

## Vogtle Unit 3 Findings

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### Design Engineering

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**Identified By:** NRC

**Identification Date:** 11/2/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2022001, 05200026/2022001

**Item Number:** 05200025/2022001-03

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

#### Failure to Evaluate Applicable Design Inputs for EMC Glands

The inspectors identified a construction finding of very low safety significance with an associated NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to assure applicable regulatory requirements and the design basis, as defined in § 50.2 and as specified in the license application, for those structures, systems, and components (SSCs) to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. Specifically, the licensee's failure to evaluate applicable design inputs in the design package (E&DCR APP-GW-GEF-2640) that installed EMC glands in Class 1E plant electrical enclosures was a PD. The licensee entered this finding into its CAP for evaluation and identification of appropriate corrective actions as CR 50125873. As immediate corrective actions, the licensee issued new E&DCRs APP-GW-GEF-519 and APP-GW-GEF-529 that analyzed, and provided seismic testing results, indicating the seismic input for the EMC glands met the as-built seismic Category II, Class D component and would not adversely affect the ability of plant Class 1E electrical enclosures to perform their intended safety function during a seismic event.

The PD was of more than minor safety significance, and thus a finding, because it represented a substantive non-conservative error in a design document that defines the technical requirements for plant Class 1E electrical enclosures and justification was required by the licensee to ensure the as-built seismic Category II, Class D component did not adversely affect the ability of plant Class 1E electrical enclosures to perform their intended safety function during a seismic event. The inspectors determined the finding was not material to an ITAAC and therefore it was a construction finding because the EMC gland seismic qualifications did not impact the seismic qualifications and acceptance criteria of ITAAC related 1E panels in which the glands were installed. The finding was of very low safety significance (Green) because the licensee subsequently revised the design documents to include seismic evaluation and testing results that determined the EMC glands would not affect seismic Category I SSCs during a seismic event. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Change Management in the area of Human Performance. The proximate cause of the PD was attributed to the licensee's failure to implement a process where managers maintain a clear focus on nuclear safety when implementing the change management process to ensure significant unintended consequences are avoided.

**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)

**Identified By:** NRC

**Identification Date:** 12/31/2017

**Significance:** Green

**Item Type:** ITAAC Finding

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50.55a(b), for the licensee's failure to demonstrate compliance with American Society of Mechanical Engineers (ASME) Code Section III, 1998 Edition with Addenda 1999 through 2000, Section NB-3222.2, "Primary Plus Secondary Stress Intensity." The inspectors identified that the licensee failed to ensure that the maximum range of stress intensities for the passive residual removal heat exchanger (PRHR HX) tube sheet and the core makeup tank (CMT) inlet nozzle were within ASME Code allowable limits for Service Level A/B conditions which was a performance deficiency. The licensee entered this finding into their corrective action program (CAP) as Condition Report (CR) 10402072, CR 10402069, CR 10454090, Corrective Action Prevention and Learnings (CAPAL) 100489810, and CAPAL 100489811 and took corrective actions to perform additional analyses after removing calculation conservatism to reevaluate the stress cut locations in question in order to show ASME Code compliance.

The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of components indeterminate, and required substantive corrective action. The inspectors determined this finding was associated with the Design/Engineering Cornerstone. Using IMC 2519, Appendix A, "AP1000 Construction Significance Determination Process," the inspectors determined that the finding was associated with a system or structure; it was associated with the Passive Core Cooling System (PXS) system which is assigned to the high risk importance column of the AP1000 Construction Significance Determination Matrix, and 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. Therefore, this finding was of very low safety significance (Green). The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Conservative Bias, H.14, in the area of Human Performance, in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." (1A11, 1A38)

**Identified By:** NRC

**Identification Date:** 06/30/2017

**Significance:** Green

**Item Type:** ITAAC Finding

**Failure to perform thermal stress analysis in the ASME design report for the shear cap and valve body of the 14-inch fourth-stage automatic depressurization system (ADS) squib valves, RCS-**

## **PL- V004A/B/C/D.**

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, "Design Control" for the licensee's failure through their contractor Westinghouse Electric Company (WEC) to perform thermal stress analysis in the ASME design report for the shear cap and valve body of the 14-inch fourth-stage automatic depressurization system (ADS) squib valves, RCS-PL-V004A/B/C/D. The licensee entered this finding into their corrective action program as Condition Reports (CR) 10379762 and 10389193 and WEC Corrective Action, Prevention and Learning (CAPAL) 100478099 and 100481984. The licensee performed immediate corrective actions to demonstrate with reasonable assurance through design analysis that the component would have been able to meet its design function. Additional long-term corrective actions include performance of additional analysis and revisions to the ASME design report and supporting documentation.

The inspectors determined this finding was associated with the Design/Engineering Cornerstone. The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of component indeterminate, and required substantive corrective action. The inspectors also determined that the finding was more than minor because it represented an ITAAC finding that was material to the acceptance criteria of VEGP Unit 3 and 4 ITAAC 13 (2.1.02.02a), and if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of this ITAAC was met. The inspectors evaluated the finding in accordance with IMC 2519, Appendix A, "AP1000 Construction Significance Determination Process," and determined the finding was of very low safety significance (Green) because it was associated with the RCS system which is assigned to the high risk importance column of the AP1000 Construction Significance Determination Matrix, and 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 Documentation, in the area of Human Performance, in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." Specifically, the licensee failed to maintain complete, accurate, and up-to-date design documentation for the 14-inch ADS squib valves [H.7]. (Section 1A01)

**Identified By:** NRC

**Identification Date:** 03/31/2016

**Significance:** Green

**Item Type:** ITAAC Finding

## **Failure to Perform AISC N690-94 Required Weld Nondestructive Examination**

Green. The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components" for Southern Nuclear Company's (SNC) failure through their contractor Westinghouse Electric Company (WEC) to adequately review and accept nonconforming items in accordance with documented procedures. The licensee entered this finding into their corrective action program as condition reports (CR) 10180672 and 10181738.

The finding was associated with the Design / Engineering Cornerstone. The finding was considered more than minor because the performance deficiency represented a substantive failure to adequately implement a quality assurance process that rendered the quality of a structure, system, or component (SSC) indeterminate. The inspectors evaluated the finding in accordance with IMC 2519, "Construction Significance Determination Process," and determined the finding was of very low safety significance because the finding is associated with a portion of a structure (auxiliary building) assigned to the intermediate risk column of the AP1000 construction significance determination matrix and would not reasonably be expected to impact the design function of the auxiliary building. The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VEGP Units 3 and 4 ITAAC 763, in that, if left uncorrected, the licensee may not be able to demonstrate that the acceptance criteria of these ITAAC were met. The acceptance criteria of these ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions.

The inspectors determined that the failure to adequately review and accept nonconforming items in accordance with documented procedures may have resulted in a deviation from the approved design that would not have been reconciled by the licensee. The inspectors reviewed the finding for a possible cross-cutting aspect in accordance with IMC 0613 Appendix F, "Construction Cross-Cutting Areas and Aspects," and determined the finding has a cross-cutting aspect in the Human Performance area because the licensee's contractor, WEC, failed to use decision making-practices that emphasized prudent choices over those that were simply allowable. [H.14].

**Identified By:** NRC

**Identification Date:** 06/30/2015

**Significance:** Green

**Item Type:** ITAAC Finding

### **Weld Allowable Stress Calculation Not in Compliance with Current Licensing Basis**

Green. The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of Title 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion III, "Design Control." Southern Nuclear Operating Company (SNC), failed through their contractor Westinghouse Electric Corporation (WEC), to correctly translate design basis into specifications, drawings, procedures, and instructions to correctly translate the design basis for welded structural connections into specifications, drawings, procedures, and instructions. The licensee entered this finding in their corrective action program as condition report (CR) 10060139, Corrective Action, Prevention and Learnings (CAPAL) 100224197, and corrective action report (CAR) 2015-1597.

