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

April 1, 2022

Ms. Jamie Coleman
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 05200025/2022002, 05200026/2022002

Dear Ms. Coleman:

On March 31, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Vogtle Electric Generating Plant, Units 3 and 4. The enclosed inspection report documents the inspection results, which the inspectors discussed on April 1, 2022, with Mr. Glen Chick, Vogtle 3 & 4 Executive Vice President, and other members of your staff.

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.

Based on the results of this inspection, no findings of significance were identified.

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).

Enclosure

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

Sincerely,

Bradley J Davis Signed by Davis, Bradley
on 04/01/22

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) 05200025/2022002,
05200026/2022002
w/attachment: Supplemental Information

cc w/ encl: Distribution via LISTSERV

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 – NRC INITIAL TEST PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED INSPECTION REPORTS 05200025/2022002, 05200026/2022002 – Dated April 1, 2022

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ACCESSION NUMBER: ML22091A316

OFFICE	RII: DCO	RII: DCO	RII: DCO	RII: DCO		
NAME	J Eargle	J Parent	C Even	B Davis		
DATE	3/31/2022	3/31/2022	3/31/2022	4/1/2022		

U.S. NUCLEAR REGULATORY COMMISSION
Region II

Docket Numbers:	5200025 5200026
License Numbers:	NPF-91 NPF-92
Report Numbers:	05200025/2022002 05200026/2022002
Licensee:	Southern Nuclear Operating Company, Inc.
Facility:	Vogtle Unit 3 & 4 Combined License
Location:	Waynesboro, GA
Inspection Dates:	January 1, 2022 through March 31, 2022
Inspectors:	J. Eargle, Senior Resident Inspector - Testing, Division of Construction Oversight (DCO) C. Even, Senior Construction Inspector, DCO G. Galletti, Vendor Inspector, Nuclear Reactor Regulation B. Griman, Construction Inspector, DCO B. Kellner, Senior Health Physicist, Division of Reactor Safety (DRS) B. Kemker, Senior Resident Inspector, DCO J. Montgomery, Senior Reactor Inspector, DRS T. Morrissey, Senior Construction Inspector, DCO A. Nielsen, Senior Health Physicist, DRS J. Parent, Resident Inspector, DCO R. Patterson, Physical Security Inspector, DRS M. Riley, Senior Construction Inspector, DCO S. Sanchez, Senior Emergency Preparedness Inspector, DRS W. Schuster, Resident Inspector, DCO
Approved by:	Bradley J. Davis, Chief Construction Inspection Branch 2 Division of Construction Oversight

SUMMARY OF FINDINGS

Inspection Report (IR) 05200025/2022002, 05200026/2022002; January 1- March 31, 2022; 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. The significance of most findings are 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

None

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. Additionally, preoperational testing of the protection and monitoring system and IDS was performed after component testing to demonstrate that the equipment and systems performed in accordance with the design criteria.

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 continued with open vessel testing activities which included taking a suction from the spent fuel pool and cask loading pit and discharging to the reactor vessel through the direct vessel injection line. The integrated leak rate test was 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.

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

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

- 65001.C-02.02 - Construction Test Observation
- 65001.C-A4.13 - Instrumentation & Control Components & Systems

The inspectors used appropriate portions of the IP to observe the licensee's performance of the following component test procedures to verify if controls in the main control room (MCR) operated to cause a signal at the squib valve electrical leads which were capable of actuating the squib valve. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the Updated Final Safety Analysis Report (UFSAR) and the ITAAC.

- B-GEN-ITPCI-039-F131, RCS-PL-V004B-I1-A Component Test 1, Rev. 1
- B-GEN-ITPCI-039-F135, RCS-PL-V004B-I2-A Component Test 1, Rev. 1
- B-GEN-ITPCI-039-F147, RCS-PL-V004D-I1-A Component Test 1, Rev. 1

1A02 (Unit 3) ITAAC Number 2.1.02.11a.ii (47) / Family 10C

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.11a.ii (47). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test work orders (WOs) used to verify if the remotely operated valves having protection and monitoring system (PMS) control performed their active function after receiving a signal from the PMS. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- SV3-PMS-T0W-1261022, PMS CIM Component Retest - ILCA01 Components, Rev. 0
- SV3-RCS-T0W-1254779, PMS CIM Component Test – SV3-RCS-PL-V150A, Rev. 0
- SV3-RCS-T0W-1254780, PMS CIM Component Test – SV3-RCS-PL-V150B, Rev. 0
- SV3-RCS-T0W-1254781, PMS CIM Component Test – SV3-RCS-PL-V150C, Rev. 0
- SV3-RCS-T0W-1254782, PMS CIM Component Test – SV3-RCS-PL-V150D, Rev. 0

b. Findings

No findings were identified.

