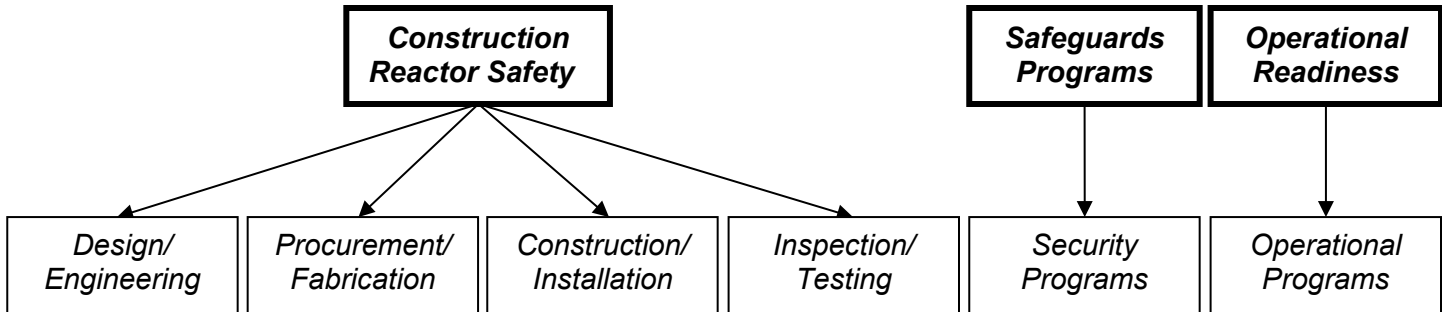


## Vogtle Unit 3 3Q/2021 Performance Summary

[Construction Action Matrix Column:](#)  
[Licensee Response](#)



### Most Significant Inspection Findings

3Q/2021	No findings this quarter	No findings this quarter	No findings this quarter	<u>G</u>	No findings this quarter	<u>G</u>
2Q/2021	No findings this quarter	No findings this quarter	<u>W</u>	No findings this quarter	<u>G</u>	No findings this quarter
1Q/2021	No findings this quarter	No findings this quarter	No findings this quarter	<u>G</u>	No findings this quarter	No findings this quarter
4Q/2020	<u>G</u>	No findings this quarter	No findings this quarter	<u>G</u>	No findings this quarter	No findings this quarter

### Additional Inspection and Assessment Information

- ❖ [List of Construction Inspection Reports](#)
- ❖ [List of Construction Assessment Reports/Inspection Plans](#)
- ❖ [Vogtle Unit 3 Findings Archive](#)

## Design Engineering

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**Identified By:** NRC

**Identification Date:** 11/04/2020

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2020004, 05200026/2020004

**Item Number:** 05200025/2020004-01

**Note:** Closed in Report (NCV)

### **ASME Code Section III Level C Service Limits May Not Be Met for Containment Penetrations 44 and 45**

The inspectors identified a construction finding of very low safety significance with an associated NCV of Title 10 of the Code of Federal Regulations Part 50 (10 CFR 50), Appendix B, Criterion III, "Design Control" for the licensee's failure to have design control measures for the 18-inch diameter carbon steel guard pipes for containment vessel penetrations P44 and P45. Specifically, the site previously performed a structural analysis that omitted the guard pipe portion of the penetrations and did not consider how the guard pipe exclusion would infringe upon the design margin for ensuring the requirement for American Society of Mechanical Engineers (ASME) Code Section III, Level C service limits were not exceeded, in accordance with the current licensing basis. The Licensee entered this issue into its corrective action program (CAP) as condition report (CR) 50053621 and updated its structural model calculations as part of the corrective action.

The performance deficiency was of more than minor safety significance, and thus a finding, because it represented an adverse condition that rendered the quality of a structure, system, and component (SSC), unacceptable or indeterminate, and required substantive corrective action. This finding was not associated with an inspection, test, analyses, and acceptance criteria (ITAAC); it was not associated with a security program; it was not associated with an IMC 2504 operational/construction program; and it was not associated with a repetitive, NRC-identified omission of a program critical attribute. This finding was of very low safety significance because the licensee was able to demonstrate the design function of the applicable structure or system (containment vessel) would not be impaired by the deficiency by successfully reperforming a structural model calculation. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect "Documentation," in the area of Human Performance, in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." Specifically, the licensee did not ensure its calculations were reflective of the ASME Level C service limit requirements for the P44 and P45 penetration guard pipes. [H.7] (Section 1A08)

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## Procurement/Fabrication

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## Construction/Installation

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**Identified By:** NRC

**Identification Date:** 01/25/2021

**Significance:** White

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational

Programs Integrated Inspection Reports 05200025/2021004, 05200026/2021004

**Item Number:** 05200025/2021010-01

**Note:** Open in Report (NCV)

### **Failure to Promptly Identify and Correct IEEE 384 Cable Separation and Seismic/Structural Nonconformances**

The inspectors identified a White construction finding and associated apparent violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to promptly identify and correct conditions adverse to quality associated with the installation of Class 1E cables and associated raceways. Specifically, the licensee failed to promptly identify that cable separation was not maintained in accordance with RG 1.75 and IEEE 384-1981, failed to promptly identify widespread deficiencies in installation of seismic supports and structural components, and failed to timely correct these issues.

