



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

**February 10, 2022**

Mr. Michael Yox  
Regulatory Affairs Director  
Southern Nuclear Operating Company  
7825 River Road, BIN 63031  
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 – NRC INITIAL TEST  
PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED INSPECTION  
REPORTS 05200025/2021008, 05200026/2021008

Dear Mr. Yox:

On December 31, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Vogtle Electric Generating Plant, Units 3 and 4. The enclosed inspection report documents the inspection results, which the inspectors discussed on January 18, 2022, with Mr. Glen Chick, Vogtle 3 & 4 Executive Vice President, and other licensee and contractor staff members.

The inspection examined a sample of construction activities conducted under your Combined License (COL) as it relates to safety and compliance with the Commission's rules and regulations, and with the conditions of these documents. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

NRC inspectors documented two findings of very low safety significance (Green) in this report. All of these findings involved a violation of NRC requirements. The NRC is treating these violations as non-cited violations (NCVs), consistent with Section 2.3.2.a of the Enforcement Policy.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), will be made available electronically for public inspection in the NRC Public Document Room, or from the Publicly Available Records (PARS) component of NRC's document system ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this letter, please contact us.

Sincerely,

*/RA/*

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

Docket Nos.: 5200025, 5200026

License Nos: NPF-91, NPF-92

Enclosure:

NRC Inspection Report (IR) 05200025/2021008, 05200026/2021008

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PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED INSPECTION  
REPORTS 05200025/2021008, 05200026/2021008 Dated February 10, 2022

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**Region II**

Docket Numbers: 5200025 and 5200026

License Numbers: NPF-91 and NPF-92

Report Numbers: 05200025/2021008 and 05200026/2021008

Enterprise Identifiers: I-2021-008-002 and I-2021-008-0003

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Units 3 & 4 Combined License

Location: Waynesboro, GA

Inspection Dates: October 1, 2021 through December 31, 2021

Inspectors: J. Eargle, Senior Resident Inspector – Testing, Division of Construction Oversight (DCO)  
S. Downey, Senior Reactor Inspector, Division of Reactor Safety (DRS)  
C. Even, Senior Construction Inspector, DCO  
B. Griman, Construction Inspector, DCO  
N. Hansing, Materials Engineer, Nuclear Reactor Regulation  
B. Kemker, Senior Resident Inspector, DCO  
T. Morrissey, Senior Resident Inspector, DCO  
J. Parent, Resident Inspector, DCO  
R. Patterson, Physical Security Inspector, DRS  
M. Riley, Senior Construction Inspector, DCO  
T. Scarbrough, Sr. Mechanical Engineer, Nuclear Reactor Regulation  
J. Walker, Emergency Preparedness Inspector, DRS

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

Enclosure

## SUMMARY OF FINDINGS

Inspection Report (IR) 05200025/2021008, 05200026/2021008; October 1–December 31, 2021; Vogtle Units 3 & 4 COL, initial test program and operational programs integrated inspection report.

This report covers a three-month period of announced inspections of Inspections, Tests, Analysis, and Inspection Criteria (ITAAC), preoperational test program, startup test program, and operational program inspections by resident and regional inspectors. Two findings were determined to be of very low safety significance (Green) by the inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, or Red), using Inspection Manual Chapter (IMC) 2519, "Construction Significance Determination Process." Cross-cutting aspects are determined using IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy and the temporary enforcement guidance outlined in enforcement guidance memorandum 11-006. The NRC's program for overseeing the safe construction of commercial nuclear power reactors is described in IMC 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

### A. NRC-Identified and Self Revealed Findings

**(Green)** 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. [H.14] (Section 1A04)

**(Green)** NRC inspectors identified a construction finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to accomplish activities associated with local leak rate testing of electrical penetration 4-IDSC-EY-P29Y in accordance with procedure 4-CNS-ITPP-502, "Containment Penetration Leak Rate (Type B) Preoperational Test," Version 1.0. Specifically, the licensee failed to wait for flowmeter readings to stabilize prior to recording the leak rate data and inappropriately declaring the test acceptance criteria met. The licensee entered this issue into its CAP as CR 50116481.

The performance deficiency was determined to be of more than minor safety significance and thus a finding because it rendered the quality of a structure, system, or component (SSC) unacceptable or indeterminate and required substantial corrective action. The inspectors determined the finding was associated with the containment and was of very low safety significance (Green) because the issue did not affect a design function. The inspectors determined the finding had a cross-cutting aspect of training, in the area of Human Performance. Specifically, the organization failed to ensure that test personnel were trained to perform tests in a consistent manner. [H.9] (Section 1P01)

## **B. Licensee-Identified Violations**

None

## REPORT DETAILS

### Summary of Plant Construction Status

During this report period for Unit 3, the licensee completed various activities to satisfy aspects of the Vogtle Unit 3 operational programs and initial test program. Post work verification was performed on safety-related and non-safety-related SSCs following the completion of repair and remediation of electrical systems. Class 1E direct current and uninterruptible power supply system (IDS), electrical distribution system, and standby onsite power system testing was performed to verify the functional capability of those systems to support electrical loads during normal and off-normal conditions.

During this report period for Unit 4, the licensee continued with integrated flush activities by flushing portions of chemical volume and control, spent fuel cooling, reactor coolant, residual heat removal, and passive core cooling systems. The licensee started open vessel testing activities which included discharging the passive core cooling system accumulators into the reactor vessel through the direct vessel injection line in order to determine actual flow resistance values between the accumulator and reactor vessel. Local leak rate tests were performed to verify the ability of the containment system to perform its safety-related function of providing containment integrity as a barrier against the release of fission products to the atmosphere. The licensee completed the secondary hydrostatic test to verify the integrity of the welds and mechanical connections as required by the ASME code.

### 1. CONSTRUCTION REACTOR SAFETY

**Cornerstones: Design/Engineering, Procurement/Fabrication,  
Construction/Installation, Inspection/Testing**

#### IMC 2503, Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) - Related Work Inspections

##### 1A01 (Unit 3) ITAAC Number 2.1.02.11a.i (46) / Family 10C

##### a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.11a.i (46). The inspectors used the following NRC inspection procedures (IPs)/sections to perform this inspection:

- 65001.C-02.02 - Construction Test Observation
- 65001.C-A4.10 - Instrumentation & Control Components & Systems

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following procedures used to partially verify if the controls in the main control room operate to cause a signal at the squib valves', 3-RCS-V004A and 4C, electrical leads which was capable of actuating the squib valves. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the Updated Final Safety Analysis Report (UFSAR) and the ITAAC.

- B-GEN-ITPCI-039-F126, RCS-PL-V004A-I1-F Component Test 2, Revision (Rev.) 1
- B-GEN-ITPCI-039-F124, RCS-PL-V004A-I1-A Component Test 2, Rev. 1
- B-GEN-ITPCI-039-F142, RCS-PL-V004C-I1-F Component Test 2, Rev. 1
- B-GEN-ITPCI-039-F140, RCS-PL-V004C-I1-A Component Test 2, Rev. 1

b. Findings

No findings were identified.

1A02 (Unit 3) ITAAC Number 2.1.02.11b.i (48) / Family 10C

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.11b.i (48). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.02 - Construction Test Observation
- 65001.C-A4.10 - Instrumentation & Control Components & Systems

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following procedures used to partially verify if the controls in the main control room operate to cause a signal at the squib valves', 3-RCS-V004A and 4C, electrical leads which was capable of actuating the squib valves. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-039-F126, RCS-PL-V004A-I1-F Component Test 2, Rev. 1
- B-GEN-ITPCI-039-F124, RCS-PL-V004A-I1-A Component Test 2, Rev. 1
- B-GEN-ITPCI-039-F142, RCS-PL-V004C-I1-F Component Test 2, Rev. 1
- B-GEN-ITPCI-039-F140, RCS-PL-V004C-I1-A Component Test 2, Rev. 1

b. Findings

No findings were identified.

1A03 (Unit 3) ITAAC Number 2.6.09.05a (644) / Family 17D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.05a (644). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.17-02.14 - Intrusion Detection System Console Display
- 65001.17-02.15 - Intrusion Detection System Recording



The inspectors used appropriate portions of the IPs to review documents and observe SNC perform inspections to determine if the security alarm annunciation, video assessment information and the intrusion detection system concurrently provided visual displays and audible annunciation of alarms in both the central and secondary alarm stations. The inspectors observed licensee testing of the alarm systems and reviewed relevant documentation to verify if the applicable quality and technical requirements of the manufacture's requirements, Vogtle 3 security plan, and the ITAAC were satisfied.

b. Findings

No findings were identified.

1A04 (Unit 3) ITAAC Number 2.6.09.06 (647) / Family 17A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.06 (647). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.17-02.08 - Vehicle Control Measures

The inspectors used appropriate portions of the IPs to review documents and walkdown the vehicle barrier system (VBS) to determine if the VBS was installed and located at the necessary stand-off distance to protect against the design basis threat vehicle bombs. The inspectors performed walkdowns of the vehicle barrier system and reviewed the applicable documentation associated with the ITAAC to verify if the applicable quality and technical requirements of the Vogtle 3 security plan and the ITAAC were satisfied.

b. Findings

Introduction

NRC inspectors identified a Green ITAAC finding and associated NCV of 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," and with an associated SL IV violation of 52.99(c)(1), "ITAAC Closure Notification," for the licensee's failure to coordinate and collaborate with the 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)."

## Description

On October 15, 2021, the licensee submitted the ICN for ITAAC 647 to the NRC per the requirements in 10 CFR 52.99. Subsequent to the submittal, the inspectors performed an inspection and identified there was no analysis or supporting inspection that the vehicle barrier system, including the ditch, could protect against the design basis threat vehicle bombs based upon the standoff distance of the system as required by the ITAAC.