The inspectors determined the performance deficiency was more than minor because it represented a substantive non-conservative error in a design document that defines the technical requirements for structural welds that are important to safety. The inspectors evaluated the finding using the construction significance determination process and determined the finding was of very low safety significance (Green) because the licensee was able to demonstrate with reasonable assurance that the design function of the affected components would not be impaired by the deficiency. The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Units 3 and 4 ITAACs 760, 761, 762, and 763. The acceptance criteria of these ITAAC require that reconciliation reports, concluding the "as-built" construction conforms to the approved design, are completed for the areas associated with each ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC. The finding had a cross-cutting aspect in the area Human Performance (Conservative Bias) because the licensee's contractor, WEC, failed to use decision making-practices that emphasized prudent choices over those that were simply allowable [H.14].

**Identified By:** NRC

**Identification Date:** 09/30/2014

**Significance:** Green

**Item Type:** ITAAC Finding

### **Failure to Correctly Translate Shear Reinforcement Design Requirements into Design Drawings**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control" for the licensee's failure to correctly translate design basis requirements into specifications, drawings, procedures, and instructions. The licensee entered the issue into their corrective action program as condition report 877796, and took immediate actions to revise the drawings and related design calculation to restore compliance with the American Concrete Institute (ACI) 349-01 Code prior to the concrete placement.

The finding was associated with the Design/Engineering cornerstone. The inspectors determined the performance deficiency was more than minor because it represented a substantive non-conservative error in a design document that defines the technical requirements for the shear reinforcement in the innermost west and east steam generator compartments at elevation 80'-0". The inspectors evaluated the finding using the construction significance determination process and determined the 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 would not be impaired by the deficiency.

The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 3 ITAAC 760. The acceptance criteria of this ITAAC requires that a reconciliation report, concluding the “as-built” construction conforms to the approved design, is completed for the areas associated with the ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC, because the design drawings contained deviations, which did not meet ACI 349-01, which is a Tier 2\* licensing commitment for Seismic Category I structures. This finding has a cross-cutting aspect in the area of Human Performance, Documentation, because the licensee failed to ensure that procedures, such as construction drawings and work packages, were accurate and adequate to assure construction quality. [H.7]

**Identified By:** NRC

**Identification Date:** 03/31/2014

**Significance:** Green

**Item Type:** ITAAC Finding

### **Inadequate Anchorage of Shear Stirrups in Precast Elements of Reinforced Concrete Slabs**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion III, “Design Control” for SNC’s failure, through their contractor Westinghouse, to correctly translate regulatory requirements into specifications, drawings, procedures, and instructions. During an inspection of precast concrete panels being fabricated for use as elements of the reinforced concrete slabs in the elevated floors of the Unit 3 auxiliary building, the inspectors observed that the design did not conform to the requirements of ACI 349-01, a Tier 2\* licensing commitment for Seismic Category I structures. Specifically, longitudinal bars were missing from some of the bends in the U-stirrups that had been installed for resistance and transfer of vertical and horizontal shear forces, respectively. The presence of a longitudinal bar in the bends of the stirrups is required by Section 12.13.3 of ACI 349-01 to provide adequate anchorage of the stirrups.

The inspectors determined the performance deficiency was more than minor because it represented a substantive non-conservative error in a design document that defines the technical requirements for the reinforced concrete slabs in the auxiliary building. The inspectors evaluated the finding using the construction significance determination process and determined the finding was of very low safety significance (Green) because installation of the precast panels had not begun. The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 3 ITAAC 763. The acceptance criteria of this ITAAC requires that a reconciliation report, concluding the “as-built” construction conforms to the approved design, is completed for the areas associated with the ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC. The inspectors screened the finding for a possible construction cross-cutting aspect (CCA) and determined that it was not related to any of the CCAs discussed in IMC 0613.

**Identified By:** NRC

**Identification Date:** 09/30/2012

**Significance:** Green

**Item Type:** ITAAC Finding

### **ITAAC Finding for Failure to Translate CA01 and CA20 Design Requirements Into Specifications and Drawings**

An ITAAC finding of very low safety significance (Green) and a violation (VIO) of Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Appendix B, Criterion III, “Design Control,” were identified by the inspectors on and before October 2, 2012, regarding the licensee’s failure to assure that regulatory requirements and the design basis for safety-related systems, structures, and components were correctly translated into specifications and instructions associated with the structural submodules for portions of the auxiliary building and containment internal structures. The inspectors identified multiple examples of the licensee’s failure to assure that applicable regulatory requirements and the design basis for safety-related systems, structures, and components were correctly translated into specifications, drawings, and



instructions.

The inspectors determined this issue was more than minor because, if left uncorrected, the failure to assure that regulatory requirements and the design basis for the auxiliary building and containment internal structures were correctly translated into specifications and instructions could adversely affect the closure of an ITAAC. The finding was associated with the Design/Engineering Cornerstone. The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 3 ITAACs 763 and 760. Specifically, the acceptance criteria for ITAAC 763 and ITAAC 760 require that a report exists and concludes that the as-built structures in the radiologically controlled area of the auxiliary building, and the as-built containment internal structures, respectively, conform to the approved design. However, the as-built Seismic Category I Structural Submodules CA20-04, CA20-07A, CA20-08A, CA20-29 and CA01-24 did not conform to the approved design. The inspectors evaluated the finding using the construction SDP and determined that the finding was of very low safety significance because it did not impair the design function of the nuclear island auxiliary building or containment internal structures and was assigned to Row 1 of the risk importance table. The inspectors screened the finding for a possible construction safety focus component (CSFC) aspect in accordance with Appendix F, "Construction Safety Focus Components and Aspects," of IMC 0613P, "Power Reactor Construction Inspection Reports - Pilot." The inspectors determined that this finding was not related to any of the CSFC aspects discussed in IMC 0613P.

**Identified By:** NRC

**Identification Date:** 05/25/2012

**Significance:** Green

**Item Type:** ITAAC Finding

### **Inadequate Design Control of Software Development**

An NRC identified ITAAC finding of very low safety significance (Green) which involved a violation (VIO) of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," was identified by the inspectors on May 25, 2012, regarding the licensee's failure to assure that applicable regulatory requirements and the design basis, as defined in § 50.2 and specified in the license application, for the Protection and Safety Monitoring System (PMS) were correctly translated into specifications, drawings, procedures, and instructions. Specifically:

- The verification and validation (V&V) effort did not adequately perform the minimum V&V tasks including software requirements evaluation, interface analysis, criticality analysis, hazard analysis, and risk analysis;
- The V&V of the System Definition (requirements) phase activities was not performed independently;
- Reusable software element documents (RSED) did not follow the prescribed life cycle activities;
- A software hazard analysis of the software requirements specification (SRS) was not performed;
- The SRS was ambiguous, incomplete and was not ranked for importance.

At the time of the exit meeting for this report, the planned corrective actions for these issues were being evaluated by the licensee. These issues were entered into a corrective action program as Condition Report 438475.

The inspectors determined this issue is more than minor because, if left uncorrected, it represents a failure to implement an adequate process and quality oversight function that could render the quality of the construction activity unacceptable or indeterminate, and it could adversely affect the closing of an ITAAC.

The finding affected the objective of the Design/Engineering Cornerstone, which is to ensure that licensee's processes are adequately developed and implemented for design control. The finding was determined to be an ITAAC Finding because examples of this finding are material to the acceptance criteria of ITAAC 2.5.2.12, in that; software requirements were not ranked for importance and the V&V team was not independent of the design team. The inspectors evaluated the finding using the construction SDP and determined that, because there were no issues identified that would reasonably be expected to impair the design function of the PMS, the finding screened as Green. The finding was cross-cutting in the area of baseline inspection, work practices, because the licensee failed to ensure supervisory and management oversight of work activities associated with the PMS software development such that the construction quality was supported. [A.4(c)].