**Identified By:** NRC

**Identification Date:** 04/20/2021

**Significance:** White

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021004, 05200026/2021004

**Item Number:** 05200025/2021010-02

**Note:** Open in Report (NCV)

### **Failure to Accomplish Separation for Class 1E System Field Installations in Accordance with Applicable Instructions, Procedures, and Drawings**

The inspectors identified a White construction finding and associated apparent violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to maintain 1-inch vertical and horizontal separation between Class 1E electrical divisions and non-Class 1E electrical cables inside switchgear cabinets as specified in safety class C (safety related) APP-G1-V8-01, "AP1000 Electrical Installation Specification."

**Identified By:** NRC

**Identification Date:** 06/21/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021004, 05200026/2021004

**Item Number:** 05200025/2021010-03

**Note:** Closed in Report (NCV)

### **Failure to Install Electrical Raceways and Connections in Accordance with Applicable Instructions, Procedures, and Drawings**

The inspectors identified a Green construction finding and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to install seismic Category I electrical raceways and connections in accordance with applicable instructions, procedures, and drawings.

**Identified By:** NRC

**Identification Date:** 05/13/2021

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021004, 05200026/2021004

**Item Number:** 05200025/2021004-01

**Note:** Closed in Report (NCV)

### **Failure to Prescribe Instructions or Procedures for ITAAC activities that Affect Quality**

NRC inspectors identified a Green finding and associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," and with an associated Severity Level IV violation of 52.99(c)(1), "ITAAC Closure Notification," for the licensee's failure to demonstrate ITAAC acceptance criteria were satisfied in accordance with procedure ND-RA-001-006, "Development and Approval of ITAAC Submittals (ICN, UIN, PCN)." The licensee also failed to verify that prescribed inspections, tests, and analyses were performed and that the prescribed acceptance criteria were met for ITAAC C.2.6.09.05a in the ITAAC Closure Notification (ICN). Specifically, the licensee failed to verify the functionality of the active vehicle barriers. The licensee entered this issue into its corrective action program as condition report (CR) 50100179 and tested the functionality of the primary active vehicle barrier.

The performance deficiency was of more than minor safety significance and a finding because it is material to the acceptance criteria of the ITAAC, and the performance deficiency prevented the licensee from meeting the ITAAC Design Commitment. The finding was determined to be of very low safety significance because the finding did not impair a design function and the active vehicle barrier function was not required per 10 CFR 73.55 at that time. The inspectors concluded that this finding affected the cross-cutting area of human performance and crosscutting aspect of Basis for Decisions. Specifically, the licensee failed to verify the entire ITAAC acceptance criteria was met before submitting the ITAAC Closure Notification.

**Identified By:** NRC

**Identification Date:** 05/22/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021004, 05200026/2021004

**Item Number:** 05200025/2021004-02

**Note:** Closed in Report (NCV)

### **Failure to Follow Procedure 3-GENITPP-517**

A self-revealed construction finding of very low safety significance with an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to accomplish hot functional testing activities in procedure 3-GEN-ITPP-517, "Precore Hot Functional Test Procedure", Version 4.1 in accordance with NMPAP-003, "Procedure and Work Instruction Use and Adherence, Version 6.1." The licensee entered this issue into its CAP as CR 50093618, CR 50093597, and CR 50097436.

The performance deficiency was determined to be of more than minor significance because it represents a substantive failure to implement an adequate program, process, procedure, or quality oversight function. Specifically, the licensee failed to perform all steps in sequence, complete each step before moving to the next step, and sign off each step after completing it and before moving to the next step. This caused the RCS pressure to increase above the low temperature overpressure relief valve setpoints. The inspectors concluded that this finding affected the cross-cutting area of human performance and cross-cutting aspect of Challenge the Unknown. Specifically, the licensee did not have a complete understanding of how to properly execute a set of steps in procedure 3-GEN-ITPP-517 and did not seek clarification before proceeding.

