actions: The licensee entered this performance issue into its CAP as CRs 50158883 and 50159180 for evaluation and to identify appropriate corrective actions. As immediate corrective actions, the licensee revised 3-IDSB-SOP-001 to improve the separation of steps associated with the 24-hour battery system and the 72-hour battery system alignments by separating them into different attachments in the procedure. Additional planned corrective actions included additional training for the operators on the IDS.

Corrective Action References: CRs 50158883 and 50159180

Performance Assessment:

Performance Deficiency: The inspectors determined the licensee's failure to have written procedures appropriate to the circumstances when restoring the Class 1E DC and uninterruptable power supply system division B 72-hour DC bus was contrary to TS 5.4.1.a and was therefore a licensee performance deficiency warranting a significance evaluation.

Screening: Consistent with the guidance in IMC 0612, "Issue Screening," Appendix B, "Issue Screening Directions," dated August 8, 2022, the inspectors determined the performance

deficiency was a finding of more than minor significance because if left uncorrected, it would have the potential to lead to a more significant safety concern. Specifically, if this procedure would have been implemented during power operations, this would have been an initiating event that caused a reactor trip and challenged the safety systems of the plant. The inspectors also reviewed the examples of minor issues in IMC 0612, Appendix E, "Examples of Minor Issues," dated January 1, 2021, and found no examples related to this issue.

Significance: In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated December 20, 2019, Table 3, "SDP [Significance Determination Process] Appendix Router," the inspectors determined this finding would require review using IMC 0609, Appendix A, “SDP for Findings at Power,” dated November 30, 2020, since the reactor was defueled. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, Appendix A, Exhibit 1, "Initiating Events Screening Questions,” and determined this finding was of very low safety significance (Green) because it did not cause a reactor trip AND a loss of mitigation equipment relied upon to transition the plant from the onset of the trip to a stable shutdown condition.

Cross-Cutting Aspect: H.12 - Avoid Complacency: Individuals recognize and plan for the possibility of mistakes, latent issues, and inherent risk, even while expecting successful outcomes. Individuals implement appropriate error reduction tools. The inspectors determined the finding had a cross-cutting aspect of Avoid Complacency in the Human Performance area because the licensee failed to recognize the possibility of latent issues and inherent risk when having the same procedure direct activities on both the 24-hour and 72-hour IDS batteries.

Enforcement:

Violation: TS 5.4.1.a states, in part, that written procedures shall be established, implemented, and maintained covering the activities in the applicable procedures recommended Regulatory Guide 1.33, Revision 2, Appendix A, February 1978. Appendix A of Regulatory Guide 1.33 states, in part, that maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Contrary to the above, from June 6, 2022 to October 11, 2022, the licensee failed to have an adequate procedure for the restoration of the IDS division B 72-hour DC bus because it instructed the operator to open the division B 24-hour DC panel breaker. This action resulted in a loss of power to division B powered safety-related air-operated valves and a valid reactor trip signal due to valve 3-PXS-V108B repositioning open.

Enforcement Action: This violation is being treated as a non-cited violation, consistent with Section 2.3.2 of the Enforcement Policy.

LER (Discussed)	LER 2022-002-00 for Vogtle Electric Generating Plant (VEGP), Unit 3, Automatic Depressurization System Stage 4 Flow Paths Inoperable During Mode 6 with Upper Internals in Place Due to Inadequate Work Processes LER 05200025/2022002-00	71153
Description: The inspectors reviewed this LER and the circumstances surrounding the event are documented in the Inspection Results section of this report, as Licensee-Identified Non-		

Cited Violation and Minor Violation. The LER will remain open pending the review of the licensee's corrective actions.