The inspectors requested the Westinghouse calculation which was the basis for the adequacy of whether the ditch would protect against the design basis threat vehicle bomb based upon the standoff distance of the system. The calculation was still in draft status because there were construction activities ongoing that could affect the ability of the ditch to protect against the design basis vehicle threat. Without finalization of the design and a supporting inspection verifying adherence to the design, sufficient design basis information was not provided with the ICN to demonstrate that the vehicle barrier system could protect against the design basis threat vehicle bombs.

Subsequent to the NRC inspectors identifying this issue, the licensee entered this issue into its corrective action program as CR 50118429.

## Analysis

The inspectors determined that the failure to follow procedure ND-RA-001-006 to coordinate with the IPT to identify and collect ITAAC determination basis input documents to demonstrate the ITAAC acceptance criteria were satisfied prior to submitting the ITAAC Closure Notification was contrary to 10 CFR 50, Appendix B, Criterion V, and was 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 because it represented a substantive failure to establish or implement an adequate program, process, procedure, or quality oversight function. Specifically, the licensee failed to demonstrate that the ITAAC acceptance criteria was satisfied prior to submitting the ICN.

This finding is an ITAAC finding because the performance deficiency is material to ITAAC 647. Specifically, the VBS is used to protect against the design basis threat vehicle bomb based upon the stand-off distance. Without the design of the protective ditch being complete, the licensee failed to collect and provide the necessary determination basis input documents to demonstrate the VBS could protect against the design basis threat vehicle bombs in accordance with the ITAAC acceptance criteria.

The inspectors determined the finding was associated with the Inspection/Testing Cornerstone and assessed the finding in accordance with IMC 2519, "Construction Significance Determination Process," Appendix A, "AP1000 Construction Significance Determination Process," Section 4. 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.

In accordance with IMC 0613 Appendix F, "Construction Cross-Cutting Areas and Aspects," 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 ICN without all the determination basis input documents finalized. [H.14]

In addition, the Construction Reactor Oversight Process's significance determination process does not specifically consider the regulatory process impact in its assessment of licensee performance. Therefore, it is necessary to address this violation which impedes the NRC's ability to regulate using traditional enforcement to adequately deter non-compliance.

The inspectors determined that the failure to provide sufficient information within the ICN that the prescribed acceptance criteria were met was a violation of 10 CFR 52.99(c)(1). In accordance with Section 6.5 of the NRC Enforcement Policy, the inspectors determined this was a SL IV violation because the licensee failed to establish, maintain, or implement adequate controls over testing processes that were important to safety. Specifically, the licensee failed to finalize the design of the VBS, including the ditch, and perform inspections of the VBS confirming adherence to the final design.

### Enforcement

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings and shall be accomplished in accordance with these instructions, procedures, or drawings.

Procedure ND-RA-001-006, Section 6.1.2, states, "For the ITAAC Determination Basis / ITAAC submittal development, the project manager will coordinate and collaborate with the IPT to identify and collect ITAAC determination basis input documents.

Contrary to the above, since October 15, 2021, the licensee failed to follow procedure ND-RA-001-006 to demonstrate that the ITAAC acceptance criteria were satisfied in its ICN. Specifically, the licensee failed to coordinate and collaborate with the IPT to identify that the design of the ditch would need to be completed and collected as an ITAAC determination basis documents to be included with the ICN to demonstrate the ITAAC acceptance criteria were satisfied.

10 CFR 52.99(c)(1), "ITAAC Closure Notification," requires, in part, that ITAAC closure 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, since October 15, 2021, the licensee failed to provide sufficient information that demonstrated that the prescribe inspections, tests, and analyses have been performed and that the prescribed acceptance criteria were met. Specifically, without the final design in place, there was no supporting analysis or inspection to demonstrate the ditch could protect against the design basis threat vehicle bombs.

The licensee entered this issue into their corrective action program as CR 50118429. Corrective actions are planned and do not represent an immediate safety concern because the licensee is not required to meet 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," at this time. The licensee has planned to complete the construction activities and provide the ITAAC determination basis documents to satisfy the ITAAC acceptance criteria.

Because this violation was not repetitive or willful, and was entered into the licensee's CAP, this violation is being treated as an NCV, consistent with Section 2.3.2.a of the NRC Enforcement Policy (NCV 05200025/2021008-01, Failure to Follow Procedure for ITAAC Verification).

1A05 (Unit 3) ITAAC Number C.2.6.09.03a (660) / Family 17A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number C.2.6.09.03a (660). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.17-02.04 - Isolation Zones

The inspectors used appropriate portions of the IP to review documents and observe SNC perform inspections to determine if the isolation zones existed in outdoor areas adjacent to the physical barrier at the perimeter of the protected area that allows 20 feet of observation and assessment of the activities of people on either side of the barrier. The inspectors performed walkdowns of the isolation zones, observed licensee testing of the isolation zones, and reviewed the applicable documentation associated with the ITAAC and Vogtle 3 security plan to verify if the applicable quality and technical requirements were met.

b. Findings

No findings were identified.

1A06 (Unit 3) ITAAC Number C.2.6.09.03b (661) / Family 17A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number C.2.6.09.03b (661). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.17-02.04 - Isolation Zones

The inspectors used appropriate portions of the IPs to review documents and observe SNC perform inspections to determine if the isolation zones were equipped with intrusion detection equipment that provided the capability to detect and assess unauthorized persons, alarm in the Central Alarm Station and Secondary Alarm Station and remain operable from an uninterruptable power supply in the event of the loss of normal power. Specifically, the inspections observed testing and reviewed documentation to verify if they satisfied the applicable quality and technical requirements of the manufacture's requirements, Vogtle 3 security plan, and the ITAAC.

b. Findings

No findings were identified.

1A07 (Unit 3) ITAAC Number C.2.6.09.09 (670) / Family 17D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number C.2.6.09.09 (670). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.17-02.11 – Vital Area Access Controls

The inspectors used appropriate portions of the IPs to review documents and observe SNC perform inspections to determine if emergency exits through the protected area perimeter were alarmed and secured by locking devices that allow prompt egress during an emergency and the emergency exits through the vital area boundaries are locked, alarmed, and equipped with a crash bar to allow for emergency egress. The inspectors observed testing and reviewed documentation to verify if they satisfied the applicable quality and technical requirements of the manufactures, Vogtle 3 security plan, and the ITAAC.

b. Findings

No findings were identified.

1A08 (Unit 3) ITAAC Number 2.1.02.11b.i (48) / Family 10C

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.11b.i (48). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.01 – Program and Procedure Reviews

The inspectors used appropriate portions of the IP to review procedure B-GEN-ITPCI-001-011, which is used to perform PMS Cabinet Diagnostics, to determine if the procedure satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

b. Findings

No findings were identified.

1A09 (Unit 3) ITAAC Number 2.5.02.06a.ii (530) / Family 10D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.5.02.06a.ii (530). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.01 – Program and Procedure Reviews

The inspectors used appropriate portions of the IP to review procedure B-GEN-ITPCI-001-011, which is used to perform PMS Cabinet Diagnostics, to determine if the procedure satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

b. Findings

No findings were identified.

1A10 (Unit 3) ITAAC Number 2.5.02.08a.ii (540) / Family 10D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.5.02.08a.ii (540). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.01 – Program and Procedure Reviews

The inspectors used appropriate portions of the IP to review procedure B-GEN-ITPCI-001-011, which is used to perform PMS Cabinet Diagnostics, to determine if the procedure satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

b. Findings

No findings were identified.

1A11 (Unit 3) ITAAC Number 2.5.02.08b.ii (543) / Family 10D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.5.02.08b.ii (543). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.01 – Program and Procedure Reviews

The inspectors used appropriate portions of the IP to review procedure B-GEN-ITPCI-001-011, which is used to perform PMS Cabinet Diagnostics, to determine if the procedure satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

b. Findings

No findings were identified.

1A12 (Unit 3) ITAAC Number 2.5.02.09d (548) / Family 10D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.5.02.09d (548). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.01 – Program and Procedure Reviews

The inspectors used appropriate portions of the IP to review procedure B-GEN-ITPCI-001-011, which is used to perform PMS Cabinet Diagnostics, to determine if the procedure satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

b. Findings

No findings were identified.

1A13 (Unit 4) ITAAC Number C.2.6.09.08a (668) / Family 17A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number C.2.6.09.08a (668). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.17-02.02 – Vital Areas/Vital Area Barriers

The inspectors performed an inspection to determine if the openings in Vogtle Unit 4 vital area barriers for heating, ventilation, and air conditioning (HVAC) system vents were secured to prevent exploitation of the openings to satisfy the ITAAC and 10 CFR 73.55(e)(4).

The inspectors reviewed the design specifications and associated drawings to identify designated HVAC system openings through vital area barriers and the way they would be secured and monitored. The inspectors examined the physical installation of auxiliary building exterior wall 'Q' HVAC penetration SV4-12306-ML-H04 and two HVAC system openings (SV4-VAS-AS-02 and SV4-VAS-AS-03) to the vital areas during this inspection period. The inspectors performed direct observation inspection of the openings to determine if they were secured in a manner that would delay or prevent exploitation. The inspectors directly inspected the barriers, locking mechanisms, welds, and bolts associated with the openings.

b. Findings

No findings were identified.