**Identified By:** Licensee

**Identification Date:** 01/21/2021

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports  
05200025/2021003, 05200026/2021003  
**Item Number:** 05200025/2021003-02  
**Note:** Open in Report (LIV)

### **Failure to Promptly Identify and Correct a Condition Adverse to Quality with Unqualified Drilling and Installation of Expansion Anchors into Safety Class C Concrete Structures**

10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." Contrary to this requirement, on or before January 21, 2021, the licensee failed to promptly identify and correct a condition adverse to quality. Specifically, the licensee identified on November 1, 2019 that a subcontractor who was not qualified to drill penetrations and install material into Safety Class C concrete structures under a licensee approved Appendix B Quality Assurance Program had been doing so under two separate contracts. These two contracts were developed to perform non-safety related activities for installation of the fire protection and suppression system. The licensee's causal evaluation of the problem identified inadequate management and oversight over its subcontractors with no corrective actions to address the behaviors. The effectiveness review for the causal evaluation was closed on August 20, 2020, although it identified that not all of the contracts were changed as specified by the corrective action to prevent recurrence at the time of the review. Approximately five months later, on January 21, 2021, a subcontractor (one of the five unqualified subcontractors identified by the effectiveness review) who was not qualified to drill penetrations and install material into Safety Class C concrete structures under a licensee approved Appendix B Quality Assurance Program drilled into the Unit 3 auxiliary building rooftop and installed expansion anchors without work instructions approved for the activity. Edge boxes were fabricated and installed by sub-tier sheet metal workers without an approved work package or an approved ASME NQA-1 Standard subcontractor quality program.

This performance deficiency was of more than minor safety significance, and thus a finding, because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. Drilling in reinforced concrete structures can adversely impact the function of the structure if portions of the reinforcing bar or embedded steel are damaged. Cleanliness of the holes being drilled can also adversely impact the function of the structure. This finding was of very low safety significance (Green) because the licensee demonstrated with reasonable assurance the design function of the auxiliary building was not impaired. This LIV is material to the ITAAC 3.3.00.02a.i.c (762) acceptance criteria because the as-built structures in the non-radiologically controlled area of the auxiliary building must conform to the approved design and will withstand the design basis loads specified in the design description without loss of structural integrity or the safety-related functions. This LIV is open pending an NRC review to verify adequate corrective actions have been developed and implemented so the deficiency can no longer prevent the ITAAC from being closed. This issue was documented in the licensee's CAP as CR 50099464, CR 50075502, and CAR 80004896.

**Identified By:** Licensee  
**Identification Date:** 02/20/2021  
**Significance:** Green  
**Item Type:** ITAAC Finding  
**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports  
05200025/2021003, 05200026/2021003  
**Item Number:** 05200025/2021003-03  
**Note:** Open in Report (LIV)

### **Unqualified Welding of Fire Extinguisher Brackets on the Unit 3 Containment Vessel**

10 CFR 50, Appendix B, Criterion IX, "Control of Special Processes," states "Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with

applicable codes, standards, specifications, criteria, and other special requirements.” Contrary to this requirement, on February 20, 2021, a subcontractor who was not qualified to perform welding on safety related structures under a licensee approved Appendix B Quality Assurance Program welded three sets of fire extinguisher brackets on the Unit 3 containment vessel without a qualified procedure. The subcontractor’s work package was not qualified for welding to the containment vessel and did not contain documents, drawings, or details that allowed welding to the containment vessel. The brackets were installed per a drawing detail that did not specify welding to the containment vessel. The drawing allowed for mounting to steel columns, permanent formwork plate, embedment plates, and modules.

This performance deficiency was of more than minor safety significance, and thus a finding, because it rendered the quality of the containment vessel unacceptable or indeterminate and required substantive corrective action. This finding was of very low safety significance (Green) because the licensee demonstrated with reasonable assurance the design function of the containment vessel was not impaired. This LIV is material to the ITAAC 2.2.01.02a (91), 2.2.01.04a.ii (96), and 2.2.01.07.i (107) acceptance criteria because it affects the ASME Section III requirements for the as-built containment vessel and associated testing requirements. This LIV remains open pending restoration of the Unit 3 containment vessel to compliance with the ASME Section III Code requirements and an NRC review to verify adequate corrective actions have been developed and implemented such that the initial ITAAC conclusions remain valid and the deficiency can no longer prevent remaining ITAAC from being closed. This issue was documented in the licensee’s CAP as CR 50099460, CR 50082701, and CAR 80004934.

**Identified By:** NRC

**Identification Date:** 07/17/2020

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2020003, 05200026/2020003

**Item Number:** 05200025/2020003-01

**Note:** Closed in Report (NCV)

### **Failure to Perform ASME Section III Leakage Examinations**

The inspectors identified a construction finding of very low safety significance (Green) with an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR 50), Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to perform leakage examinations of two American Society of Mechanical Engineers (ASME) Class 2, pressure-retaining, weld joints for containment penetrations P27 and P28 to satisfy the requirements of ASME Section III.