**Identified By:** NRC

**Identification Date:** 05/07/2012

**Significance:** Green

**Item Type:** ITAAC Finding

#### **Failure to Assure Design Services were Accomplished with the Appropriate Design Control Measures**

An ITAAC finding of very low safety significance (green) and a VIO of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," were identified by the inspectors on May 7, 2012, regarding the licensee's failure to assure that regulatory requirements and the design basis for systems, structures, and components were correctly translated into specifications and instructions associated with the nuclear island (NI) basemat reinforcement. Specifically, the anchorage of the reinforcement steel inappropriately relied on the excess reinforcement provision of ACI 349-01, Section 12.2.5, to reduce the development length of the bars, and the anchorage of the negative moment reinforcement steel was not developed at the face of the support in a manner consistent with ACI 349-01, Section 13.3.4. At the time of the exit meeting for this report, the planned corrective actions for this issue were being evaluated by the licensee. This issue was entered in to the corrective action program as Condition Report (CR) 442272.

The inspectors determined that this issue was more than minor because, if left uncorrected, the failure to assure that regulatory requirements and the design basis for the NI basemat reinforcement were correctly translated into specifications and instructions could adversely affect the closure of an Inspection, Test, Analyses, and Acceptance Criteria (ITAAC). The finding is associated with the Design/Engineering Cornerstone. The finding was determined to be an ITAAC finding because it is material to the acceptance criteria of Unit 3 ITAACs 3.3.00.02a.i.b, 3.3.00.02a.i.c, and 3.3.00.02a.i.d in that the reinforcement design for NI basemat and the affected areas of the shield building, non-radiologically controlled areas of the auxiliary building, and the radiologically controlled areas of the auxiliary building deviated from the design basis without being reconciled by the licensee. The inspectors evaluated the finding using the construction SDP and determined that finding was of very low safety significance because it did not impair the design function of the nuclear island (NI) basemat, shield building, or auxiliary building and was assigned to Row 1 of the risk importance table. This finding was cross-cutting in the area of Baseline Inspection, Decision- Making, Systematic Process, because the licensee did not demonstrate that a systematic process, reflecting the potential to impact ITAAC closure, was followed to make design changes. [A.1(a)].

#### **Procurement/Fabrication**

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**Identified By:** NRC

**Identification Date:** 12/31/2019

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2019004, 05200026/2019004

**Item Number:** 05200025/2019004-02

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

#### **Non-Conservative Rounding of Conversion Factor Use**

The inspectors identified an ITAAC finding of very low safety significance with an associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to

install Unit 3 core makeup tank (CMT) A upper level sensing lines for instruments PXS 11A/C and 13 B/D in accordance with ITAAC 2.2.03.08c.xii and the approved design requirements. The licensee entered this finding into its corrective action program for evaluation and identification of appropriate corrective actions (CR50034981). Corrective actions for this issue included rework on the two-level sensing lines to correct the nonconforming conditions.

The 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 Analysis described in the ITAAC. The inspectors determined this finding 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 a performance deficiency of very low safety significance (Green) because if left uncorrected, the finding could reasonably be expected to impair the design function of only one train of a multi-train system. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Avoiding Complacency, in the area of Human Performance, in accordance with Appendix F of IMC 0613. Specifically, the licensee failed to properly implement appropriate error reduction tools, such as inadequate verification by personnel performing the measurements. [H.12] (Section 1A07)

**Identified By:** NRC

**Identification Date:** 06/30/2018

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports  
05200025/2018002, 05200026/2018002

**Item Number:** 05200025/2018002-01

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

### **Missing Weld Edge Preparation Surface Examination on Pressurizer Lower Head**

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of Title 10 of the Code of Federal Regulations (10 CFR) Part 50.55a(b), for the licensee's failure to demonstrate compliance with American Society of Mechanical Engineers (ASME) Code Section III, 1998 Edition with Addenda 1999 through 2000, Subarticle NB-5130, Examination of Weld Edge Preparation Surfaces. The inspectors identified that the licensee failed to document a magnetic particle (MT) or liquid penetrant (PT) examination on the full penetration weld edge preparation surface of the Unit 3 pressurizer lower head which was a performance deficiency. The licensee entered this finding into their corrective action program as condition report (CR) 10484251 and took corrective actions to provide reasonable assurance that a PT examination was performed by the vendor to show ASME Code compliance.

The finding was determined to be more than minor because the performance deficiency represented an irretrievable loss or inadequate documentation of a quality assurance record, and a record-keeping issue that could preclude the licensee from demonstrating the adequacy of quality or from properly evaluating safety-significant activities. The inspectors determined this finding was associated with the Procurement/Fabrication Cornerstone and was not associated with a security finding; 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. Using IMC 2519, Appendix A, AP1000 Construction Significance Determination Process, the inspectors determined that the finding was associated with a system or structure; it was associated with the Reactor Coolant System (RCS) which is assigned to the high risk importance column of the AP1000 Construction Significance Determination Matrix, and 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 (row 1 of the Construction Significance Determination Matrix). Therefore, this finding was of very low safety significance (Green). The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Documentation, H.7, in the area of Human Performance, in accordance with IMC 0613, Appendix F, Construction Cross-Cutting Areas and Aspects. (1A01)

**Identified By:** NRC

**Identification Date:** 06/30/2018



**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports  
05200025/2018002, 05200026/2018002

**Item Number:** 05200025/2018002-02

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

### **Failure to Meet Radiographic Film Requirements on PRHR HX**

The NRC identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50.55a(b), for the licensee's failure to demonstrate compliance with ASME Code Section III, 1998 Edition with Addenda 1999 through 2000, Sub-article NB-5100, General Requirements for Examination. The inspectors identified that the licensee failed to ensure that radiographic films for the passive residual heat removal (PRHR) heat exchanger (HX) lower channel head to lower support plate weld (CW-006/2) met density limitations and image quality indicator (IQI) placement requirements which was a performance deficiency. The licensee entered this finding into their corrective action program as CR 10491047 and took corrective actions to perform additional radiographs in order to show ASME Code compliance.

The finding was determined to be more than minor because the performance deficiency represented an adverse condition that rendered the quality of a component indeterminate, and required substantive corrective action. The inspectors determined this finding was associated with the Procurement/Fabrication Cornerstone and was not associated with a security finding; 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. Using IMC 2519, Appendix A, AP1000 Construction Significance Determination Process, the inspectors determined that the finding was associated with a system or structure; it was associated with the passive core cooling system (PXS) which is assigned to the intermediate risk importance column of the AP1000 Construction Significance Determination Matrix, and 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 (row 1 of the Construction Significance Determination Matrix). Therefore, this finding was of very low safety significance (Green). The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Evaluation, P.2, in the area of Problem Identification and Resolution, in accordance with IMC 0613, Appendix F, Construction Cross-Cutting Areas and Aspects. (1A15)

**Identified By:** NRC

**Identification Date:** 03/31/2015

**Significance:** Green

**Item Type:** ITAAC Finding

### **Failure to Identify Nonconforming Overlay Plates**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," for the licensee's failure, through their contractor Chicago Bridge and Iron (CB&I), to perform adequate inspections of safety-related overlay plates at supplier facilities and failure to perform adequate examinations of overlay plates upon delivery, to assure the plates conformed to the procurement documents. The licensee entered this issue in their corrective action program as condition report number 899313.