IMC 2504, Construction Inspection Program – Inspection of Construction and Operational Programs

1P01 Pre-operational Testing

- 70702-02.04 - Test Witnessing

a. Inspection Scope

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following procedure used to test if the containment system was capable of performing its safety-related function to isolate during required design basis events. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 4-CNS-ITPP-502, Attachment 38, 4-IDSC-EY-P29Y (Electrical Penetration E29) Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 15, 4-DAS-EY-P03Z (Electrical Penetration E03) Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 36, 4-IDSC-EY-P27Z (Electrical Penetration E27) Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 4, 4-CNS-MY-Y04 (Personnel Hatch H03) Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 1, 4-CNS-MY-Y01 (Equipment Hatch H01) Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 2, 4-CNS-MY-Y02 (Maintenance Hatch H02) Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 5, 4-FHS-MY-Y04 (Fuel Transfer Tube Quick Opening Hatch) Type B Test, Rev. 1



- 4-CNS-ITPP-502, Attachment 10, 4-CNS-PY-C01 (Spare Penetration 40) O-Rings, Type B Test, Rev. 1
- 4-CNS-ITPP-502, Attachment 12, 4-CNS-PY-C03 (Spare Penetration 42) O-Rings, Type B Test, Rev. 1
- SV4-CNS-T0W-1265323, EPA retaining rings 4-ECS-P17X, -P18X, -P19X, -P20X, -P21X, -P22X, P23X, -P24X, and -P25X, Rev. 1

## b. Findings

### Introduction

NRC inspectors identified a construction finding of very low safety significance and an associated NCV of 10 CFR, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to accomplish activities associated with local leak rate testing of electrical penetration 4-IDSC-EY-P29Y in accordance with procedure 4-CNS-ITPP-502, "Containment Penetration Leak Rate (Type B) Preoperational Test," Version 1.0. Specifically, the licensee failed to wait for flowmeter readings to stabilize prior to recording the leak rate data and inappropriately declaring the test acceptance criteria met.

### Description

On November 29, 2021, NRC inspectors observed licensee test personnel performing local leak rate testing of electrical penetration assembly 4-IDSC-EY-P29Y per procedure 4-CNS-ITPP-502. Step 3.15 of the procedure states, in part, that, "When both of the following conditions are reached: 1) pressure has stabilized between 58.1 psig and 59.0 psig, and 2) flowmeter readings have stabilized for 10 minutes, record the following data for 4-IDSC-EY-P29Y (Electrical Penetration E29) leakage and in Attachment 42, Table 5." The NRC inspectors observed that the test personnel did not allow the flowmeter readings to stabilize, and the measured leak rate fluctuated above and below the acceptance criteria for the 10-minute duration. After the required 10 minutes had passed, the test personnel determined the test to be satisfactory since the leak rate value satisfied the acceptance criteria. Subsequent to the inspectors questioning the licensee whether the procedure was followed and if the test was satisfactory, SNC reviewed the intent of the procedure steps and the data from the test and concluded that the test was unsatisfactory and required to be retested. The licensee entered this issue into its CAP as CR 50116481.

### Analysis

The inspectors determined the failure to accomplish local leak rate testing of electrical penetration 4-IDSC-EY-P29Y in accordance with procedure 4-CNS-ITPP-502 was contrary to 10 CFR 50, Appendix B, Criterion V, and a performance deficiency. The performance deficiency was determined to be of more than minor safety significance and thus a finding because it rendered the quality of an SSC unacceptable or indeterminate and required substantial corrective action. Specifically, the performance deficiency resulted in the local leak rate test of containment penetration 4-IDSC-EY-P29Y being declared unsatisfactory, and the test had to be reperformed. This violation was determined to be a construction finding.

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," Section 4. The inspectors determined the finding was associated with the containment and was of very low safety significance because the issue did not affect a design function.

In accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects," the inspectors determined the finding had a cross-cutting aspect of training, in the area of Human Performance. Specifically, the organization failed to ensure that test personnel were trained to perform tests in a consistent manner [H.9].

### Enforcement

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

Contrary to the above, on November 29, 2021, the licensee failed to accomplish local leak rate testing of electrical penetration 4-IDSC-EY-P29Y in accordance with procedure 4-CNS-ITPP-502. Specifically, the licensee failed to allow flowmeter readings to stabilize prior to recording the leak rate data, resulting in the licensee inappropriately declaring the test acceptance criteria met. This finding did not present an immediate safety concern because the plant was not operating, and the reactor vessel did not have fuel in it. The licensee entered this issue into its CAP as CR 50116481 and retested the electrical penetration assembly. Because this violation was not repetitive or willful, was of very low safety significance, and was entered into the licensee's CAP, this violation is being treated as an NCV consistent with Section 2.3.2.a of the NRC Enforcement Policy (NCV 0500026/2021008-02, Failure to Follow Procedure CNS-ITPP-502).

### 1P02 Pre-operational Testing

- 70702-02.04 - Test Witnessing

#### a. Inspection Scope

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following procedures used to test if the containment system was capable of performing its safety-related function to isolate during required design basis events. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 4-CNS-ITPP-503, Attachment 6, Type C Testing of 4-CVS-PY-C02 (CVS Letdown CTMT PEN), Rev. 1
- 4-CNS-ITPP-503, Attachment 8, Type C Testing of 4-CVS-PY-C04 (CVS Zinc Add CTMT PEN), Rev. 1

b. Findings

No findings were identified.

**3. OPERATIONAL READINESS**

**Cornerstones: Operational Programs**

IMC 2503, ITAAC - Related Work Inspections

3T01 (Unit 3) ITAAC Number 2.1.03.07.i (78) / Family 05D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.03.07.i (78). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.05 - Inspection of ITAAC-Related Installation of Reactor Pressure Vessel and Internals
- 65001.D-02.03 - Test Results Review

The inspectors used appropriate portions of the IP to review the results of the following procedure used to determine if the as-built reactor internals had no observable damage or loose parts following hot functional testing satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC:

- 3-RXS-ITPP-501, Pre - and Post - Hot Functional Test Inspection of Reactor Vessel Internals, Rev. 3.0

b. Findings

No findings were identified.

3T02 (Unit 3) ITAAC Number 2.2.03.10 (206) / Family 10A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.10 (206). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following procedure used to verify if the valve opens within 20 seconds after receipt of an actuation signal from the protection and monitoring

system (PMS). The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-GEN-OTS-10-002, Division B Quarterly Valve Stroke Test, Rev. 0.1

The inspectors used portions of the IP to observe the licensee's performance of the following procedure used to verify if the valve performed its active safety function after a signal is input to the PMS. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-039-F075, PXS-PL-V015A-S1 Component Test, Rev. 2

b. Findings

No findings were identified.

3T03 (Unit 3) ITAAC Number 2.2.03.11b.i (209) / Family 10D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.11b.i (209). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following procedure used to partially verify if the squib valves received an electrical signal at the valve electrical leads that was capable of actuating the valve after a signal is input to the PMS. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-039-F098, PXS-PL-V120B-I1-F Component Test 2, Rev. 2
- B-GEN-ITPCI-039-F102, PXS-PL-V123A-I1-F Component Test 2, Rev. 2
- B-GEN-ITPCI-039-F114, PXS-PL-V125B-I1-F Component Test 2, Rev. 1

b. Findings

No findings were identified.

3T04 (Unit 3) ITAAC Number 2.6.03.04c (603) / Family 08D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.03.04c (603). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following procedure used to test if Division D and spare IDS 24-hour battery banks could supply their DC switchboard bus loads for a period of 24 hours without recharging. The inspectors also observed the licensee's performance of the following procedure used to test if Division C IDS 72-hour battery bank could supply its DC switchboard bus load for a period of 72 hours without recharging. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-IDS-ITPP-501, Class 1E and UPS Preoperational Test, Version 8.0

b. Findings

No findings were identified.

3T05 (Unit 3) ITAAC Number 3.3.00.10.i (815) / Family 06D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.10.i (815). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing
- 65001.D-02.03 - Test Results Review

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following procedure used to verify if the leakage from the passive containment cooling system (PCS) storage tank to the leak chase collection system did not exceed 10 gallons per hour. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Rev. 2

The inspectors used appropriate portions of the IP to review the licensee's test results in the following report to determine if the total water flow from the leak chase collection system did not exceed 10 gal/hr. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- SV3-PCS-ITR-800815, Unit 3 Test Results for PCCWST Leakage into the Leak Chase Collection System: ITAAC 3.3.00.10.i, Rev. 0

b. Findings

No findings were identified.

## IMC 2504, Construction Inspection Program – Inspection of Construction and Operational Programs

### 3P01 Emergency Preparedness

- 82002-Att4 - Emergency Preparedness Exercises

#### a. Inspection Scope

The licensee conducted the first of two full participation exercises on September 23, 2020 (ADAMS Accession Number ML20315A137). The exercise demonstrated the requirements of 10 CFR 50, Appendix E, Section IV.F.2.a.ii, for emergency preparedness. However, the September 2020 exercise assumed a fuel load date within first quarter 2021 that was postponed to 2022. Thus, the requirement that a full participation exercise that tests the licensee's onsite emergency plans be conducted within a year before the scheduled date of initial fuel loading had to be re-established. The licensee conducted a second pre-operational full participation exercise on December 14, 2021, to satisfy the requirement.

The inspectors performed direct inspection of the second pre-operational Unit 3 graded exercise. The inspection evaluated the licensee's process to determine if the conduct of the exercise supports the finding that the emergency preparedness (EP) program demonstrates reasonable assurance that the licensee can effectively implement its emergency plan (E-Plan) to adequately protect public health and safety in the event of a radiological emergency. The inspection also verified there were no E-Plan changes. The inspectors observed the licensee's performance of the drill to verify if the requirements of the E-Plan, 10 CFR Appendix E, and 10 CFR 50.47(b) were satisfied.

#### b. Findings

No findings were identified.