The performance deficiency was of more than minor safety significance, and thus a finding, because it represented an adverse condition that rendered the quality of a structure unacceptable or indeterminate, and required substantive corrective action. The inspectors determined this finding was not associated with an ITAAC; it was not associated with a security program; it was not associated with an IMC 2504 operational/construction program; and it was not associated with a repetitive, NRC-identified omission of a program critical attribute. The inspectors determined this finding was of very low safety significance because the licensee was able to demonstrate the design function of the applicable structure (containment vessel) would not be impaired by successfully reperforming a pneumatic test of the affected welds. The licensee entered this issue into its corrective action program as condition report (CR) 50056351. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect Avoid Complacency, in the area of Human Performance. Specifically, the licensee failed to ensure the contract individuals recognized and planned for the possibility of mistakes, latent problems, or inherent risk, even while expecting successful outcomes. The licensee did not ensure the contractor understood the location of the welds, ensure obstructions were not present, and ensure supporting procedures or drawings were referenced to satisfactorily perform targeted ASME Section III weld examinations during the pneumatic test. [H.12] (Section 1A07)

**Identified By:** NRC

**Identification Date:** 05/01/2020

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2020002, 05200026/2020002

**Item Number:** 05200025/2020002-01

**Note:** Closed in Report (NCV)

### **Failure to Correct Inadequate Thread Engagement for TZ Hilti Bolts**

The inspectors identified a construction finding of very low safety significance with an associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to correct a condition adverse to quality related to inadequate thread engagement for TZ Hilti Bolts identified in condition report (CR) 50004237. Specifically, CR 50004237 was written to address specification SV3/SV4-SS01-Z0-011, Revision 0, which allowed post-installed anchors to be installed so that the end of the bolt was flush with the nut. In the instance of the TZ Hilti Bolts, bolt ends are tapered and when installed flush with the bolt resulted in inadequate thread engagement. This issue was entered into the licensee's corrective action program as CR 50039089. The licensee performed immediate corrective actions and was able to demonstrate with reasonable assurance that the lack of thread engagement would not affect the anchors ability to perform their intended safety function.

The performance deficiency was of more than minor safety significance, and thus a finding, because it represented an adverse condition that rendered the quality of a structure, system, and component (SSC), unacceptable or indeterminate, and required substantive corrective action. The inspectors determined this finding was not associated with an ITAAC; it was not associated with a security program; and it was not associated with a repetitive, NRC identified omission of a program critical attribute. The inspectors determined this finding was of very low safety significance (Green) because the licensee was able to demonstrate with reasonable assurance that the design function of the applicable structure or system would not be impaired by the deficiency. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Problem Identification and Resolution, in the area of Resolution. Specifically, the licensee failed to thoroughly evaluate the issue to ensure that the resolution addressed the extent of condition for inadequate thread engagement identified in CR 50004237.

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### **Inspection/Testing**

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**Identified By:** NRC

**Identification Date:** 3/17/2021

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2021006, 05200026/2021006

**Item Number:** 05200025/2021006-01

**Note:** Closed in Report (NCV)

### **Failure to Follow Procedure B-GEN-ITPA-004**

An ITAAC finding of very low safety significance with an associated NCV of Title 10 of the Code of Federal Regulations Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the licensee's failure to follow its procedural guidance for troubleshooting external leakage from the Unit 3 spent fuel pool (SFP) and fuel transfer canal (FTC), which resulted in over-pressurization of the leak chase area between the SFP and FTC stainless steel liner and the surrounding Seismic Category I structural module. The licensee failed to adhere to procedure B-GEN-ITPA-004, "Conduct

of Test," Revision 24. Additionally, the procedure was not appropriate to the circumstances because it did not contain adequate guidance on when formal troubleshooting was required. The licensee entered this finding into its corrective action program as condition report 50083423. Corrective actions for this issue included repairs to the SFP and FTC liner, the leak chase, and the surrounding structural module to return them into conformance with the design.

The performance deficiency was of more than minor safety significance, and thus a finding, because it represented an adverse condition that rendered the quality of a structure (i.e., the SFP, FTC, and surrounding structural module) unacceptable and required substantive corrective action. The performance deficiency was also material to the acceptance criteria of ITAAC 3.3.00.02a.i.d (763) and prevented the licensee from meeting an ITAAC Design Commitment. The inspectors determined this finding was a performance deficiency of very low safety significance (Green) because there was reasonable assurance the structure or the applicable portions of the structure would have been able to meet its design function. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect Challenge the Unknown, in the area of Human Performance. The licensee did not have a complete understanding of how to properly execute the set of steps in the procedure and clarification was not sought before proceeding.

**Identified By:** NRC

**Identification Date:** 1/29/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-01

**Note:** Closed in Report (NCV)

#### **Failure to Correct NRC Identified Violation**

The NRC inspectors identified a construction finding of very low safety significance and a non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50 (10 CFR 50), Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to correct a deficiency in their Class 1E Direct Current (DC) and Uninterruptible Power Supply (UPS) (IDS) preoperational test procedure, 3-IDS-ITPP-501. The licensee entered this finding into their corrective action program as condition reports (CR) 50076165 and 50078235, and corrective action report (CAR) 80004604, to correct the preoperational test procedure.