The finding was associated with the Procurement / Fabrication Cornerstone. The inspectors determined the performance deficiency was more than minor because it was associated with the process and material control attributes of the Procurement / Fabrication Cornerstone and adversely affected the cornerstone objective of ensuring that the licensee's programs and processes were adequately developed and implemented for procurement and fabrication activities. The finding was determined to represent an ITAAC finding because it was material to the acceptance criteria of Vogtle Unit 3 ITAAC 763, in that, if left uncorrected, the licensee could not show that the acceptance criteria of this ITAAC was met. The inspectors determined that the failure of these overlay plates to meet AWS D1.1:2000 welding requirements represented a nonconformance with the approved structural design, which if left

uncorrected, represented a deviation from the design that would not have been reconciled by the licensee. The inspectors determined that the finding was of very low safety significance (Green) because the licensee demonstrated, with reasonable assurance, that the design function of the applicable structure or system would not have been impaired by the deficiency. This finding had a cross-cutting aspect in the area of Problem Identification and Resolution (Resolution) because the licensee failed to take effective corrective actions to address issues in a timely manner commensurate with their safety significance.

**Identified By:** NRC

**Identification Date:** 09/30/2013

**Significance:** Green

**Item Type:** ITAAC Finding

### **Inadequate Source and Receipt Inspections of Safety Related Embed Plates**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," for SNC's failure, through their contractor Chicago Bridge and Iron (CB&I), to perform adequate inspections of safety-related embed plates at supplier facilities and failure to perform adequate examinations of these embed plates upon delivery, to assure the plates conformed to the procurement documents. The violation was entered into the licensee's corrective action program as condition report (CR) 695726 and corrective action record (CAR) 207908, to ensure actions were taken to correct the condition.

The performance deficiency had greater than minor safety significance because it was associated with the process and material control attributes of the Procurement / Fabrication Cornerstone and adversely affected the cornerstone objective of ensuring that the licensee's programs and processes were adequately developed and implemented for procurement and fabrication activities. The finding represented an ITAAC finding because it was material to the acceptance criteria of Vogtle Unit 3 ITAACs 762 and 763, in that, if left uncorrected, the licensee could not show that the acceptance criteria of these ITAACs were met. The finding was evaluated under the construction significance determination process as outlined in IMC 2519, Appendix A. The finding was of very low safety significance (Green) because the nonconforming embed plates had not been installed in the nuclear island, and the licensee was able to demonstrate in their Part 21 evaluation, that, if left uncorrected, the affected portions of the structure would have been able to meet their design functions. The finding had a cross-cutting aspect in the area of baseline inspection, corrective action program A.5(c).

**Identified By:** NRC

**Identification Date:** 09/30/2012

**Significance:** Green

**Item Type:** ITAAC Finding

### **Failure to Assure Safety Related Materials Conformed to the Procurement Documents**

An ITAAC finding of very low safety significance (Green) and three examples of a VIO of 10 CFR Part 50, Appendix B, Criterion VII, "Control of Purchased Material, Equipment, and Services," were identified by the inspectors for SNC's failure, through its contractor Stone and Webster (Shaw), to ensure that purchased material conformed to procurement documents. Specifically, the inspectors identified that (1) submodule CA20-04, (2) auxiliary building embed plates, and (3) nuclear island reinforcing steel were accepted but did not conform to the approved design. This issue was entered into the corrective action program as CR 531786.

The finding was determined to be more than minor because the issue, if left uncorrected, represented a failure to establish and implement an adequate program and quality oversight function that could render the quality of construction activities unacceptable or indeterminate. Additionally, this issue was considered to be more than minor because, if left uncorrected, it could adversely affect the closure of an ITAAC. The finding was associated with the Procurement/Fabrication Cornerstone. This finding was determined to be an ITAAC finding because examples 1 and 3 were material to the acceptance criteria of Vogtle Unit 3 ITAACs 763 and 762. Specifically, the acceptance criteria for these ITAAC require that a report exists and concludes that the as-built structures in the non-radiologically controlled and

radiologically controlled areas of the auxiliary building, respectively, conform to the approved design. However, as-built submodule CA20-04 and nuclear island reinforcing steel did not conform to the approved design. The inspectors evaluated the finding using the construction SDP and determined this finding was of very low safety significance because it did not impair the design function of the nuclear island basemat or auxiliary building and was assigned to Row 1 of the risk importance table. The inspectors determined that this finding had a cross-cutting aspect in the area of Baseline Inspection, Construction Experience, because the licensee and Shaw did not adequately implement and institutionalize construction experience through changes to construction processes, procedures, materials, and training programs [A.6(b)].

## Construction/Installation

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**Identified By:** NRC

**Identification Date:** 06/21/2022

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2022003, 05200026/2022003 and Second Quarter Assessment Follow-up Letter

**Item Number:** 05200025/2022003-02

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

### **Failure to Maintain Cable Separation Requirements for Valves PXS-PL-V130A, SGS-PL-V036A, VWS-PL-V086, and CVS-PL-V090 for ITAAC 3.3.00.07d.ii.b (801)**

NRC inspectors identified an ITAAC finding of very low safety significance with associated NCV of Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to maintain the 1-inch physical separation required for safety-related (SR) and nonsafety-related (NSR) cables for valves passive core cooling system (PXS) PXS-PL-V130A, steam generator system (SGS) SGS-PL-V036A, central chilled water system (VWS) VWS-PL-V086, and chemical and volume control system (CVS) CVS-PL-V090 as stated in electrical specification APP-G1-V8-001, "AP1000 Electrical Installation Specification," Revision 11. The failure to maintain the 1-inch physical separation required for SR and NSR cables, is a performance deficiency (PD). The licensee entered this issue into the corrective action program (CAP) as condition reports (CRs) 50144333, CR 50144475, CR 50145108, and CR 50145447. Immediate corrective actions, for this issue, included rework to restore compliance with the separation requirements.

The PD was of more than minor safety significance, and thus a finding, because it represented an adverse condition that rendered the quality of the safety function associated with the Class 1E raceway structure unacceptable and required substantive corrective action. Specifically, it impacted the structure's design function to maintain physical separation between Class 1E divisions and between Class 1E divisions and non-Class 1E cables. This violation was determined to be an ITAAC finding because it impacted ITAAC 3.3.00.07d.ii.b (801) which states physical separation is maintained between Class 1E divisions and between Class 1E divisions and non-Class 1E cables inside non-radiologically controlled areas in the auxiliary building. The inspectors determined this finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Field Presence, in the area of Human Performance in accordance with IMC 0613, Appendix F, Construction "Cross-Cutting Areas and Aspects," dated November 4, 2020. The proximate cause of the PD was attributed to failure to ensure leaders were in the work areas observing, coaching, and reinforcing standards and expectations during field work.

**Identified By:** NRC

**Identification Date:** 01/18/2022

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2022001, 05200026/2022001

**Item Number:** 05200025/2022001-01

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

### **Failure to Review and Control Process and Quality Standard Deviations on the IDS Battery Racks**

The inspectors identified an ITAAC 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." The licensee's failure to assure the Unit 3 Class 1E dc and uninterruptible power supply system (IDS) 24-hour, 72-hour, and spare safety-related battery racks were installed in accordance with ITAAC 2.6.03.02.i (597) and the approved design was a performance deficiency (PD). The licensee entered this finding into its corrective action program (CAP) as condition report (CR) 50130395 for evaluation and identification of corrective actions. As immediate corrective actions, the licensee restored the as-built configuration of the Unit 3 IDS battery racks to match the seismically qualified condition specified by the design.