Licensee-Identified Non-Cited Violation	71153
This violation of very low safety significance was identified by the licensee and was entered into the licensee's CAP and is being treated as an NCV consistent with Section 2.3.2 of the Enforcement Policy.	
Violation: TS 3.4.13 states, in part, with the reactor subcritical for ≥ 28 hours three flow paths in ADS stage 4 shall be operable while in Mode 6 with the upper internals in place. With the above requirement not satisfied, immediately initiate action to remove the upper internals and suspend positive reactivity additions. Contrary to the above, at 2:30 p.m. on October 22, 2022, the licensee entered Mode 6 with the upper internals in place without satisfying the Limiting Condition for Operation (LCO) of TS 3.4.13. Additionally, with all four ADS stage 4 flow paths inoperable from October 22 at 2:30 p.m. until October 23 at 4:47 a.m., the licensee did not immediately initiate action to remove the upper internals to satisfy the Required Action of TS 3.4.13 Condition D. This is a violation of TS 3.4.13. Significance/Severity: Green. The inspectors performed a review of this finding using IMC 0609, Appendix G, "Shutdown Operations Significance Determination Process (SDP)," dated January 8, 2020, since the reactor was in Mode 6. The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, Appendix G, Attachment 1, "Shutdown Operations Significance Determination Process Phase 1 Initial Screening and Characterization of Findings," dated May 20, 2022, and determined this finding would require a detailed risk evaluation. For mitigating systems findings, Question A.2 of Exhibit 3 asked: "Does the finding represent a loss of system safety function." The inspectors answered "YES" to this question since all four divisions of the ADS Stage 4 flow paths were inoperable. The Region II Senior Risk Analyst (SRA) conducted an assessment of the risk significance of the finding using SAPHIRE 8, Version 8.2.6 and the AP1000 SPAR Model - Level 1 & Seismic-Flood-Fire, Version 8.50, dated February 28,2017. The AP1000 model was used because it contains shutdown accident sequences. The plant was in Mode 6 (Not Drained) and the exposure time was 15 hours. The SRA set ADS-EPV-CF-4ABCDX (Common Cause Failure of All 4 Stage 4 Depressurization Squib Valves to Open) to "TRUE" and ran the event for all Shutdown-Not Drained event sequences. The dominant accident sequence was a shutdown loss of inventory event due to normal heat removal valve V-024 opening with a failure to fully depressurize while shutdown. The change in core damage frequency was less the 1E-6. Based on the results of the detailed risk evaluation, the inspectors determined the finding was of very low safety significance. Corrective Action References: The licensee entered this violation into its CAP as CR 10917389.	

As an immediate corrective action, the licensee placed all ADS stage 4 squib valve CIMs to "remote," to restore operability of the required ADS stage 4 flow paths and compliance with the TS.

Minor Violation	71153

Minor Violation: The inspectors identified a minor violation of the NRC's reporting requirements in 10 CFR 50.73(a)(1), "Licensee Event Report System." The licensee failed to correctly submit a required LER within 60 days after discovery on October 23, 2022, of an event where a single cause or condition caused at least two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident. The licensee submitted LER 05200025/2022–002–00 to report the event in accordance with 10 CFR 50.73(a)(2)(v)(D) as an event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to mitigate the consequences of an accident, and also in accordance with 10 CFR 50.73(a)(2)(i)(B) as an operation or condition which was prohibited by the plant's Technical Specifications (TS). However, the licensee did not report the event in accordance with 10 CFR 50.73(a)(2)(vii)(D) as an event where a single cause or condition caused at least two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident. The root cause of the event as stated in the LER was inadequate work practices.

Screening: The inspectors determined the performance deficiency was a violation of minor significance. In accordance with Section 6.9.d.10 of the NRC Enforcement Policy, this violation was categorized as minor because the licensee's failure correctly identify all applicable event reporting codes would not have impacted the completeness or accuracy of other information submitted to the NRC.

Enforcement:

10 CFR 50.73(a)(1) requires, in part, that the licensee submit an LER for any event of the type described in this paragraph within 60 days after the discovery of the event. 10 CFR 50.73(a)(2)(vii)(D) requires, in part, that the licensee report any event where a single cause or condition caused at least two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident.

Contrary to the above, the licensee failed to submit a required LER within 60 days after discovery of an event on October 23, 2022, where a single cause or condition caused at least two independent trains or channels to become inoperable in a single system designed to mitigate the consequences of an accident. The event involved the common cause inoperability of all four ADS stage 4 divisions.

This failure to comply with the NRC's reporting requirements in 10 CFR 50.73(a)(1), "Licensee Event Report System," constitutes a minor violation that is not subject to enforcement action in accordance with of the NRC Enforcement Policy. The licensee entered this violation into its CAP as CR 10940798 to evaluate the cause for its failure to correctly satisfy the reporting requirements and to identify appropriate corrective actions.

LER 05200025/2022–002–00 remains open pending the inspectors' review of the licensee's resolution of the 10 CFR 50.73 reporting discrepancy.

EXIT MEETINGS AND DEBRIEFS

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

- On January 25, 2023, the inspectors presented the quarterly inspection results to Mr. Glen Chick, VEGP Units 3 & 4 Executive Vice President and other members of the licensee staff.