The performance deficiency was of more than minor safety significance and a finding because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The finding was determined to be of very low safety significance (Green) because the finding did not impair a design function. The inspectors concluded that this finding affected the cross-cutting area of human performance and the crosscutting aspect of avoiding complacency. The proximate cause was attributed to a failure to use proper human error reduction techniques, namely inadequate verification by personnel. [H.12]

**Identified By:** NRC

**Identification Date:** 2/1/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-02

**Note:** NCV

#### **Failure to Use Worst Case Load Profile for IDS Battery Service Test**



The NRC inspectors identified a performance deficiency and ITAAC finding of very low safety significance (Green), and a NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to translate the most limiting accident load profiles and load currents that envelope the battery bank design duty cycle into the battery service tests specified by procedure 3-IDS-ITPP-501, "Class 1E DC and UPS Preoperational Test." The licensee entered this finding into their corrective action program as CR 50078637 and changed their procedure to test the worst-case load profile with the worst-case load currents for battery divisions IDSA, IDSB, IDSC, and IDSS service tests.

The performance deficiency was of more than minor safety significance and a finding because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The finding was determined to be of very low safety significance (Green) because the finding did not impair a design function. The inspectors concluded that this finding affected the cross-cutting area of human performance and crosscutting aspect of challenge the unknown. Specifically, the licensee failed to adequately investigate which profiles were the most limiting for each division and the spare battery to ensure the test procedure encompassed the requirements. [H.11]

**Identified By:** NRC

**Identification Date:** 2/1/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-03

**Note:** NCV

#### **Failure to Place IDSB Battery on Float for 72 hours After Being on Equalize Voltage**

The NRC inspectors identified a construction finding of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to place the IDSB 24-hour battery on float voltage for 72 hours subsequent to it being on equalize voltage. The licensee entered this finding into their corrective action program as CR 50085270 to reperform the IDSB service test with the appropriate requisite float voltage.

The performance deficiency was of more than minor safety significance and a finding because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The finding was determined to be of very low safety significance (Green) because the finding did not impair a design function. The inspectors concluded that this finding affected the cross-cutting area of human performance and crosscutting aspect of conservative bias. Specifically, the licensee proceeded with testing without questioning whether a 72-hour float was required. [H.14]

**Identified By:** NRC

**Identification Date:** 2/2/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-04

**Note:** NCV

#### **Failure to Translate Design Requirements into IDS Test Procedure**

The NRC inspectors identified a construction finding with three examples of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to translate the design requirements and acceptance limits in applicable design documents into preoperational test procedure 3-IDS-ITPP-501, "Class 1E DC and UPS Preoperational Test." Specifically, the licensee failed to translate design requirements from NEMA PE 5-1985, "Utility Type Battery Chargers," SV3-IDS-T1-

503, "Class 1E DC and Uninterruptible Power Supply System Preoperational Test Specification," and the UFSAR Section 14.2.9.1.14. The licensee entered this finding into their corrective action program as CRs 50080097, 50079776, and 50089774, respectively, to restore compliance. The performance deficiency was of more than minor safety significance and a finding because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The finding was determined to be of very low safety significance (Green) because the finding did not impair a design function. The inspectors concluded that this finding affected the cross-cutting area of human performance and crosscutting aspect of consistent process. Specifically, the licensee used an inconsistent approach to ensure that all requirements were translated into the procedure. [H.13]

**Identified By:** NRC

**Identification Date:** 2/24/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-05

**Note:** NCV

### **Failure to Control Design Calculation for Three Battery Cells Bypassed**

The NRC inspectors identified a construction finding of very low safety significance and a NCV of 10 CFR 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," for the licensee's failure to control the quality of design requirements and acceptance criteria in calculations used to determine voltage margins after battery discharge. The licensee entered this into their corrective action program as CR 50080010 and CAP IR 2021-2177. Corrective actions included using a different battery profile that used a higher final cell voltage which ensured at least 210VDC after 24 hours of discharge following a design basis accident with three cells bypassed.

The performance deficiency was of more than minor safety significance and a finding because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The finding was determined to be of very low safety significance (Green) because the finding did not impair a design function. The inspector concluded that this finding affected the cross-cutting area of human performance and crosscutting aspect of documentation. Specifically, the licensee failed to consider all potential scenarios for the battery calculation. [H.7]

**Identified By:** NRC

**Identification Date:** 1/20/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-06

**Note:** NCV

### **Inadequate Startup Testing Procedures for Establishing Initial Criticality**

The NRC inspectors identified a construction finding of very low safety significance (Green) and a NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate applicable regulatory requirements and the design basis into specifications and procedures for performing the Unit 3 initial plant startup testing activities of achieving initial criticality in a controlled manner, measuring the isothermal temperature coefficient (ITC), and calculating the moderator temperature coefficient (MTC) of reactivity. The licensee entered this finding into its corrective action program as CR 50086434 for evaluation and identification of appropriate corrective actions.