### 3P02 Inservice Testing (IST)

- 73054-02.03 - Program Scope
- 73054-02.04 - Quality Assurance Program

#### a. Inspection Scope

The inspectors performed the following activities related to the development of the Vogtle Units 3 & 4 IST Programs for pumps, valves, and dynamic restraints that will perform safety-related functions at Vogtle Units 3 & 4:

- The inspectors reviewed the following IST procedures to verify that they met the applicable testing requirements of 10 CFR 50.55a and the American Society of Mechanical Engineers (ASME) Operations and Maintenance (OM) Code, and support the implementation of the IST program:

- 3-CAS-OTS-17-001, Compressed and Instrument Air Systems Check Valve Exercise, Rev. B=0.1
- 3-CCS-OTS-10-001, Component Cooling Water System Valve Stroke Test, Rev. C=0.2
- 3-CCS-OTS-17-002, Component Cooling Water System Check Valve Exercise, Rev. A=0.0
- 3-CNS-OTS-18-001, Containment Isolation Actuation Test, Version B=0.1
- 3-CVS-OTS-10-001, Chemical and Volume Control System Valve Stroke Test, Rev. E=0.4
- 3-CVS-OTS-10-002, Chemical and Volume Control System Check Valve Exercise Test, Rev. B=0.1
- 3-CVS-OTS-17-001, Chemical and Volume Control System Reactor Coolant System Leakage Test, Rev. D=0.3
- 3-MTS-OTS-10-001-V0.2-01, TPC for Main Turbine Inservice Valve Test, Rev. C=0.2
- 3-PXS-OTS-10-004, Passive Core Cooling System Pressure Isolation Valve Leak Test, Rev. A=0.0
- 3-RCS-OTS-10-001, Reactor Coolant System Valve Stroke Test, Rev. C=0.2
- 3-SGS-OTS-10-003, Steam Generating System Valve Stroke Test Train A Modes 3-6, Rev. C=0.2
- 3-SGS-OTS-10-004, Steam Generating System Valve Stroke Test Train B Modes 3-6, Rev. C=0.2
- NMP-ES-017-007, MOV Diagnostic Procedure for QUIKLOOK 3, Rev. 1.1

The inspectors reviewed Technical Evaluations Quality Record 60018184 (4-13-2020) that the licensee prepared to address 10 CFR 50.55a requirements for verifying remote valve position indication. The inspectors also reviewed the licensee's check valve condition monitoring program document NMP-ES-013-003 for consistency with the provisions in the ASME OM Code, Appendix II, Check Valve Condition Monitoring Program, as incorporated by reference in 10 CFR 50.55a.

b. Findings

No findings were identified.

3P03 Preservice Testing (PST)

- 73758-App C - Appendix C. Implementation of PST/IST Program for Pumps, Valves, and Dynamic Restraints
- 73758-Att2.02.04 - Design-Basis Verification, Preservice Testing and Inservice Testing
- 73758-Att2.02.06 - Preventive Maintenance

a. Inspection Scope

The inspectors performed the following activities related to the development of the Vogtle Units 3 & 4 IST Programs for pumps, valves, and dynamic restraints that perform safety-related functions at Vogtle Units 3 & 4:

- The inspectors reviewed the licensee's disposition of operating experience (OpE) for Main Steam Isolation Valves (MSIVs) and determined that the licensee's actions provided reasonable assurance that the issue identified in the OpE will not adversely impact the plant during operation. Specifically, the inspectors evaluated the licensee's procedures for periodic testing and surveillance activities for MSIVs to determine whether degradation in valve performance was occurring over time that might result in the MSIVs being incapable of performing their safety functions. This included as review of APP-GW-GF-105, "APOG GC: NRC 2015-13: Main Steam Isolation Valve Failure Events," which describes the licensee review of MSIV OpE up to 2016. The inspectors also reviewed NMP-GM-008, "Operating Experience Program," and other documents, that contained the licensee's evaluation of more recent OpE.
- The inspectors reviewed work packages for static diagnostic testing, PST procedures, and PST results for the following sample of motor-operated valves (MOVs) to verify that the requirements of 10 CFR 50.55a and the ASME OM Code had been met.
  - CCS-PL-V200, Cooling Water Supply Containment Isolation Valve
  - CCS-PL-V208, Cooling Water Return Containment Isolation Valve
  - CVS-PL-V003, CVS Purification Stop Valve
  - PXS-PL-V117B, Containment Recirculation Sump B to RCS Isolation Valve
  - RCS-PL-V002A, ADS Stage 2 Control Valve
  - RCS-PL-V002B, ADS Stage 2 Control Valve
  - RCS-PL-V003A, ADS Stage 3 Control Valve
  - RCS-PL-V003B, ADS Stage 3 Control Valve
  - RCS-PL-V011A, ADS Stage 1 Isolation Valve
  - RCS-PL-V012A, ADS Stage 2 Isolation Valve
  - RCS-PL-V013B, ADS Stage 3 Isolation Valve
  - RNS-PL-V001B, RNS Suction from RCS Inner Isolation Valve
  - RNS-PL-V002B, RNS Suction from RCS Outer Isolation / IC Containment Isolation Valve
  - SGS-PL-V027A, Steam Generator 1 PORV Isolation Valve
  - SGS-PL-V027B, Steam Generator 2 PORV Isolation Valve
  - VBS-PL-V186, MCR Supply Air Isolation Valve
  - VBS-PL-V188, MCR Return Air Isolation Valve
  - VFS-PL-800A, Containment Vacuum Relief Valve Isolation Valve A
  - VFS-PL-800B, Containment Vacuum Relief Isolation Valve B



- The inspectors reviewed one sample of a test work package for Class 1 Pressurizer Safety Valve RCS-PL-V005A to confirm if the manufacturer's testing in advance of the pretesting prior to fuel loading was planned by the licensee. The inspectors confirmed the resolution of the licensee's identification of discrepancies in live load packing configuration datasheets for PV01 valves described in AP1000 Nonconformance & Disposition Report SV3-PV01-GNR-000028 (7-3-2020), CR 50054618 (6-29-2020), and Corrective Actions Quality Record (CAR) 80003016 (6-29-2020).

b. Findings

No findings were identified.

**4. OTHER INSPECTION RESULTS**

4OA6 Meetings, Including Exit

.1 Exit Meeting.

On January 18, 2022, the inspectors presented the inspection results to Mr. G. Chick, Vogtle 3&4 Executive Vice President, and other licensee and contractor staff members. Proprietary information was reviewed during the inspection period, but was not included in the inspection report.

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensees and Contractor Personnel**

A. Nix, NI Manager  
K. Roberts, ITAAC Manager  
M. Hickox, Test Support Manager  
C. Alexander, Milestone Manager  
S. Boyle, Milestone Manager  
D. Pagan-Diaz, ITP Turnover. Manager  
J. Olsen, NI Supervisor  
N. Kellenberger, SNC Licensing Supervisor  
C. Castell, SNC Licensing Engineer  
N. Patel, SNC Licensing Engineer  
N. Chapman, SNC Licensing Engineer  
J. Weathersby, SNC Licensing Engineer  
C. Main, ITAAC Project Manager  
D. Wade, ITAAC Project Manager  
B. Macioce, Principle Engineer Digital Testing  
R. McKay, ITP Test Engineer  
S. Turner, ITP Test Engineer  
G. Weaver, ITP Test Engineer  
R. Nicoletto, ITP Test Engineer  
W. Pipkins, ITP Test Engineer  
D. Melton, ITP Test Engineer  
R. Espara, ITP Test Engineer  
J. Clark, ITP Test Engineer  
K. Morgan, ITP Test Engineer

### **LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

<u>Item Number</u>	<u>Type</u>	<u>Status</u>	<u>Description</u>
05200025/2021008-01	NCV	Open	Failure to Prescribe Instructions or Procedures for ITAAC Activities that Affect Quality
05200026/2021008-02	NCV	Open/Closed	Failure to Follow Procedure CNS-ITPP-502

## LIST OF DOCUMENTS REVIEWED

### Section 1A01

WO 1109896  
WO 1237895

### Section 1A02

WO 1109896  
WO 1237895

### Section 1A03

Acceptance Testing documentation for IDS zones 63-71, 84-92, and zones A-F  
V-SSO-2021-01- 7 Day Testing of the Security Perimeter and Duress Systems, April 30, 2021  
3 SES ITAAC-661-UPS01 PA IDS/Assessment-UPS01, Rev. 1.1  
3-SES-MIS-001- Site Security System (SES) Perimeter Intrusion Detection Tests, Rev. 4.0  
SV3-SES-ITR-800644, Intrusion Detection/Video Assessment Testing: ITAAC 1.6.09.05a, Rev. 0

### Section 1A04

3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Rev. 2.0  
WO: 1056002  
CR: 50112120, 50112128  
SV3-PCS-ITR-800815, Unit 3 Test Results for PCCWST Leakage into the Leak Chase Collection System: ITAAC 3.3.00.10.i, Rev. 0  
ITAAC Closure Notification on Completion of Item 3.3.00.10.i [Index Number 815] Letter

### Section 1A05

Acceptance Testing documentation for IDS zones 63-71, 84-92, and zones A-F  
V-SSO-2021-01- 7 Day Testing of the Security Perimeter and Duress Systems, April 30, 2021  
3 SES ITAAC-661-UPS01 PA IDS/Assessment-UPS01, Rev. 1.1  
3-SES-MIS-001- Site Security System (SES) Perimeter Intrusion Detection Tests, Rev. 4.0

### Section 1A06

SV3-SES-ITR-800670, Protected Area Perimeter and Vital Area Boundary Emergency Exit Test, Rev. 0  
C.2.6.09.09-U3-CP, ITAAC Completion Package, Rev. 0  
VEGP Unit 3 and Unit 4 Physical Security Plan, Rev. 6