This PD 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 analysis described in the ITAAC. Specifically, with the nonconforming conditions the IDS batteries did not meet the acceptance criteria. The finding was of very low (Green) safety significance because the licensee was able to demonstrate with reasonable assurance through additional analyses that the design function of the Class 1E IDS batteries would not be impaired by the PD, and the nonconforming conditions were corrected such that the installation is seismically bounded by the tested or analyzed conditions. The finding was indicative of current licensee performance and was associated with the cross-cutting area of Human Performance and the cross-cutting aspect of Procedure Adherence. The proximate cause of the PD was attributed to a failure to review procedures and instructions before work was performed to validate they were appropriate for the scope of work and required changes were completed before implementation.

**Identified By:** NRC

**Identification Date:** 10/20/2021

**Significance:** Green

**Item Type:** Construction Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2021007, 05200026/2021007

**Item Number:** 05200025/2021007-01

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

#### **Failure to Correct Cable Separation issues in panel SV3-IDSC-DT-1**

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," was identified for the licensee's failure to identify and correct conditions adverse to quality pertaining to Institute of Electrical and Electronic Engineers 384-1981 cable separation issues inside Class 1E dc and uninterruptible power supply system (IDS) regulating transformer panel SV3-IDSC-DT-1. The licensee failed to maintain the 1-inch separation required for safety and nonsafety-related cables within IDS 'C' regulating transformer panel SV3-IDSC-DT-1 in accordance with electrical installation specification APP-G1-V8-001, Appendix B2, "Separation and Segregation Spacing Requirements." Two conditions were identified. The licensee entered this finding into its corrective action program as condition report 50117479. Corrective actions for this issue included rework to restore compliance with the separation requirements and the initiation of a causal analysis.

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 the safety function associated with IDS unacceptable or indeterminate and required substantive corrective action. The inspectors determined this finding was a performance deficiency of very low safety significance because if left uncorrected it could reasonably be expected to impair the design function of IDS for only one train of a multi-train system. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Work Management, in the area of Human Performance. The licensee failed to implement a process of planning, controlling, and executing work activities such that nuclear safety was the overriding priority. Specifically, the licensee failed to have a process in place for quality control to verify all cable separation nonconformances were addressed inside the panel.

**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.

**Identified By:** NRC

**Identification Date:** 12/31/2019

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2019004, 05200026/2019004

**Item Number:** 05200025/2019004-01

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

#### **Failure to Meet ITAAC Requirement for Installation**

The inspectors identified an ITAAC finding of very low safety significance (Green) with an associated NCV of 10 Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion IV, "Procurement Document Control," for the licensee's failure to specify an accurate conversion factor for calculating the dry film density of coatings used in containment. Specifically, the licensee used a conversion factor that was rounded in a non-conservative manner, which resulted in the dry film density not meeting the ITAAC. The licensee entered this issue into its corrective action program as CR 50034350 and CR 50034649. The licensee performed immediate corrective actions to demonstrate with reasonable assurance the non-conforming coatings with a dry film density of 99.83 pounds per cubic feet (lbs/ft<sup>3</sup>) would not transport to the containment sump screens and the design function of the PXS would not be impaired.

The performance deficiency was of more than minor safety significance, and thus a finding, because it was material to the acceptance criteria of an ITAAC. The inspectors determined 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. 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 Conservative Bias, in the area of Human Performance. Specifically, the licensee failed to use decision making practices that emphasized prudent choices over those that are simply allowable when rounding off conversion factors in specifications, and when receiving coatings that were within less than 0.25% of the acceptance criterion. [H.14] (Section 1A06)

**Identified By:** NRC

**Identification Date:** 12/31/2016

**Significance:** Green

**Item Type:** ITAAC Finding

#### **Failure to adequately implement measures to assure that special processes, including welding, are accomplished in accordance with applicable codes**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion IX, "Control of Special Processes" for Southern Nuclear Operating Company's (SNC) failure through their contractor Westinghouse Electric Company (WEC) to adequately implement measures to assure that special processes, including welding, are accomplished in accordance with applicable codes. The licensee entered this finding into their corrective action program as SNC CR 10320757 and WEC CAPAL System Issue ID 100436639.

The inspectors concluded the finding was associated with the Construction/Installation Cornerstone. The

finding was considered more-than-minor because the performance deficiency represented a substantive failure to adequately implement a quality assurance (QA) measure that rendered the quality of an SSC indeterminate. The finding is also similar to IMC 0613, "Power Reactor Construction Inspection Report", Appendix E, example 6 which indicates, in part, that a WPS qualification issue is not minor if it is related to a change in an essential variable, and the WPS was required to be re-qualified. The inspectors evaluated the finding in accordance with IMC 2519, "Construction Significance Determination Process," and determined the finding was of very low safety significance (Green) because the finding affected a portion of a structure in the intermediate column of the risk importance table. The inspectors determined that the finding represented an ITAAC finding because it was material to the acceptance criteria of VEGP Unit 3 ITAAC 761, in that, if left uncorrected, the licensee may not have been able to demonstrate that the acceptance criteria of this ITAAC was met. The acceptance criteria of this ITAAC require that all deviations between the as-built structures and the approved designs be reconciled to verify that the as-built structures will withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure to adequately implement measures to assure that special processes, including welding, are accomplished in accordance with applicable codes may have resulted in a deviation from the approved design that would not have been reconciled by the licensee. The inspectors reviewed the finding for a possible cross-cutting aspect in accordance with IMC 0613 Appendix F, "Construction Cross-Cutting Areas and Aspects," and determined the finding has a cross-cutting aspect in the Human Performance area because the licensee did not recognize that the WPS was not qualified in accordance with AWS D1.4-98. [H.9]. (Section 1A34)

**Identified By:** NRC

**Identification Date:** 06/30/2015

**Significance:** Green

**Item Type:** ITAAC Finding

### **Spent Fuel Pool Wall Repair Without an Approved Procedure**

Green. The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure, through their contractor Chicago Bridge and Iron (CB&I), to perform repair activities of the VEGP Unit 3 Spent Fuel Pool Wall according to an approved engineering disposition or procedure. The licensee entered this finding in their corrective action program as condition report (CR) 10062982, corrective action report (CAR) 2015-1585, and Nonconformance and Disposition report (N&D) SV3-CA20-GNR-000577. The inspectors determined the performance deficiency was more than minor since it represented a substantive failure to establish an adequate procedure for the mechanical straightening of duplex stainless steel materials. The finding was determined to represent an ITAAC finding because it was material to the acceptance criteria of VEGP Unit 3 ITAAC 763, in that, if left uncorrected, the licensee could not show that the acceptance criteria of this ITAAC was met. The inspectors determined that the failure to repair the spent fuel pool wall according to an approved procedure represented a deviation from the design that would not have been properly reconciled by the licensee.

The inspectors determined that the finding was of very low safety significance (Green) because the licensee developed an adequate repair procedure that would correct the out of tolerance condition, and through supplemental testing, verify that the mechanical properties of the duplex stainless steel material were not adversely affected (i.e., the design function of the applicable structure or system would not have been impaired by the deficiency). This finding had a cross-cutting aspect in the area Human Performance (Resources) because the licensee failed to ensure that procedures were available and adequate to support nuclear safety. Specifically, the licensee had established the requirement that all fabrication processes for duplex stainless steel material are in accordance with appropriate procedures, but failed to develop and obtain engineering approval for mechanical straightening activities (a fabrication process) to ensure that the integrity of the spent fuel pool wall would be maintained [H.1].

**Identified By:** NRC

**Identification Date:** 03/31/2015

**Significance:** Green

**Item Type:** Construction Finding



## **Failure to Perform Routine Quality Control Inspections**

The inspectors identified a construction finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to accomplish safety-related, required quality control inspections in accordance with CB&I QC inspection plan FS561-004. The licensee entered the issue in their corrective action program as condition report number 10039935.