The performance deficiency was of more than minor safety significance, and thus a finding, because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. This finding was associated with an SSC (i.e. reactor system) and was a licensee performance deficiency of very low safety significance (Green) because the procedure was not implemented. The inspectors concluded this finding affected the cross-cutting area of human performance and the cross-cutting aspect of teamwork. Consistency between the procedures and test specification required a coordinated effort between three organizations. This was not effectively done during initial drafting of the procedures. [H.4]

**Identified By:** NRC

**Identification Date:** 2/12/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 – NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021002, 05200026/2021002

**Item Number:** 05200025/2021002-07

**Note:** NCV

### **Inadequate Startup Testing Procedures for Initial Fuel Loading**

The NRC inspectors identified a construction finding of very low safety significance (Green) and a NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to correctly translate applicable regulatory requirements and the design basis into specifications and procedures for performing the Unit 3 initial plant startup testing activity of initial fuel loading. The licensee entered this finding into its corrective action program as CR 50086035 for evaluation and identification of appropriate corrective actions.

The performance deficiency was of more than minor safety significance, and thus a finding, because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. This finding was associated with an SSC (i.e. reactor system) and was a licensee performance deficiency of very low safety significance (Green) because the procedure was not implemented. The inspectors concluded this finding affected the cross-cutting area of human performance and the cross-cutting aspect of documentation. The proximate cause of the performance deficiency was primarily attributed to the failure to create accurate documentation. Revision 1 of the test procedure was archived without sufficient development and it was not adequately reviewed prior to approval. [H.7]

**Identified By:** NRC

**Identification Date:** 11/04/2020

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2020004, 05200026/2020004

**Item Number:** 05200025/2020004-02

**Note:** Closed in Report (NCV)

### **Failure to Construct and Perform Quality Inspections on the Battery Racks for the Class 1E DC and Uninterruptible Power Supply System**

The inspectors identified an ITAAC finding of very low safety significance with an associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." The licensee failed to construct and perform quality inspections on Unit 3 and Unit 4 Class 1E DC and uninterruptible power supply system (IDS) battery racks for the 250 Vdc 24-hour, 72-hour, and spare batteries in accordance with ITAAC 2.6.03.02.i and the approved design requirements for Vogtle Units 3 and 4. The licensee entered this finding into its CAP as CR 50066999, conducted engineering analysis of the nonconforming conditions, and performed rework on the battery racks to correct the nonconforming conditions.

This performance deficiency was of more than minor safety significance, and thus a finding, because it was material to the acceptance criteria of an ITAAC and invalidated the Inspection, Test, or Analyses described in the ITAAC 2.6.03.02.i. This finding was not associated with a security program; it was not associated with an IMC 2504 operational or construction program; and it was not associated with a repetitive, NRC-identified omission of a program critical attribute. This finding was a licensee performance deficiency of very low safety significance because it was associated with the IDS and there was reasonable assurance the design function of the system would not have been impaired by the deficiency based on engineering analysis of the nonconforming conditions identified. The inspectors determined this finding was indicative of present licensee performance and affected the cross-cutting area of human performance and the cross-cutting aspect of avoiding complacency. The proximate cause of the performance deficiency was primarily attributed to a failure to perform a thorough review of the work instructions and to plan the activity every time without relying on past successes and assumed conditions. [H.12] (Section 1A15)

**Identified By:** NRC

**Identification Date:** 10/08/2020

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Reports 05200025/2020010, 05200026/2020010

**Item Number:** 05200025/2020010-01

**Note:** Closed in Report (NCV)

#### **Failure to Complete Procedure B-GEN-ITPCI-019 sub-procedures as Written**

The inspectors identified a performance deficiency and a construction finding of very low safety significance (Green) and an associated non-cited violation (NCV) of Title 10, Code of Federal Regulations (CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow safety related procedure B-GEN-ITPCI-019, "PMS Sensor Channel Calibration," for the calibration of reactor coolant system (RCS) pressure transmitters.

The performance deficiency was determined to be more than minor because it represented a substantive failure to implement procedures. This finding was associated with the Construction Reactor Safety – Inspection/Testing Cornerstone. Using IMC 2519, Appendix A, "Construction Significance Determination Process," this finding was determined to be of very low safety significance (Green) because it was associated with the protection and safety monitoring system (PMS) and RCS, which are in the high risk column of the AP1000 Construction Significance Determination Matrix, but all trains of the systems were not considered failed, and it was not a repetitive significant condition adverse to quality. In accordance with IMC 0613, Appendix F "Construction Cross-Cutting Areas and Aspects," the finding was determined to be indicative of present licensee performance and was associated with the cross-cutting aspect of Training in the area of Human Performance. Specifically, Southern Nuclear Company (SNC) did not provide adequate training for the calibration of safety-related transmitters to ensure technical competency and maintain nuclear safety values [H.9]. (Section 3P04)

**Identified By:** NRC

**Identification Date:** 07/09/2020

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Reports 05200025/2020009, 05200026/2020009

**Item Number:** 05200025/2020009-01

**Note:** Closed in Report (NCV)

#### **Failure to Complete Containment Prior to Unit 3 ILRT**

The inspectors identified a performance deficiency and an ITAAC finding of very low safety significance (Green) and an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (CFR) Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," for the licensee's failure to complete the containment system in accordance with Option B, "Performance-Based Requirements," prior to commencing the Unit 3 Type A containment integrated leak rate test (CILRT). The licensee entered this issue into their corrective action program (CAP) as CR 50061137 with planned corrective actions to complete the containment system and perform additional testing.