### Section 1A07

APP-GW-MD-103, HVAC Details Sheet 1, Rev. 1  
APP-MD03-V2-850003, DFDAF-330 Damper Schedule, Rev. 0  
315-FDG-GH-ZZ2875313, Fire Damper Grating Assembly, Rev. 1  
APP-VBS-MD-504, HVAC Layout VBS Exh & Ret Duct (CSA) Isometric Annex Building Area 1 El 135'-3", Rev. 3  
SV4-12306-GNR-000001, Wall Q Penetration 12306-ML-H04 Specialty Device (ESR 50058583), Rev. 0  
APP-GW-MD-103, HVAC Details Sheet 1, Rev. 1  
APP-CE01-CE-870514, HVAC Penetration Missile Barrier - Wall Q- Anchorage Option 2, Rev. B

SV4-1231-SS-905, Auxiliary Building HVAC Penetration Missile Barrier Wall Q Area 1  
El. 100'-0", Rev. 0  
APP-MD03-Z0D-004, "VAS Fire, Smoke, Combination Fire/Smoke Damper & Blast Damper  
Data Sheet Seismic Category II," Rev. 16  
APP-VAS-MD-548, "Auxiliary Building Area 4 Elevation 145'-9" VAS Duct Iso View," Rev. 7  
Engineering & Design Coordination Report No. APP-SES-GEF-031, "Updates to Barrier Matrix,"  
Rev. 0  
APP-AS21-A1-001, "AP1000 Security Barrier Design Requirements," Rev. 1

#### **Section 1A08**

B-GEN-ITPCI-001-011, PMS-Cabinets - Cabinet Diagnostics, Rev. 1.2

#### **Section 1A09**

B-GEN-ITPCI-001-011, PMS-Cabinets - Cabinet Diagnostics, Rev. 1.2

#### **Section 1A10**

B-GEN-ITPCI-001-011, PMS-Cabinets - Cabinet Diagnostics, Rev. 1.2

#### **Section 1A11**

B-GEN-ITPCI-001-011, PMS-Cabinets - Cabinet Diagnostics, Rev. 1.2

#### **Section 1A12**

B-GEN-ITPCI-001-011, PMS-Cabinets - Cabinet Diagnostics, Rev. 1.2

#### **Section 1P01**

4-CNS-ITPP-502, Containment Penetration Leak Rate (Type B) Preoperational Test, Rev. 1.0  
Work Order SV4-CNS-T0W-1265323, Perform (LLRT) on EPA Retaining Rings  
Work Order SV4-CNS-T0W-1198235, Perform Pre-op LLRT Test (4-CNS-ITPP-502)

#### **Section 1P02**

WO: 1198239

### **3. OPERATIONAL READINESS**

#### **Section 3T01**

3-GEN-ITPP-517, Precore Hot Functional Test Procedure, Rev. 5  
APP-CVAP-GER-003, Comprehensive Vibration Assessment Program (CVAP) Vibration  
Analysis Program for the AP1000 Plant, Rev. 0  
APP-CVAP-GER-004, Comprehensive Vibration Assessment Program (CVAP) Measurement  
and Inspection Programs for the AP1000 Plant, Rev. 0  
APP-CVAP-T2I-001, AP1000 Comprehensive Vibration Assessment Program (CVAP) Pre and  
Post Host Functional Test (HFT) Visual Inspection Instructions, Rev. 0  
APP-MI01-Z0M-001, AP1000 RVI Installation Requirements Manual  
CV3-CVAP-T2R-300 (Final Report), Comprehensive Vibration Assessment Program (CVAP)  
Final Report for the Southern Vogtle Unit 3 (SV3) AP1000 Plant, Rev. 0  
ND-21-0956 ICN Letter, ITAAC Closure Notification on Completion of ITAAC Item 2.1.03.07.i  
[Index Number 78], 12/21/21  
SV0-RCS-VQQ-800060, Vogtle Unit 3 AP1000 Reactor Vessel Internals (RVI) Customization,  
Installation, Inspection, Testing and Final Cleaning (SV3-RXS-MJR-MI01), Rev. 1

SV3-CVAP-T2R-100, Vogtle Unit 3 Pre-Hot Functional Test Visual Report of the AP1000 Reactor Vessel Internals, Rev. 0  
SV3-CVAP-T2R-400, Vogtle Unit 3 Post-Hot Functional Test Visual Report of the AP1000 Reactor Vessel Internals, Rev. 0  
SV3-MI01-GNR-000041, Neutron Shield Panel Gaps (ESR 50106207), Rev. 0  
SV3-MI01-S3R-001, Southern Vogtle Unit 3 Reactor Vessel Internals Summary Design Report, Rev. 1  
SV3-RXS-ITR-800078, Unit 3 Reactor Vessel Pre and Post Hot Functional Test Inspection: ITAAC 2.1.03.07.i, NRC Index Number: 78, Rev. 2  
SVP\_SV0\_006481, Submittal of Inspections, Test, Analyses, and Acceptance Criteria (ITAAC) Completion Package Documents for Unit 3 ITAAC, 12/10/21  
WDI-PJF-1323441-FSR-001, CVAP Pre and Post Hot Functional Test Visual Inspection Field Service Report, Rev. 1  
ESRs: 50107475, 50105649, 50105240, 50104641, 50106207, 50105705  
NCRs: NCR-915281-028, NCR-915281-028, NCR-915281-027  
WO: 1061754

### **Section 3T02**

B-GEN-ITPCI-039-F075, PXS-PL-V015A-S1 Component Test, Rev. 2.0  
3-GEN-OTS-10-002, Division B Quarterly Valve Stroke Test, Rev. 0.1  
WO 1109882

### **Section 3T03**

WO 1237842

### **Section 3T04**

WO 1124423

### **Section 3T05**

SV3-SES-ITR-800660, Unit 3 ITAAC 660 Walkdown Inspection: ITAAC C.2.6.09.03a, Rev. 0  
C.2.6.09.03a-U3-CP, ITAAC Completion Package, Rev. 0  
VEGP Unit 3 and Unit 4 Physical Security Plan, Rev. 6

### **Section 3P01**

#### Procedures

NMP-EP-141-004, Vogtle 3 & 4 Emergency Action Levels and Basis (Amendments 77 and 76 (Vogtle Electric Generating Plant Units 3 and 4 LAR 16-002)), Rev. 3.0  
NMP-EP-141-004-F01, VEGP 3 & 4 EAL Wall Chart - >200o F, Rev. 2.1 (verified in 2 copies)  
NMP-EP-142, Emergency Notification, Rev. 5.0 (verified in 2 binders)  
NMP-EP-143, Facility Activation, Rev. 7.0 (verified in 3 binders)  
NMP-EP-143-F01, Command and Control Turnover and Transfer, Rev. 3.0  
NMP-EP-143-001, Alternative Facility Operation Rev. 3.0 (verified in 1 binder)  
NMP-EP-144, Protective Actions Rev. 6.0 (verified in 2 binders)  
NMP-EP-145, Termination and Recovery, Rev. 2.0 (verified in 2 binders)  
NMP-EP-147, Offsite Dose Assessment Automated MIDAS, Rev. 4.0 (verified in 2 binders)  
NMP-EP-147-001, SNC Field Monitoring Team Sampling, Rev. 4.0 (verified in 2 binder)  
NMP-EP-147-005, VEGP 3 & 4 MIDAS NU Dose Projections, Rev. 3.0 (verified in 2 binders)  
NMP-EP-147-006, SNC-SRS Emergency Response Agreement, Rev. 1.0 (verified in 1 binder)  
NMP-EP-147-007, Field Monitoring Team Communication Devices, Rev. 2.0 (verified in 1 binder)

NMP-EP-147-008, Field Monitoring Team Environmental Sampling, Rev. 1.0 (verified in 1 binder)  
 NMP-EP-147-F12, VEGP 3 & 4 AP1000 Plant Schematic, Rev. 1.0 (verified in 1 binder, missing from DAS binder)  
 NMP-EP-205, Emergency Communications and News Releases, Rev. 9.0 (verified in 1 binder)  
 NMP-OS-019-001, EOF Support for Beyond Design Based Events, Rev. 4.0 (verified in 2 binders)  
 NMP-OS-019-002, TSC Support for Beyond Design Based Events, Rev. 4.0 (verified in 1 binder)  
 NMP-OS-019-003, Security Support for Beyond Design Based Events, Rev. 2.0 (verified in 1 binder)  
 Emergency Notification Form(s) [NMP-EP-142-F01, Emergency Notification (EN) Form] for ORO Messages 1 thru 8, 12/14/2021.  
 SNC Dose Assessment Form(s) – “WHAT-IF” offsite dose calculations (no release in progress). Initial calculation and three (3) follow-up calculations at approximately thirty (30) minute intervals, 12/14/2021.  
 NMP-EP-146-F06, EOF Dose Analyst Initial Actions, 12/14/2021  
 NMP-EP-147-F16, VEGP 3-4 – MIDAS Plant Parameters, 12/14/2021  
 Emergency Plan Annex for Vogtle Electric Generating Plant, Units 3 & 4, Rev. 3  
 3-AOP-101, Rapid Power Reduction, Rev. 1.0  
 3-AOP-112, Reactor Coolant Leak, Rev. 1.0  
 3-AOP-401, Malfunction of DDS, Rev. 1.1  
 NMP-EP-303-F02, Drill & Exercise Comment & Feedback Form, Rev. 0