The finding was associated with the Construction/Installation Cornerstone. The inspectors determined the performance deficiency was more than minor because the issue represented a substantive failure to implement an adequate quality oversight function, in that these routine welding inspections were not performed by the licensee's contractor for over six months. The finding was determined to be a construction finding because it was not associated with a specific ITAAC. The inspectors determined that the finding was of very low safety significance (Green) because the finding could not be directly associated with a system or structure. This finding has a cross-cutting aspect in the area of Human Performance, Procedure Adherence because the licensee failed to ensure that individuals followed specific procedures [H.8].

**Identified By:** NRC

**Identification Date:** 12/31/2014

**Significance:** Green

**Item Type:** ITAAC Finding

## **Failure to Establish Qualified Welding Procedures In Accordance With American Welding Society (AWS) D1.1:2000**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion IX, "Special Processes," for the licensee's failure to assure that special processes, including welding, were controlled and accomplished using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements. The licensee entered the issue into their corrective action program under condition report numbers 898717, 10008446, and 10009103, and took immediate actions to revise three welding procedure specifications to meet American Welding Society (AWS) D1.1: 2000 and post-qualify them to justify a "use-as-is" disposition for the associated welds in CA01, CA05, and CA20.

The finding was associated with the Construction/Installation cornerstone. The inspectors determined the performance deficiency was more than minor because the issue was similar to the "not minor if" statement of example 6 in IMC 0613, "Power Reactor Construction Inspection Reports," Appendix E, in that the issue was related to a change in an essential variable, and the welding procedure specification (WPS) required re-qualification. The inspectors evaluated the finding using the construction significance determination process and determined the finding was of very low safety significance (Green) because the licensee was able to create additional procedure qualification records to post-qualify the WPSs and disposition the associated welds "use-as-is." The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 3 ITAACs 3.3.00.02a.i.a (760) and 3.3.00.02a.i.d (763). The acceptance criteria of these ITAACs require that a reconciliation report, concluding the as-built structure conforms to the approved design and will withstand the design basis loads without loss of structural integrity is completed for the areas associated with the ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee, as required by the ITAAC, because the welds were not welded with qualified welding procedures resulting in a deviation from AWS D1.1:2000 and a failure to meet Section Q1.17, "Welds," of American Institute of Steel Construction (AISC) N690:1994 requirements. This finding has a crosscutting aspect in the area of Human Performance - Resources because the licensee failed to ensure that procedures were adequate to assure construction quality. Specifically, the licensee failed to ensure that welding procedures were qualified in accordance with the Code. [H.1]

**Identified By:** NRC

**Identification Date:** 09/30/2014

**Significance:** Green

**Item Type:** ITAAC Finding

## **Failure to Install Structural Reinforcement in Accordance with ACI 349-01 Development Length Requirements**

The inspectors identified an ITAAC finding of very low safety significance (Green) and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to correctly install structural reinforcement in accordance with approved design drawings. The licensee entered this issue into their corrective action program as CR 877795, and removed the nonconforming reinforcement, revised the design drawings, and re-installed the reinforcement according to the revised design.

The finding was associated with the Construction/Installation Cornerstone. The inspectors determined the performance deficiency was more than minor because it represented an adverse condition that rendered the quality of a system, structure, or component unacceptable or indeterminate and required substantive corrective action. The inspectors evaluated the finding using the construction significance determination process and determined the 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 would not be impaired by the deficiency. The finding was determined to be an ITAAC finding because it was material to the acceptance criteria of Unit 3 ITAAC 760. The acceptance criteria of this ITAAC requires that a reconciliation report, concluding the "as-built" construction conforms to the approved design, is completed for the areas associated with the ITAAC. This finding is associated with deviations from design requirements that would not have been reconciled by the licensee as required by the ITAAC, because the as-built configuration contained deviations that did not meet ACI 349-01, which is a Tier 2\* licensing commitment for Seismic Category I structures. This finding has a cross-cutting aspect in the area of Human Performance, Field Presence, because the licensee failed to ensure that supervisory and management oversight of work activities, including contractors, was adequate and sufficient enough such that construction quality is supported and assured. [H.2]

**Identified By:** NRC

**Identification Date:** 05/07/2012

**Significance:** Green

**Item Type:** Technical Finding

## **Failures to Properly Classify Conditions Adverse to Quality**

The inspectors identified a Green technical finding and cited violation (NOV) of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, with five examples of the licensee's failure to adequately identify conditions adverse to quality (CAQ) due to inadequate evaluation and classification attributes. The licensee issued Condition Report (CR) 441941 to address this issue and to review the classification of the five identified examples and other corrective action documents for inappropriate thresholds.

This performance deficiency had greater than minor safety significance because it identified issues that, if left uncorrected represented failures to implement an adequate program that could render the quality of the construction activity unacceptable or indeterminate. The finding was a technical finding associated with the construction/installation cornerstone and was evaluated under the construction significance determination process as outlined in IMC 2519P Appendix A. This finding is of very low safety significance (Green) because none of the examples impaired the design function of a system or structure listed in the construction significance determination process risk importance table. This finding was directly related to the construction cross cutting area of baseline inspection and the Corrective Action Program component because the licensee's suppliers failed to adequately evaluate and classify conditions as adverse to quality due to an inappropriately high threshold for classifying conditions adverse to quality. [A.5(c)].

**Identified By:** NRC

**Identification Date:** 05/07/2012

**Significance:** Green

**Item Type:** Technical Finding

## **Failure to Correct a Condition Adverse to Quality**

The inspectors identified a Green technical finding and cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, for a failure to correct a CAQ. The licensee initiated CR 441949 to document this finding in their corrective action program, and to evaluate the extent of the condition and the areas where corrective action may be needed.

This performance deficiency had greater than minor safety significance because it involved the closure of three corrective action reports that all identified a potential adverse trend (a potential CAQ or significant CAQ) without an evaluation or justification for closure and without any corrective action. The finding was a technical finding associated with the construction/installation cornerstone and was evaluated under the construction significance determination process as outlined in IMC 2519P Appendix A. This finding is of very low safety significance (Green) because the identified condition did not impair the design function of a system or structure listed in the construction significance determination process risk importance table.

This finding was directly related to the construction cross cutting area of baseline inspection and the corrective action program component because the licensee's supplier failed to adequately evaluate and correct conditions adverse to quality. [A.5(c)].

### Inspection/Testing

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**Identified By:** Licensee

**Identification Date:** 04/26/2022

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2022003, 05200026/2022003 and Second Quarter Assessment Follow-up Letter

**Item Number:** 05200025/2022003-01

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

#### Failure to Provide Sufficient Information in the ICN for ITAAC 2.2.03.08c.xiii (198)

10 CFR 52.99I(1), "ITAAC Closure Notification," requires, in part, that the licensee notify the NRC that the prescribed inspections, tests, and analyses have been performed and that the prescribed acceptance criteria are met. The notification must contain sufficient information to demonstrate that the prescribed inspections, tests, and analyses have been performed and that the prescribed acceptance criteria are met. Contrary to the above, on April 19, 2022, the licensee failed to provide sufficient information in the ICN for ITAAC 2.2.03.08c.xiii (198) to demonstrate that the prescribed inspections, tests, and analyses had been performed and that the prescribed acceptance criteria were met. Specifically, the licensee determined sometime after April 26, 2022, that the prescribed acceptance criteria had not been met at the time the ICN was submitted due to the presence of a carbon steel spreader plate within the exclusion zone defined in the ITAAC.