The performance deficiency was more than minor because it was material to the acceptance criteria of the ITAAC. The finding was associated with the Construction Reactor Safety – Inspection/Testing Cornerstone. Using IMC 2519, Appendix A, "Construction Significance Determination Process," this finding was determined to be of very low safety significance (Green) because it was associated with the containment system (CNS), which is in the low risk column of the AP1000 Construction Significance Determination Matrix, and was not a repetitive significant condition adverse to quality. In accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects," the finding was determined to be indicative of present licensee performance and was associated with the cross-cutting aspect of Change Management in the area of Human Performance. Specifically, rather than maintaining nuclear safety as the overriding priority, the design change associated with the new pressure boundary welds on the EPAs was not adequately evaluated to ensure compliance with regulatory requirements [H.3]. (Section 3T05)

**Identified By:** NRC

**Identification Date:** 08/04/2020

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Reports 05200025/2020009, 05200026/2020009

**Item Number:** 05200025/2020009-02

**Note:** Closed in Report (NCV)

### **Failure to Establish Adequate Procedure for Unit 3 72-hour Battery Performance Test**

The inspectors identified a performance deficiency and a construction finding of very low safety significance (Green) and an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to establish an adequate procedure for UFSAR required battery performance testing of the Division B and C, Class 1E, 72-hour batteries. The licensee entered this issue into their CAP as CRs 50058111, 50057805 and corrected the procedure prior to implementation.

The performance deficiency was determined to be more than minor and a finding because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The inspectors concluded the finding was associated with the Inspection/Testing cornerstone and assessed the finding in accordance with IMC 2519, "Construction Significance Determination Process," Appendix A, "AP 1000 Construction Significance Determination Process," Section 4. The inspectors determined the finding was of very low safety significance (Green) because the finding was not related to a security or operational program and the test had not been performed. In accordance with IMC 0613 Appendix F, "Construction Cross-Cutting Areas and Aspects," the inspectors determined the finding had a cross-cutting aspect of Avoid Complacency in the area of Human Performance. Specifically, the licensee did not properly proofread following a copy/paste from a previous section that allowed an incorrect number to propagate through the procedure [H.12]. (Section 3T12)

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**Identified By:** NRC

**Identification Date:** 01/8/2020

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2020004, 05200026/2020004

**Item Number:** 05200025/2021004-03

**Note:** Closed in Report (FIN)

NRC inspectors identified a construction finding of very low safety significance for the licensee's failure to analyze site specific conditions in accordance with NMP-SE-015, "Target Set Identification, Development, and Maintenances." The licensee entered this issue into its corrective action program as CR 50031962.

The performance deficiency was determined to be of more than minor safety significance because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The inspectors concluded that this finding affected the cross-cutting area of human performance and cross-cutting aspect of Bases for Decisions. Specifically, the licensee failed to verify its understanding of the requirements for target set identification and development.

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## Operational Programs

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**Identified By:** SNC

**Identification Date:** 08/12/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021005, 05200026/2021005

**Item Number:** 05200025/2021005-01

**Note:** Closed in Report (NCV)

### Failure to Follow Procedure 3-IDSC-SOP-002

A self-revealed construction finding of very low safety significance with an associated noncited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR), Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to accomplish activities in procedure 3-IDSC-SOP-002, "Class 1E AC System – Division C," Version 0 in accordance with procedure NMP-AP-003, "Procedure and Work Instruction Use and Adherence," Version 6.1. The licensee entered this issue into its corrective action program (CAP) as condition report (CR) 50103788, CR 50103789, and CR 50103907.

The performance deficiency was determined to be of more than minor significance and thus a finding because it represented a substantive failure to implement an adequate program, process, procedure, or quality oversight function. The inspectors determined the finding was of very low safety significance (Green) because the event impaired only one train of the IDS. The inspectors determined the finding had a cross-cutting aspect of H.2, Field Presence, in the area of Human Performance. Specifically, senior managers did not ensure that operators performing 3-IDS-SOP-002 had adequate supervisory and management oversight of work activities which led to plant equipment being damaged.

**Identified By:** NRC

**Identification Date:** 09/30/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021005, 05200026/2021005

**Item Number:** 05200025/2021005-02

**Note:** Closed in Report (NCV)

### **Failure to Obtain a License Amendment Prior to Altering Dynamic Restraint Qualification Requirements**

The NRC inspectors identified a performance deficiency and construction finding of very low safety significance and an associated Severity Level (SL) IV non-cited violation (NCV) of 10 CFR 50.59, "Changes, tests, and experiments," for the licensee's failure to perform a written safety evaluation prior to implementing a change to remove ASME QME-1-2007 commitments from the UFSAR in accordance with procedure ND-LI-VNP-002. The licensee entered this issue into its corrective action program as CR 50098695.