#### Records & Data

Emergency Logs, EOF Dose Analyst, 12/14/2021  
 VEGP Unit 3 NRC Graded Exercise Scenario Package, dated 12/14/2021  
 2021 US NRC Graded Exercise Management Debrief Presentation Package, 12/16/2021  
 Control Room Simulator, Operations Support Center, Technical Support Center, and Emergency Operations Facility - documentation packages (logs, event notification forms, protective action recommendations, and radiological dose assessments)

### **Section 3P02**

#### Corrective Action Documents

Preventive Maintenance Change Request PMCR-101353 (10-14-2021), Adjust frequency of 3SGSPM0257 & 0258 based on OE  
 Condition Report Quality Record 50054618 (6-29-2020), PV01 Live Load Packing Configuration  
 Condition Report Quality Record 50093154 (5-19-2021), Non-Safety Time Response Calculation  
 Condition Report Quality Record 50113950 (11-8-2021), Lack of Specificity to Supplemental Data Capture and Acceptance for MSIV Position Verification  
 Condition Report Quality Record 50114114 (10-9-2021), E&DCR Impact to Surveillances  
 Corrective Actions Quality Record 80003016 (6-29-2020), PV01 Live Load Packing Configuration  
 Corrective Actions Quality Record 80005635 (6-12-2021), Use of DDS MTS Atomic Clock instead of M&TE for Testing  
 AP1000 Nonconformance & Disposition Report SV3-PV01-GNR-000028 (Revision 0, 7-03-2020), PV01 Live Load Packing Configuration  
 AP1000 Nonconformance & Disposition Report SV3-PV01-GNR-000038 (Revision 0, 11-02-2020), PV01 MOV Faster Valve Stroke Times During Valve Setup

Technical Evaluations Quality Record 60018184 (4-13-2020), 10 CFR 50.55a Condition  
Requires Procedure Changes

Procedures

3-CAS-OTS-17-001, Compressed and Instrument Air Systems Check Valve Exercise,  
Version B=0.1  
3-CCS-OTS-10-001, Component Cooling Water System Valve Stroke Test, Version C=0.2  
3-CCS-OTS-17-002, Component Cooling Water System Check Valve Exercise, Version A=0.0  
3-CNS-OTS-18-001, Containment Isolation Actuation Test, Version B=0.1  
3-CVS-OTS-10-001, Chemical and Volume Control System Valve Stroke Test, Version E=0.4  
3-CVS-OTS-10-002, Chemical and Volume Control System Check Valve Exercise Test,  
Version B=0.1  
3-CVS-OTS-17-001, Chemical and Volume Control System Reactor Coolant System Leakage  
Test, Version D=0.3  
3-MTS-OTS-10-001-V0.2-01, TPC for Main Turbine Inservice Valve Test, Version C=0.2  
3-PCS-OTS-10-004, Passive Containment Cooling System Valve Stroke Test (Manual Valve  
Operability and Exercise), Version D=0.3  
3-PXS-OTS-10-004, Passive Core Cooling System Pressure Isolation Valve Leak Test,  
Version A=0.0  
3-RCS-OTS-10-001, Reactor Coolant System Valve Stroke Test, Version C=0.2  
3-SGS-OTS-10-003, (Version C=0.2, 12-29-2020), Steam Generating System Valve Stroke  
Test Train A Modes 3-6, Version C=0.2  
3-SGS-OTS-10-004 (Version C=0.2, 12-29-2020), Steam Generating System Valve Stroke Test  
Train B Modes 3-6  
NMP-ES-002 (Version 27.0, 8-13-2021), System Monitoring and Health Reporting  
NMP-ES-005-001 (Version 11.0, 4-20-2021), Scoping and Importance Determination for  
Equipment Reliability – Single Point Vulnerability  
NMP-ES-013-003 (Version 6.0, 10-26-2020), IST Check Valve Condition Monitoring Program  
Development and Maintenance  
NMP-ES-017-007 (Version 1.1, 7-21-2021), MOV Diagnostic Procedure for QUIKLOOK 3  
NMP-GM-006-002 (Version 4.1, 10-22-2020), Surveillance Program  
NMP-GM-008 (Version 23.0, 5-9-2021), Operating Experience Program  
NMP-GM-027 (Version 17.0, 8-26-2021), Plant Health Process  
NMP-MA-053 (Version 2.2, 5-13-2019), SNC Maintenance Department Measuring and Test  
Equipment Program (M&TE)  
B-GEN-ITPA-004 (Version 11.0, 6-26-2019), Conduct of Test  
B-GEN-ITPCM-001 (Version 4.0, 7-28-2021), Limitorque SMB/SB Motor Operated Valve  
Component Testing  
3-PMS-OTS-20-002 (Version B=0.1, 8-8-2019), ESFAS 24-Month Trip Actuating Device  
Operational Test

Work Packages

Work Package SV3-CCS-T0W-1100430, Static Diagnostic Testing of MOV SV3-CCS-PL-V200,  
Rev. 0  
Work Package SV3-CCS-T0W-1100440, Static Diagnostic Testing of MOV SV3-CCS-PL-V208,  
Rev. 0  
Work Package SV3-CCS-T0W-1229062, Retest MOV SV3-CCS-PL-V208, Rev. 0  
Work Package SV3-CVS-T0W-1054304, Static Diagnostic Testing of MOV SV3-CVS-PL-V003,  
Rev. 1  
Work Package SV3-PXS-T0W-1045343, Static Diagnostic Testing of  
MOV SV3-PXS-PL-V117B, Rev. 0

Work Package SV3-SGS-T0W-1067835, Static Diagnostic Testing of  
MOV SV3-SGS-PL-V027A

Work Package SV3-SGS-T0W-1067844, Static Diagnostic Testing of  
MOV SV3-SGS-PL-V027B

Work Package SV3-RCS-T0W-1054810, Perform Relief Valve Testing on  
SV3-RCS-PL-V005 PZR Safety A

Work Package SV3-RCS-T0W-1235363, Retest 3-RCS-V002B, CWA 3-21-214/238

Work Package SV3-RCS-T0W-1235364, Retest 3-RCS-V003A, CWA 3-21-237

Work Package SV3-RCS-T0W-1237680, Retest 3-RCS-V002A, CWA 3-20-2177

Work Package SV3-RCS-T0W-1067977, Static Diagnostic Testing of  
MOV SV3-RCS-PL-V003B

Work Package SV3-RCS-T0W-1067982, Static Diagnostic Testing of  
MOV SV3-RCS-PL-V011A

Work Package SV3-RCS-T0W-1067988, Static Diagnostic Testing of  
MOV SV3-RCS-PL-V012A

Work Package SV3-RCS-T0W-1067997, Static Diagnostic Testing of  
MOV SV3-RCS-PL-V013B

Work Package SV3-RNS-T0W-1237493, Retest 3-RNS-V002B, CWA -3-21-0403

Work Package SV3-RNS-T0W-1237500, Retest 3-RNS-V001B, CWA 3-21-0406

Work Package SV3-VBS-T0W-1052705, Static Diagnostic Testing of MOV SV3-VBS-PL-V186,  
Rev. 1

Work Package SV3-VBS-T0W-1052709, Static Diagnostic Testing of MOV SV3-VBS-PL-V188,  
Rev. 1

Work Package SV3-VFS-T0W-1049092, Static Diagnostic Testing of MOV SV3-VFS-PL-V800B,  
Rev. 0

Work Package SV3-VFS-T0W-1049121, Static Diagnostic Testing of MOV SV3-VFS-PL-V800A,  
Rev. 0

#### Miscellaneous

APP-GW-GF-105 (Revision 0, 6-24-2016), APOG GC: NRC 2015-13: Main Steam Isolation  
Valve Failure Events

SV0-PV64-VMM-001 (Revision 1, 1-9-2020), PV64 Main Steam Isolation Valve (MSIV)  
Installation, Operation and Maintenance Manual

ND-CO-015 (Version 10.0, 3-4-2020), Nuclear Development Quality Assurance Conduct of  
Operations

Nuclear Development Quality Assurance Manual (Version 20.0, 11-5-2019)

Bechtel 26139-000-4MP-T81C-N7102 (Revision 2, 5-22-2019), Control of Measuring and Test  
Equipment

#### CRs Written as a Result of Inspection

50113950  
50093154  
50114114  
CAR 80005635

#### **Section 3P03**

##### Corrective Action Documents

Preventive Maintenance Change Request PMCR-101353, Adjust frequency of 3SGSPM0257 &  
0258 based on OE, 10/14/2021

Condition Report Quality Record 50054618, PV01 Live Load Packing Configuration, 6/29/2020

Condition Report Quality Record 50093154, Non-Safety Time Response Calculation, 5/19/2021



Condition Report Quality Record 50113950, Lack of Specificity to Supplemental Data Capture and Acceptance for MSIV Position Verification, 11/8/2021  
 Condition Report Quality Record 50114114, E&DCR Impact to Surveillances, 10/9/2021  
 Corrective Actions Quality Record 80003016, PV01 Live Load Packing Configuration, 6/29/2020  
 Corrective Actions Quality Record 80005635, Use of DDS MTS Atomic Clock instead of M&TE for Testing, 6/12/2021  
 AP1000 Nonconformance & Disposition Report SV3-PV01-GNR-000028, PV01 Live Load Packing Configuration, Rev. 0  
 AP1000 Nonconformance & Disposition Report SV3-PV01-GNR-000038, PV01 MOV Faster Valve Stroke Times During Valve Setup, Rev. 0  
 Technical Evaluations Quality Record 60018184, 10 CFR 50.55a Condition Requires Procedure Changes, 4/13/2020