The performance deficiency was considered more than minor and a finding because it represented a substantive failure to implement an adequate program, process, procedure, or quality oversight function. Specifically, the licensee failed to develop an ICN that accurately reflected ITAAC completion as supported by verifiable documents and traceable records. The inspectors also determined the finding could be associated with a specific ITAAC and was material to the acceptance criteria of an ITAAC since it was associated with non-conforming material located within the exclusion zone defined in ITAAC 2.2.03.08c.xiii (198). Based on the size of the spreader plate and connection between the plate and structural module, the inspectors determined that the design function of the affected SSC would not have been impaired by the deficiency. As a result, the inspectors concluded the finding was of very low safety significance (Green).

**Identified By:** NRC

**Identification Date:** 04/26/2022

**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 05200025/2022004, 05200026/2022004

**Item Number:** 05200025/2022004-01

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

#### Failure to Use Appropriate M&TE

NRC inspectors identified an ITAAC finding of very low safety significance and with an associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations, Part 50 (10 CFR 50), Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was identified for the licensee's failure to accomplish preoperational testing activities in accordance with procedure 3-FPS-OTS-17-001, "FPS Check Valve Exercise Test," Revision 0.1. The licensee entered this issue into the corrective action program (CAP) as CRs 50136335 and 50140727.

The performance deficiency was determined to be more than minor because it invalidated the performance of the test described in the ITAAC. The inspectors determined that the issue was an ITAAC finding because it was material to the acceptance criteria of ITAAC 2.2.01.11a.iv. Specifically, the licensee failed to utilize measuring and test equipment that was accurate and within the appropriate range necessary to verify that valve 3-FPS-V052 was closed and the ITAAC acceptance criteria was met when the licensee failed to use a 0-20 gpm calibrated flowmeter or equivalent as specified by the procedure. The finding was determined to be of very low safety significance (Green) due to the licensee demonstrating with reasonable assurance that the design function of the applicable system was not impaired by the deficiency. The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of challenge the unknown, in the area of human performance. Specifically, the licensee should have questioned signing the test as being performed satisfactorily when the measuring and test equipment was not appropriate.

**Identified By:** NRC

**Identification Date:** 06/01/2022

**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 05200025/2022004, 05200026/2022004

**Item Number:** 05200025/2022004-02

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

#### **Failure to Translate Design Requirements into Procedure 3-IDS-ITPP-501**

NRC inspectors identified a construction finding of very low safety significance and a NCV of 10 CFR, Appendix B, Criterion III, "Design Control," for the licensee's failure to translate design requirements of the Class 1E DC and UPS system into preoperational testing procedure 3-IDS-ITPP-501, "Class 1E DC and UPS Preoperational Test," Rev. 7. The licensee entered this issue into their corrective action program as CR 50141588.

The performance deficiency was determined to be more than minor and a finding because it affected the procedure quality attribute of the construction reactor safety cornerstone objective (Inspection/Testing). Specifically, the procedure would have allowed the safety-related battery chargers to operate outside of the 0.5% nominal voltage design requirements and exceed the maximum float output voltage of 270 VDC contained in design requirements. The finding was determined to be of very low safety significance (Green) because the finding did not impair a design function. The inspectors determined this finding was indicative of present licensee performance and was associated with the cross-cutting aspect of change management, in the area of human performance. The proximate cause was attributed to the failure to use a systematic process for evaluating and implementing change so that nuclear safety remains the overriding priority.

**Identified By:** NRC

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

**Significance:** Green

**Item Type:** ITAAC Finding

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports 05200025/2022001, 05200026/2022001

**Item Number:** 05200025/2022001-02

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

#### **Failure to Provide Sufficient Information in the ICN for ITAAC 761**

The inspectors identified an ITAAC finding of very low safety significance with an associated NCV of 10 CFR 52.99(c)(1), "ITAAC Closure Notification," for the licensee's failure to submit an ITAAC closure

notification (ICN) for Unit 3 ITAAC 3.3.00.02a.i.b (761) that contained sufficient information to demonstrate the prescribed inspections, tests, and analyses had been performed and the prescribed acceptance criteria were met and was a PD. As immediate corrective actions, the licensee withdrew the ICN. Subsequently, the licensee completed an engineering evaluation to address areas of the shield building concrete wall with thickness not meeting the requirements of the Vogtle 3 and 4 Updated Final Safety Analysis Report Table 3.3-1 and the as-built summary report for the shield building was updated to reflect the closure of the associated nonconformance and disposition report (N&D). The licensee entered this finding into its CAP for evaluation and identification of corrective actions as CR 50127060.

The PD was of more than minor safety significance and an ITAAC finding because it represented a substantive failure to implement a program, process, procedure, or quality oversight function that was material to the acceptance criteria of an ITAAC. Specifically, the licensee failed to develop an ICN that accurately reflected ITAAC completion as supported by verifiable documents and traceable records. As a result, the ICN would have been rejected by the NRC, if it had not been withdrawn voluntarily. The PD was material to the acceptance criteria of an ITAAC since it was associated with deviations that had not been repaired or reconciled to the approved design as required by the ITAAC. Based on review of N&D SV3-CC01-GNR-000686, the inspectors determined the design function of the affected structure would not have been impaired by the deficiency. As a result, the inspectors concluded the finding was of very low safety significance (Green). The inspectors determined the finding was indicative of present licensee performance and was associated with the cross-cutting aspect of Conservative Bias in the area of Human Performance. The proximate cause of the PD was attributed to the failure to use conservative decision making when submitting the ICN without having all the determination basis input documents finalized.

**Identified By:** NRC

**Identification Date:** 10/15/2021

**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 05200025/2021008, 05200026/2021008

**Item Number:** 05200025/2021008-01

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

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

NRC inspectors identified a Green ITAAC finding and associated non-cited violation (NCV) of Title 10 of the Code of Federal Regulations (10 CFR 50), Appendix B, Criterion V, "Instructions, Procedures, and Drawings," and with an associated Severity Level (SL) IV violation of 52.99(c)(1), "ITAAC Closure Notification," for the licensee's failure to coordinate and collaborate with the ITAAC Project Team (IPT) to identify and collect ITAAC determination basis input documents for ITAAC C.2.6.09.06 (Index Number 647) to demonstrate the vehicle barrier system could protect against the design basis threat vehicle bombs prior to submitting the ITAAC Closure Notification in accordance with procedure ND-RA-001-006, "Development and Approval of ITAAC Submittals (ICN, UIN, PCN)." The licensee entered this issue into its corrective action program (CAP) as condition report (CR) 50118429.

The performance deficiency was determined to be more than minor because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. The inspectors determined this finding was of very low safety significance (Green) because the vehicle barrier function was not required per 10 CFR 73.55 at that time. The inspectors determined the finding had a cross-cutting aspect of Conservative Bias in the area of Human Performance. Specifically, the licensee failed to use conservative decision making when submitting the ITAAC Closure Notice (ICN) without all the determination basis input documents finalized.

**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)

**Identified By:** NRC

**Identification Date:** 12/31/2016

**Significance:** Green

**Item Type:** ITAAC Finding

### **Failure to identify nonconforming welds**

The inspectors identified an ITAAC finding of very low safety significance (Green) and 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 identify nonconforming welds between seismic category I embed plates and structural modules inside the Vogtle Unit 3 and Unit 4 containment building. The licensee entered this finding into their corrective action program as Condition Reports (CRs) 10308295, 10308213, Corrective Action, Prevention, and Learning (CAPAL) 100436977, SV3-CA01-GNR-000958, SV3-CA02-GNR-000069, and SV4-CA05-GNR-000028.