THIRD PARTY REVIEWS

.1 Review of World Association of Nuclear Operators (WANO) Pre-Startup Review (PSUR) Report for Vogtle Unit 3.

The inspectors reviewed the WANO PSUR Report of Vogtle Unit 3 conducted in August 2022. During this review, the inspectors did not identify any new significant safety issues.

DOCUMENTS REVIEWED

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
71111.01	Corrective Action Documents	CR10924077	cold weather check list improvements	11/16/2022
	Miscellaneous		Unit 3 outside area operator rounds	11/15/2022
			Unit 3 turbine building operator rounds	11/15/202
	Procedures	B-GEN-OPS-009	cold weather checklist	version 1.0
71111.04	Drawings	APP-PXS-M6-001	Passive core cooling system	revision 16
		APP-PXS-M6-002	Passive core cooling system	revision 22
	Procedures	3-PXS-SOP-001	Passive Core Cooling System	Version 5.0
71111.05	Fire Plans	B-PFP-ENG-001-F3101	Pre-Fire Plan - Containment Building El 82'-6"	Version 1.0
		B-PFP-ENG-001-F3102	Pre-Fire Plan - Containment Building El 92'-6"	Version 1.0
71111.12	Corrective Action Documents	CAR 80008038	“ESR response may allow inoperable IDS battery voltage ranges”	
		CR 50149614	“SV3-IDSB-DB-2A/2B Batteries”	
		CR 50149710	“IDS-DS Calibration”	
		CR 50149756	“N&D SV3-DF01-GNR-000002 not closed for 3-IDS TTO”	
		CR 50149854	“N&D SV3-EY01-GNR-000004 not closed for 3-IDS1 TTO”	
		CR 50149858	“N&D SV3-EY01-GNR-000010 not closed for 3-IDS TTO”	
		CR 50149990	“IDSB-DC-1-VDC, IDSB-DC-1-VDC and IDSB-DC-1-VDC (Battery Charger DC Out Volts) are reading below rounds minimum voltage.”	
		CR 50152606	“Need MWO created to support performance of 3-SFS-OTS-10-001”	
		CR 50153926	“Specific gravity for monthly surveillance on SV3-IDSB-DB-2A/2B”	
		CR 50154096	“Specific gravity readings were not within the acceptance criteria.”	
		CR 50154215	“3-RNS-V002A and 3-RNS-V002B cannot be operated from the PMS Division B Dedicated Safety Panel”	
		CR 70002075	“U3, AUX, BULK PULL, PMS-1, (ORPHAN CABLES, SV3-ORC-1235, -1236, -1237, -1242, -1244, -1251, -1258, -1259,	

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
			-1277, -1284, -1286), ROOM 12301”	
		CR 70002076	“U3, AUX, BULK PULL, PMS-1, (ORPHAN CABLES, SV3-ORC-1235, -1236, -1237, -1242, -1244, -1251, -1258, -1259, -1277, -1284, -1286), ROOM 12301”	
		TE 60045186	“3-PMS-JD-ILCB04 (Integrated Logic Cab B04) heartbeat not functioning correctly”	
	Corrective Action Documents Resulting from Inspection	CR 10914781	“NRC identified cable separation nonconformance in Room 11206”	
		CR 10927678	“Two Minor Violations Identified by NRC during Unit 3 Electrical Inspection”	
		CR 50157788	“NRC identified IEEE 384 Cable/Raceway Separation Nonconformance”	
	Work Orders	WO 1283869	“SV3-PXS-PL-V125A- Repair wiring Squib Conduit (Safety Related)”	
		WO 1284382	“SV3-IDSS-DF-1- Replace electrical panel ground due to corrosion (Safety Related)”	
		WO 1284499	“U3 - SOUTH AUX - FABRICATE AND INSTALL TYPICAL WELDED AND NON-WELDED CONDUIT SUPPORTS IN AUX BLDG - EL 145'-3" - 160'-0" - ALL AREAS, ALL ROOMS”	
		WO 1284539	“U3 - AUX - FABRICATE AND INSTALL TYPICAL WELDED AND NON-WELDED CONDUIT SUPPORTS IN AUX BLDG - EL 66' 6" - AREA 3 - ROOM 12156”	
71111.15	Corrective Action Documents	CR 50158104	“Unit 3 IEEE 384 Cable Tray Transition Enclosure Non-Conformance”	
		CR 50158106	“Unit 3 IEEE 384 Cable Separation Noncompliance”	
		CR 50159176	“Unit 3 PMS Roxtec Gland Functionality for Safety System Actuation”	
	Corrective Action Documents Resulting from Inspection	CR 10927678	“Two Minor Violations Identified by NRC during Unit 3 Electrical Inspection”	
		CR 50157188	“NRC identified IEEE 384 Cable/Raceway Separation and Other Electrical Installation Nonconformances”	
	Engineering Evaluations	APP-GW-E1R-004	“Evaluation of Design Requirements for Separation of AP1000 Cables and Raceway”	Revision 0