#### Procedures

3-CAS-OTS-17-001, Compressed and Instrument Air Systems Check Valve Exercise, Version B=0.1  
 3-CCS-OTS-10-001, Component Cooling Water System Valve Stroke Test, Version C=0.2  
 3-CCS-OTS-17-002, Component Cooling Water System Check Valve Exercise, Version A=0.0  
 3-CNS-OTS-18-001, Containment Isolation Actuation Test, Version B=0.1  
 3-CVS-OTS-10-001, Chemical and Volume Control System Valve Stroke Test, Version E=0.4  
 3-CVS-OTS-10-002, Chemical and Volume Control System Check Valve Exercise Test, Version B=0.1  
 3-CVS-OTS-17-001, Chemical and Volume Control System Reactor Coolant System Leakage Test, Version D=0.3  
 3-MTS-OTS-10-001-V0.2-01, TPC for Main Turbine Inservice Valve Test, Version C=0.2  
 3-PCS-OTS-10-004, Passive Containment Cooling System Valve Stroke Test (Manual Valve Operability and Exercise), Version D=0.3  
 3-PXS-OTS-10-004, Passive Core Cooling System Pressure Isolation Valve Leak Test, Version A=0.0  
 3-RCS-OTS-10-001, Reactor Coolant System Valve Stroke Test, Version C=0.2  
 3-SGS-OTS-10-003, Steam Generating System Valve Stroke Test Train A Modes 3-6, Version C=0.2  
 3-SGS-OTS-10-004, Steam Generating System Valve Stroke Test Train B Modes 3-6, Rev. C=0.2  
 NMP-ES-002, System Monitoring and Health Reporting, Rev. 27  
 NMP-ES-005-001, Scoping and Importance Determination for Equipment Reliability – Single Point Vulnerability, Rev. 11  
 NMP-ES-013-003, IST Check Valve Condition Monitoring Program Development and Maintenance, Rev. 6  
 NMP-ES-017-007, MOV Diagnostic Procedure for QUIKLOOK 3, Rev. 1.1  
 NMP-GM-006-002, Surveillance Program, Rev. 4.1  
 NMP-GM-008, Operating Experience Program, Rev. 23  
 NMP-GM-027, Plant Health Process, Rev. 17  
 NMP-MA-053, SNC Maintenance Department Measuring and Test Equipment Program (M&TE), Rev. 2.2  
 B-GEN-ITPA-004, Conduct of Test, Rev. 11  
 B-GEN-ITPCM-001, Limitorque SMB/SB Motor Operated Valve Component Testing, Rev. 4  
 3-PMS-OTS-20-002, ESFAS 24-Month Trip Actuating Device Operational Test, Rev. B=0.1

#### Work Packages

Work Package SV3-CCS-T0W-1100430, Static Diagnostic Testing of MOV SV3-CCS-PL-V200, Rev. 0  
Work Package SV3-CCS-T0W-1100440, Static Diagnostic Testing of MOV SV3-CCS-PL-V208, Rev. 0  
Work Package SV3-CCS-T0W-1229062, Retest MOV SV3-CCS-PL-V208, Revision 0  
Work Package SV3-CVS-T0W-1054304, Static Diagnostic Testing of MOV SV3-CVS-PL-V003, Rev. 1  
Work Package SV3-PXS-T0W-1045343, Static Diagnostic Testing of MOV SV3-PXS-PL-V117B, Rev. 0  
Work Package SV3-SGS-T0W-1067835, Static Diagnostic Testing of MOV SV3-SGS-PL-V027A  
Work Package SV3-SGS-T0W-1067844, Static Diagnostic Testing of MOV SV3-SGS-PL-V027B  
Work Package SV3-RCS-T0W-1054810, Perform Relief Valve Testing on SV3-RCS-PL-V005 PZR Safety A  
Work Package SV3-RCS-T0W-1235363, Retest 3-RCS-V002B, CWA 3-21-214/238  
Work Package SV3-RCS-T0W-1235364, Retest 3-RCS-V003A, CWA 3-21-237  
Work Package SV3-RCS-T0W-1237680, Retest 3-RCS-V002A, CWA 3-20-2177  
Work Package SV3-RCS-T0W-1067977, Static Diagnostic Testing of MOV SV3-RCS-PL-V003B  
Work Package SV3-RCS-T0W-1067982, Static Diagnostic Testing of MOV SV3-RCS-PL-V011A  
Work Package SV3-RCS-T0W-1067988, Static Diagnostic Testing of MOV SV3-RCS-PL-V012A  
Work Package SV3-RCS-T0W-1067997, Static Diagnostic Testing of MOV SV3-RCS-PL-V013B  
Work Package SV3-RNS-T0W-1237493, Retest 3-RNS-V002B, CWA -3-21-0403  
Work Package SV3-RNS-T0W-1237500, Retest 3-RNS-V001B, CWA 3-21-0406  
Work Package SV3-VBS-T0W-1052705, Static Diagnostic Testing of MOV SV3-VBS-PL-V186, Rev. 1  
Work Package SV3-VBS-T0W-1052709, Static Diagnostic Testing of MOV SV3-VBS-PL-V188, Rev. 1  
Work Package SV3-VFS-T0W-1049092, Static Diagnostic Testing of MOV SV3-VFS-PL-V800B, Rev. 0  
Work Package SV3-VFS-T0W-1049121, Static Diagnostic Testing of MOV SV3-VFS-PL-V800A, Rev. 0

#### Miscellaneous

APP-GW-GF-105, APOG GC: NRC 2015-13: Main Steam Isolation Valve Failure Events, Rev. 0  
SV0-PV64-VMM-001, PV64 Main Steam Isolation Valve (MSIV) Installation, Operation and Maintenance Manual, Rev. 1  
ND-CO-015, Nuclear Development Quality Assurance Conduct of Operations, Rev. 10  
Nuclear Development Quality Assurance Manual, Rev. 20  
Bechtel 26139-000-4MP-T81C-N7102, Control of Measuring and Test Equipment, Rev. 2

#### CRs Written as a Result of Inspection

50113950

## LIST OF ACRONYMS

10 CFR	Title 10 of the Code of Federal Regulations
ASME	American Society of Mechanical Engineers
CAP	corrective action program
CAR	corrective action quality record
COL	Combined License
CR	condition report
DCO	Division of Construction Oversight
DRS	Division of Reactor Safety
EP	emergency preparedness
E-Plan	emergency plan
Green	very low safety significance
HVAC	heating, ventilation, and air conditioning
IDS	Class 1E direct current and uninterruptible power supply system
IMC	inspection manual chapter
IP	inspection procedure
IPT	ITAAC Project Team
IST	inservice testing
IR	inspection report
ICN	ITAAC Closure Notice
ITAAC	Inspections, Tests, Analysis, and Acceptance Criteria
MOV	motor operated valve
MSIV	main steam isolation valve
NCV	non-cited violations
NRC	Nuclear Regulatory Commission
OM	Operations and Maintenance
OpE	operating experience
PARS	Publicly Available Records
PCS	passive containment cooling system
PMS	protection and monitoring system
PST	preservice testing
Rev.	Revision
SL	severity level
SSC	structure, system, or component
UFSAR	Updated Final Safety Analysis Report
VBS	vehicle barrier system

### ITAAC INSPECTED

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
46	2.1.02.11a.i	11.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.1.2-1 to perform active functions.	i) Testing will be performed on the squib valves identified in Table 2.1.2-1 using controls in the MCR without stroking the valve.	i) Controls in the MCR operate to cause a signal at the squib valve electrical leads which is capable of actuating the squib valve.
48	2.1.02.11b.i	11.b) The valves identified in Table 2.1.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	i) Testing will be performed on the squib valves identified in Table 2.1.2-1 using real or simulated signals into the PMS without stroking the valve.	i) The squib valves receive a signal at the valve electrical leads that is capable of actuating the squib valve.
78	2.1.03.07.i	7. The reactor internals will withstand the effects of flow induced vibration. 10. The reactor lower internals assembly is equipped with holders for at least eight capsules for storing material surveillance specimens.	i) Not used per Amendment No. 151. ii) A pre-test inspection, a flow test and a post-test inspection will be conducted on the as-built reactor internals. Inspection of the reactor lower internals assembly for the presence of capsules will be performed.	i) Not used per Amendment No. 151. ii) The as-built reactor internals have no observable damage or loose parts. At least eight capsules are in the reactor lower internals assembly.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
206	2.2.03.10	<p>10. Safety-related displays of the parameters identified in Table 2.2.3-1 can be retrieved in the MCR. 11.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.3-1 to perform their active function(s). 11.b) The valves identified in Table 2.2.3-1 as having PMS control perform their active function after receiving a signal from the PMS. 12.b) After loss of motive power, the remotely operated valves identified in Table 2.2.3-1 assume the indicated loss of motive power position. 13. Displays of the parameters identified in Table 2.2.3-3 can be retrieved in the MCR.</p>	<p>Inspection will be performed for the retrievability of the safety-related displays in the MCR. ii) Stroke testing will be performed on remotely operated valves other than squib valves identified in Table 2.2.3-1 using the controls in the MCR. ii) Testing will be performed on the remotely operated valves other than squib valves identified in Table 2.2.3-1 using real or simulated signals into the PMS. iii) Testing will be performed to demonstrate that remotely operated PXS isolation valves PXS-V014A/B, V015A/B, V108A/B open within the required response times. Testing of the remotely operated valves will be performed under the conditions of loss of motive power. Inspection will be performed for retrievability of the displays identified in Table 2.2.3-3 in the MCR.</p>	<p>Safety-related displays identified in Table 2.2.3-1 can be retrieved in the MCR. ii) Controls in the MCR operate to cause remotely operated valves other than squib valves to perform their active functions. ii) Remotely operated valves other than squib valves perform the active function identified in the table after a signal is input to the PMS. iii) These valves open within 20 seconds after receipt of an actuation signal. After loss of motive power, each remotely operated valve identified in Table 2.2.3-1 assumes the indicated loss of motive power position. Displays identified in Table 2.2.3-3 can be retrieved in the MCR.</p>
209	2.2.03.11b.i	<p>11.b) The valves identified in Table 2.2.3-1 as having PMS control perform their active function after receiving a signal from the PMS.</p>	<p>i) Testing will be performed on the squib valves identified in Table 2.2.3-1 using real or simulated signals into the PMS without stroking the valve.</p>	<p>i) Squib valves receive an electrical signal at the valve electrical leads that is capable of actuating the valve after a signal is input to the PMS.</p>