The inspectors determined that the failure to follow procedure ND-LI-VNP-002 to perform a 10 CFR 50.59 evaluation for the removal of ASME QME-1-2007 commitments from the design bases was a violation of 10 CFR 50.59(d)(1), and a performance deficiency. Per the guidance in IMC 0613, Appendix E, "Examples of Minor Construction Issues," the performance deficiency was determined to be more than minor, and thus a finding, because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. Specifically, the removal of QME-1-2007 for dynamic restraints constituted a more than minimal increase in the likelihood of a malfunction of a structure, system, or component important to safety and there was a reasonable likelihood that the change would have required Commission review and approval prior to implementation in accordance with 10 CFR 50.59(c)(2)(ii). The inspectors determined the finding had a cross-cutting aspect of H.3, Change Management in the area of Human Performance. Specifically, the licensee failed to ensure the process for reviewing the change to remove QME-1-2007 for dynamic restraints was systematic in that all aspects of QME-1-2007 were evaluated for their impact on dynamic restraints.

**Identified By:** NRC

**Identification Date:** 09/30/2021

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021005, 05200026/2021005

**Item Number:** 05200025/2021005-03

**Note:** Closed in Report (NCV)

### **Failure to Demonstrate Qualification of Valve Nonmetallic Parts**

NRC inspectors identified a performance deficiency and ITAAC finding of very low safety significance and an NCV of 10 CFR 50.49(e)(5), "Environmental qualification of electric equipment important to safety for nuclear power plants," for the licensee's failure to establish the qualified lives of all nonmetallic components necessary for the completion of the safety function of the squib and main steam isolation (MSI) valves in accordance with procedure APP-GW-G1-002, "AP1000 Equipment Qualification Methodology." The licensee entered this issue into its CAP as CR 50096894.

The performance deficiency was determined to be more than minor, and thus a finding, because it is material to the acceptance criteria of the ITAAC, and the performance deficiency prevented the licensee from meeting the ITAAC Design Commitment. The inspectors determined this finding was of very low safety significance because the finding did not impair a design function of the valves. The inspectors determined no cross-cutting aspect applied because the performance deficiency did not reflect current licensee performance.

**Identified By:** NRC

**Identification Date:** 07/19/2021

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021005, 05200026/2021005

**Item Number:** 05200025/2021005-04

**Note:** Closed in Report (NCV)

### **Failure to Demonstrate Qualification of Containment High Radiation Monitor Door Gasket**

NRC inspectors identified an ITAAC finding and associated NCV of 10 CFR 50.49.e(5) for the failure to establish the qualified life of the Containment High Range Monitor (CHRM) door gasket in accordance with Institute of Electrical and Electronics Engineers Standard (IEEE) 323-1974. The licensee entered this issue into its CAP as CR 50096896 and CAP-IR-2021-6870 and is working on corrective actions to address the issue.

The performance deficiency was determined to be more than minor, and thus a finding, because it represented an adverse condition that rendered the quality of a system, structure, or component (SSC), unacceptable or indeterminate, and required substantive corrective action. The inspectors determined that the finding was of very low safety significance because the finding was not associated with a system or structure in risk importance table. The inspectors determined the finding was associated with the cross-cutting aspect of "Consistent Process" in the area of Human Performance. Specifically, the licensee failed to use a consistent, systematic approach to make decisions whether the AP1000 harsh environment included wetted environments.

**Identified By:** NRC

**Identification Date:** 07/9/2021

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Initial Test Program and Operational Programs Integrated Inspection Reports 05200025/2021005, 05200026/2021005

**Item Number:** 05200025/2021005-05

**Note:** Closed in Report (NCV)

### **Failure to Qualify EPAs in Accordance with IEEE 317**

NRC identified an ITAAC finding and associated violation of 10 CFR 50, Appendix B, Criterion III, for the failure to seismically or environmentally qualify the Electrical Penetration Assemblies (EPAs) in accordance with IEEE 317, Section 6.2.10. Specifically, the licensee failed to test or analyze the as installed assembly including cable configurations, terminations, termination box, raceways, and their respective interactions. The licensee entered this issue into its CAP as CR 50104476 and is working on corrective actions to address the issue.

The performance deficiency was determined to be more than minor, and thus a finding, because it represented an adverse condition that rendered the quality of an SSC unacceptable or indeterminate and required substantive corrective action. The inspectors determined the finding was of very low safety significance because the licensee was able to show through additional analysis that the finding did not impact a design function of the EPAs. The inspectors determined the finding was associated with the cross-cutting aspect of "Change Management" in the area of Human Performance. Specifically, the licensee leadership failed to use a systematic process for evaluating and implementing changes to as installed SSCs compared to configurations that were environmentally qualified so that nuclear safety remained the overriding priority.

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