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
		ESR 50158518	“IEEE 384 EOC - Containment Issues (Pull Boxes)”	
		ESR 50158519	“IEEE 384 EOC - Aux Building Issues”	
		ESR 50159174	“PMS Roxtec Evaluation”	
		ESR 50159834	“IEEE 384 6" Separation Requirement Cannot be Met - MWO1287454”	
	Miscellaneous	FDT-CAP-Z0-604-01	"Coating Carbon Steel Structures, Systems, or Components, AP1000"	3
	Operability Evaluations	NMP-AD-012-F01	Operability Determination Support Basis - CR 50155712	Version 4.1
	Procedures	NMP-AD-012-F01	Operability determination support basis	version 4.1
	Work Orders	WO 1284050	“Inspect 60 random glands to verify gland screws are torqued to correct value (Safety Related)”	
71111.19	Procedures	3-RNS-OTS-17-001	Normal residual heat removal pump 1A quarterly exercise test	version B 0.1
	Work Orders	WO SNC2000996	SV3-PXS-PL-V021B- repair accum B N2 vent SOV	12/12/2022
71111.20	Corrective Action Documents Resulting from Inspection	CR 10930772	Trash Found in Containment	
		CR 10930779	Material Left in Containment Unattended	
		CR 10930890	Unattended Temporary Material in Containment in Modes 1-4 Not Approved per B-GEN-ENG-032-002 Prior	
		CR 10930976	Determine Significance of Recent Containment Debris Discoveries for Unit 3	
		CR 10931055	Removal of Equipment from Unit 3 CTMT	
		CR 10931104	NRC Identified Red Tape on Electrical Cabling Inside CTMT	
		CR 10931200	Unterminated IT/BIS Wire Found in 11400 Inside U3 CTMT (NRC Identified	
		CR 10931241	T-MOD SNC 1386954 Unattended Temp Material in CTMT Modes 1-4 Not Approved per Program/Procedure	
		CR 10931243	T-MOD SNC 1387901 Unattended Temp Material in CTMT Modes 1-4 Not Approved per Program/Procedure	
	Procedures	3 CNS-SOP-001	Containment System, Attachment 4, Containment Closeout Inspection	Version K=0.10
		3-GOP-205	Plant Cooldown Mode 3 to Mode 5	Version M=0.12
		3-GOP-301	Mode Change Checklists	Version

Inspection Procedure	Type	Designation	Description or Title	Revision or Date
				J=0.9
		3-GOP-304	Refueling to Cold Shutdown Mode 6 to Mode 5	Version K=0.10
		3-RNS-SOP-001	Normal Residual Heat Removal System	Version 6.0
		B-GEN-ENG-032	Containment Cleanliness and Sampling Program	Version 1.0
		B-GEN-OPS-006	Containment Entry	Version 3.0
		ND-CO-026	Vogtle 3&4 Conduct of Operations	Version 3.0
71153	Corrective Action Documents	10937629	NRC finding related to LER 2022-001-00	01/06/2023
		CR 10917380	LCO 3.4.13 Conditions B and F Entered with a LOSF	
	Corrective Action Documents Resulting from Inspection	CR 10938577	NRC Identified - Question on Additional Reporting Criterion for LER 2022-002-00	
		CR 10940798	NRC Identified - Revision Needed to LER 2022-002-00	
	Miscellaneous		Main Control Room Logs	10/22/2022 through 10/23/2022
			Prompt Investigation Report - All Required ADS Stage 4 Required Flowpaths Inoperable (CR 10917380)	10/26/2022
		EN 56175	Stage Four Automatic Depressurization System (ADS) Inoperable	10/23/2022
		LER 052000025/2022-002-00	Automatic Depressurization System Stage 4 Flow Paths Inoperable During Mode 6 with Upper Internals in Place due to Inadequate Work Processes	12/19/2022
		Licensee Evaluation	Review of 10 CFR 50.73(a)(2)(vii) for LER 2022-002-00	No Revision or Date