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
603	2.6.03.04c	<p>4.c) Each IDS 24-hour battery bank supplies a dc switchboard bus load for a period of 24 hours without recharging. 4.d) Each IDS 72-hour battery bank supplies a dc switchboard bus load for a period of 72 hours without recharging. 4.e) The IDS spare battery bank supplies a dc load equal to or greater than the most severe switchboard bus load for the required period without recharging. 4.f) Each IDS 24-hour inverter supplies its ac load. 4.g) Each IDS 72-hour inverter supplies its ac load. 4.h) Each IDS 24-hour battery charger provides the PMS with two loss-of-ac input voltage signals. 5.a) Each IDS 24-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged. 5.b) Each IDS 72-hour battery charger supplies a dc switchboard bus load while maintaining the corresponding battery charged. 5.c) Each IDS regulating transformer supplies an ac load when powered from the 480 V MCC. 6. Safety-</p>	<p>Testing of each 24-hour as-built battery bank will be performed by applying a simulated or real load, or a combination of simulated or real loads which envelope the battery bank design duty cycle. The test will be conducted on a battery bank that has been fully charged and has been connected to a battery charger maintained at <math>270 \pm 2</math> V for a period of no less than 24 hours prior to the test. Testing of each 72-hour as-built battery bank will be performed by applying a simulated or real load, or a combination of simulated or real loads which envelope the battery bank design duty cycle. The test will be conducted on a battery bank that has been fully charged and has been connected to a battery charger maintained at <math>270 \pm 2</math> V for a period of no less than 24 hours prior to the test. Testing of the as-built spare battery bank will be performed by applying a simulated or real load, or a combination of simulated or real loads which envelope the most severe of the division batteries design duty cycle. The</p>	<p>The battery terminal voltage is greater than or equal to 210 V after a period of no less than 24 hours with an equivalent load that equals or exceeds the battery bank design duty cycle capacity. The battery terminal voltage is greater than or equal to 210 V after a period of no less than 72 hours with an equivalent load that equals or exceeds the battery bank design duty cycle capacity. The battery terminal voltage is greater than or equal to 210 V after a period with a load and duration that equals or exceeds the most severe battery bank design duty cycle capacity. Each 24-hour inverter supplies a line-to-line output voltage of <math>208 \pm 2\%</math> V at a frequency of <math>60 \pm 0.5\%</math> Hz. Each 72-hour inverter supplies a line-to-line output voltage of <math>208 \pm 2\%</math> V at a frequency of <math>60 \pm 0.5\%</math> Hz. Two PMS input signals exist from each 24-hour battery charger indicating loss of ac input voltage when the loss-of-input voltage condition is simulated. Each 24-hour battery charger provides an output current of at least 150 A with an output voltage in the</p>

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
		related displays identified in Table 2.6.3-1 can be retrieved in the MCR. 11. Displays of the parameters identified in Table 2.6.3-2 can be retrieved in the MCR.	test will be conducted on a battery bank that has been fully charged and has been connected to a battery charger maintained at $270 \pm 2$ V for a period of no less than 24 hours prior to the test. Testing of each 24-hour as-built inverter will be performed by applying a simulated or real load, or a combination of simulated or real loads, equivalent to a resistive load greater than 12 kW. The inverter input voltage will be no more than 210 Vdc during the test. Testing of each 72-hour as-built inverter will be performed by applying a simulated or real load, or a combination of simulated or real loads, equivalent to a resistive load greater than 7 kW. The inverter input voltage will be no more than 210 Vdc during the test. Testing will be performed by simulating a loss of input voltage to each 24-hour battery charger. Testing of each as-built 24-hour battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads. Testing of each 72-hour as-built	range 210 to 280 V. Each 72-hour battery charger provides an output current of at least 125 A with an output voltage in the range 210 to 280 V. Each regulating transformer supplies a line-to-line output voltage of $208 \pm 2\%$ V. Safety-related displays identified in Table 2.6.3-1 can be retrieved in the MCR. Displays identified in Table 2.6.3-2 can be retrieved in the MCR.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
			<p>battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads. Testing of each as-built regulating transformer will be performed by applying a simulated or real load, or a combination of simulated or real loads, equivalent to a resistive load greater than 30 kW when powered from the 480 V MCC. Inspection will be performed for retrievability of the safety-related displays in the MCR.</p> <p>Inspection will be performed for retrievability of the displays identified in Table 2.6.3-2 in the MCR.</p>	



No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
644	2.6.09.05a	5.a) Security alarm annunciation and video assessment information is displayed concurrently in the central alarm station and the secondary alarm station, and the video image recording with real time playback capability can provide assessment of activities before and after each alarm annunciation within the perimeter area barrier. 15.b) Intrusion detection and assessment systems concurrently provide visual displays and audible annunciation of alarms in the central and secondary alarm stations.	Test, inspection, or a combination of test and inspections of the installed systems will be performed. Tests will be performed on intrusion detection and assessment equipment.	Security alarm annunciation and video assessment information is displayed concurrently in the central alarm station and the secondary alarm station, and the video image recording with real time playback capability provides assessment of activities before and after alarm annunciation within the perimeter barrier. The intrusion detection system concurrently provides visual displays and audible annunciations of alarms in both the central and secondary alarm stations.
647	2.6.09.06	6. The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.	Inspections and analysis will be performed for the vehicle barrier system.	The vehicle barrier system will protect against the DBT vehicle bombs based upon the stand-off distance of the system.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
660	C.2.6.09.03a	<p>3.a) Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area that allows 20 feet of observation on either side of the barrier. Where permanent buildings do not allow a 20-foot observation distance on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier.</p>	<p>Inspections will be performed of the isolation zones in outdoor areas adjacent to the physical barrier at the perimeter of the protected area.</p>	<p>Isolation zones exist in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and allow 20 feet of observation and assessment of the activities of people on either side of the barrier. Where permanent buildings do not allow a 20-foot observation and assessment distance on the inside of the protected area, the building walls are immediately adjacent to, or an integral part of, the protected area barrier and the 20-foot observation and assessment distance does not apply.</p>

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
661	C.2.6.09.03b	<p>3.b) The isolation zones are monitored with intrusion detection equipment that provides the capability to detect and assess unauthorized persons.</p> <p>4. The intrusion detection and assessment equipment at the protected area perimeter: a) detects penetration or attempted penetration of the protected area barrier and concurrently alarms in both the Central Alarm Station and Secondary Alarm Station; b) remains operable from an uninterruptible power supply in the event of the loss of normal power.</p>	<p>Inspections will be performed of the intrusion detection equipment within the isolation zones. Tests, inspections or a combination of tests and inspections of the intrusion detection and assessment equipment at the protected area perimeter and its uninterruptible power supply will be performed. Tests, inspections or a combination of tests and inspections of the intrusion detection and assessment equipment at the protected area perimeter and its uninterruptible power supply will be performed.</p>	<p>The isolation zones are equipped with intrusion detection equipment that provides the capability to detect and assess unauthorized persons. The intrusion detection and assessment equipment at the protected area perimeter: a) detects penetration or attempted penetration of the protected area barrier and concurrently alarms in the Central Alarm Station and Secondary Alarm Station; b) remains operable from an uninterruptible power supply in the event of the loss of normal power.</p>
668	C.2.6.09.08a	<p>8.a) Penetrations through the protected area barrier are secured and monitored. 8.b) Unattended openings (such as underground pathways) that intersect the protected area boundary or vital area boundary will be protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.</p>	<p>Inspections will be performed of penetrations through the protected area barrier. Inspections will be performed of unattended openings that intersect the protected area boundary or vital area boundary.</p>	<p>Penetrations and openings through the protected area barrier are secured and monitored. Unattended openings (such as underground pathways) that intersect the protected area boundary or vital area boundary are protected by a physical barrier and monitored by intrusion detection equipment or provided surveillance at a frequency sufficient to detect exploitation.</p>

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
670	C.2.6.09.09	9. Emergency exits through the protected area perimeter are alarmed and secured with locking devices to allow for emergency egress. 9. Emergency exits through the vital area boundaries are locked, alarmed, and equipped with a crash bar to allow for emergency egress.	Tests, inspections, or a combination of tests and inspections of emergency exits through the protected area perimeter will be performed. Test, inspection, or a combination of tests and inspections of the emergency exits through the vital area boundaries will be performed.	Emergency exits through the protected area perimeter are alarmed and secured by locking devices that allow prompt egress during an emergency. The emergency exits through the vital area boundaries are locked, alarmed, and equipped with a crash bar to allow for emergency egress.
815	3.3.00.10.i	10. The shield building roof and PCS storage tank support and retain the PCS water sources. The PCS storage tank has a stainless steel liner which provides a barrier on the inside surfaces of the tank. Leak chase channels are provided on the tank boundary liner welds.	i) A test will be performed to measure the leakage from the PCS storage tank based on measuring the water flow out of the leak chase collection system.	i) A report exists and concludes that total water flow from the leak chase collection system does not exceed 10 gal/hr.