The inspectors concluded this finding was associated with the Construction Reactor Safety - Inspection/Testing Cornerstone. The finding was considered more-than-minor because the issue was not isolated, similar to example 11 from Appendix E, "Examples of Minor Construction Issues," of IMC 0613, and represented a substantive failure to implement a quality oversight function. Specifically, the inspectors identified at least 33 nonconforming welds that were accepted by at least eight different quality control (QC) inspectors. The inspectors determined the finding was of very low safety significance (Green) because the finding was associated with Row 1 of the AP1000 Construction Significance Determination Matrix and the containment internal structures basemat was associated with the Intermediate Risk of the Systems/Structures Risk Importance Table for AP1000 Construction Significance Determination Process (SDP) Matrix X-Axis. Furthermore, the licensee was able to provide reasonable assurance that the structure would have been able to meet its design function. The inspectors determined the finding represented an ITAAC finding because it was material to the acceptance criteria of Vogtle Unit 3 and Unit 4 ITAAC 760, in that, if left uncorrected, the licensee could

not show that the acceptance criteria of these ITAAC were met. The acceptance criteria of Vogtle Unit 3 and Unit 4 ITAAC 760 requires that all deviations between the as-built containment internal structures and the approved design be reconciled (evaluated) such that the as-built structure would withstand the design basis loads without a loss of structural integrity or other safety-related functions. The inspectors determined that the failure of these welds to meet the American Welding Society (AWS) D1.1:2000 and AWS D1.6:1999 visual weld acceptance criteria represented a nonconformance with the approved structural design, which if left uncorrected, represented a deviation from the design that would not have been reconciled by the licensee. The inspectors screened the finding for a possible construction safety focus component (CSFC) aspect in accordance with Appendix F, "Construction Cross-Cutting Areas and Aspects," of IMC 0613, "Power Reactor Construction Inspection Reports." This finding has a cross-cutting aspect in the area of Safety Conscious Work Environment, avoid complacency, because the licensee did not assure that individuals adequately recognized and planned for the possibility of mistakes, latent issues, and inherent risk while expecting successful outcomes, in that multiple QC inspectors failed to consider that the ends of the Complete Joint Penetration (CJP) welds were within the scope of the inspection and even though the front sides of the welds were satisfactory the ends were nonconforming. [H.12]. (Section 1A32)

### Security Programs

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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.

**Identified By:** NRC

**Identification Date:** 03/31/2019

**Significance:** Severity Level IV

**Item Type:** Enforcement

**Report:** Vogtle Electric Generating Plant, Units 3 And 4 - NRC Integrated Inspection Reports  
05200025/2019001, 05200026/2019001

**Item Number:** 05200025/2019001-02

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

### Failure to Implement FFD Requirements

(Severity Level IV) The NRC identified a Severity Level IV NCV as a result of a NRC Office of Investigation (OI Report 2-2017-026) report for the licensee's failure to adequately implement the Fitness For Duty (FFD) testing program. Specifically, a FFD collector working at Vogtle Units 3 and 4 failed to ensure a donor emptied their pockets of all contents before collection of a sample. This failure allowed the donor to subvert a FFD test as required by 10 CFR 26.105(b). The licensee entered this finding into their corrective action program as CR 10366889 and subsequently re-tested all the individuals which were tested on May 8, 2017, by the FFD collector in question. All re-tested individuals passed. The FFD collector and the individual that subverted the FFD test were both removed from the site.

The finding was determined to be more than minor because the issue represented a failure of the licensee to appropriately implement the requirements of 10 CFR 26.105(b) and 10 CFR 26.85(a). Although this violation is willful, it was brought to the NRC's attention by the licensee, it involved isolated acts of low-level

individuals, and it was addressed by appropriate remedial actions. The security significance of this violation was determined to be a Severity Level IV, in part, because there were no adverse security impacts to the construction facility, and the individual was precluded from entering the Construction Controlled Area. Violations that involve willfulness or that affect the regulatory process are dispositioned using traditional enforcement and are not subject to IMC 2519, "Construction Significance Determination Process." Traditional enforcement violations are not assessed for cross-cutting aspects. (2P01)

## 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.

**Identified By:** NRC

**Identification Date:** 12/31/2017

**Significance:** Green

**Item Type:** Construction Finding

The inspectors identified a construction finding of very low safety significance (Green) for the licensee's failure to include accurate parameters in the ODCM for the calculation of offsite radiation doses due to routine gaseous effluent releases. Specifically, the ODCM contained long-term atmospheric dispersion factors that were less representative of current meteorological conditions and less conservative than those used in the UFSAR and ESP to demonstrate compliance with 10 CFR 20 and 10 CFR 50, Appendix I. The licensee documented this issue in CR 10437502 and has planned corrective actions including re-evaluation of the dispersion values contained in the ODCM by an independent subject matter expert.

The finding was of more than minor significance because it was associated with the Operational Readiness Cornerstone, Program Effectiveness Attribute of Process and Effluent Monitoring, and adversely affected the associated cornerstone objective to ensure licensees adequately develop and implement the operational programs required by a license condition or regulation. The finding has a cross-cutting aspect in the area of Human Performance, Conservative Bias [H.14], because the dispersion parameters incorporated into the ODCM were less conservative than the ones used in the approved licensing basis documents (3P02). The finding is not greater than Green because the finding is not an omission of the ODCM's critical attributes.

### **Violations Identified Prior to 2012**

**Significance:** Severity Level IV, August 18, 2011

**Identified by:** NRC

**Item Type:** Violation

### **Failure to Assure That Material Qualification Testing Associated With The Waterproof System Simulated Field Conditions.**

Based on the review of documentation and the observation of installation practices associated with site-specific (SS) ITAAC 3.8.5.1.1, the inspectors identified several examples where Southern Nuclear



Operating Company, Inc (SNC) failed to simulate field conditions during qualification testing of the waterproof system. This issue was determined to be an ITAAC- related construction finding and a severity level (SL) IV violation of Criterion III, "Design Control," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities."

Inspection Report #: 05200025/2011009

**Significance:** Severity Level IV, December 31, 2010

**Identified by:** NRC

**Item Type:** Violation

#### **Failure To Assure That Purchased Services Conform To Procurement Documents**

During the review of records and the observation of a sample of pre-construction activities that could affect the quality of the safety-related containment vessel (CV), the inspectors identified several examples where Southern Nuclear Operating Company, Inc (SNC) failed to assure that safety-related services purchased through their contractor and subcontractor conformed to the CV procurement documents. This issue was determined to be a construction finding and a Severity Level IV Violation of Criterion VII, "Control of Purchased Material, Equipment, and Services," of Appendix B, "Quality Assurance Program Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to Title 10 of the Code of Federal Regulations (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," for SNC's failure to assure that activities which could affect the quality of the safety-related containment vessel for Vogtle Unit 3, conformed to the procurement documents.

Inspection Report #: 05200011/2010-008; 05200025/2010-002; 05200026/2010-001

**Significance:** Severity Level IV, March 6, 2009

**Identified by:** NRC

**Item Type:** Violation

#### **10 CFR Part 21 and 10 CFR 50.55(e) Procedure and Implementation**

The NRC inspectors issued Violations 05200025/2009-201-01 and 05200026/2009-201-01 as a result of SNC ND failure to: (1) accurately reflect the correct definitions of 10 CFR Part 21, (2) address all the requirements of 10 CFR 50.55(e), and (3) use the correct terminology throughout the procedure.

Inspection Report #: 05200025/2009-201; 05200026/2009-201-01

**Significance:** Severity Level IV, March 6, 2009

**Identified by:** NRC

**Item Type:** Violation

#### **Corrective Action Program**

The NRC inspectors issued Violations 05200025/2009-201-02 and 05200026/2009-201-02 because SNC ND NMP-GM-002 does not include guidance to screen new condition reports for potential 10 CFR Part 21 applicability and does not provide a clear link to the SNC ND 10 CFR Part 21 Procedure (ND-ARL-017).

Inspection Report #: 05200025/2009-201; 05200026/2009-201-01