1A03 (Unit 3) ITAAC Number 2.1.02.11a.ii (47) / Family 10C

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.11a.ii (47). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedures used to verify if PMS cabinet and divisional diagnostics tests assessed that the software was loaded on to the

cabinets successfully, no software or hardware errors were present, intra cabinet communication links were operable, and the cabinets were communicating the cabinet health status to the interface test processor. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-001-011, PMS Cabinets, Rev. 4
- B-GEN-ITPCI-001, PMS Cabinets – Cabinet Diagnostics, Rev. 1.2
- B-GEN-ITPCI-001-012, PMS Cabinets – Division Diagnostics, Rev. 1

1A04 (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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedures used to verify if PMS cabinet and divisional diagnostics tests assessed that the software was loaded on to the cabinets successfully, no software or hardware errors were present, intra cabinet communication links were operable, and the cabinets were communicating the cabinet health status to the interface test processor. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-001-011, PMS Cabinets, Rev. 4
- B-GEN-ITPCI-001, PMS Cabinets – Cabinet Diagnostics, Rev. 1.2
- B-GEN-ITPCI-001-012, PMS Cabinets – Division Diagnostics, Rev. 1

1A05 (Unit 3) ITAAC Number 2.1.02.13b (64) / Family 10D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.13b (64). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test WOs to verify if the reactor coolant pump (RCP) breaker trips after receiving a signal from the PMS. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- SV3-PMS-T0W-1261029, PMS CIM Component Retest - 1LCC01 Components, Section 4.5, ECS-ES-31 (RCP 1A DIV C Switchgear), Rev. 1

- SV3-PMS-T0W-1261029, PMS CIM Component Retest - 1LCC01 Components, Section 4.6, ECS-ES-31 (RCP 1B DIV C Switchgear), Rev. 1
- SV3-PMS-T0W-1261029, PMS CIM Component Retest - 1LCC01 Components, Section 4.7, ECS-ES-31 (RCP 2A DIV C Switchgear) Rev. 1
- SV3-PMS-T0W-1261029, PMS CIM Component Retest - 1LCC01 Components, Section 4.8, ECS-ES-31 (RCP 2B DIV C Switchgear), Rev. 1

b. Findings

No findings were identified.

1A06 (Unit 3) ITAAC Number 2.2.01.09 (110) / Family 10A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.09 (110). The inspectors used the following NRC IP/sections to perform this inspection:

- 65001.C-02.02 - Construction Test Observation
- 65001.C-02.03 - Construction Test Record Review

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test WO and test procedure used to verify if the remotely operated containment isolation valves having PMS control performed their active function after receiving a signal from the PMS. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- SV3-PMS-T0W-1261022, PMS CIM Component Retest - ILCA01 Components, Rev. 0
- B-GEN-ITPCI-039-F003, CAS-PL-V014 Component Test, Rev. 2

The inspectors used the appropriate portions of the IP to review the licensee's test results to verify if these remotely operated containment isolation valves having PMS control performed their active function after receiving a signal from the PMS. The test packages were reviewed as part of the ITAAC Technical Report to verify if the test results satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

- SV3-CNS-ITR-802110, Unit 3 Testing Results of Containment Isolation Valves, ITAAC 2.2.01.09 (Item 10.b), Rev. 0

b. Findings

No findings were identified.

1A07 (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 IP/sections to perform this inspection:

- 65001.C-02.02 - Construction Test Observation
- 65001.C-02.03 - Construction Test Record Review

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedure used to verify if remotely operated valves other than squib valves could perform their active safety function. 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-F074, PXS-PL-V014B-S1 Component Test, Rev. 1

The inspectors used the appropriate portions of the IP to review the licensee's test results of the passive core cooling system valves to verify the remotely operated valves having PMS control performed their active function and opened within 20 seconds after receiving a signal from PMS and assumed the loss of motive power position. The test packages were reviewed as part of the ITAAC Technical Report to verify if the test results satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

- SV3-PXS-ITR-802206, Unit 3 Inspection results of ITAAC 2.2.03.10 (Item 11b), Rev. 0
- SV3-PXS-ITR-803206, Unit 3 Recorded Results of Remotely Operated PXS Valves Response to Loss of Motive Power: ITAAC 2.2.03.10 (Item 12b), Rev. 0
- ND-21-1129, ITAAC Closure Notice on Completion of ITAAC Item 2.2.03.10 [Index Number 206], 03/08/2022

b. Findings

No findings were identified.

1A08 (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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test WOs used to verify if the PMS blocks were automatically removed when the test signal reached the specified limit. The test

was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- SV3-PMS-T0W-1229658 Attachment B, P-19 Automatic Block Removal Test, Rev. 1
- SV3-PMS-T0W-1229658, Attachment A, P-11 / P-12 Automatic Block Removal Test, Rev. 2
- SV3-PMS-T0W-1229658, Attachment A, P-11 / P-12 Automatic Block Removal Test, Rev. 3

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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedure used to verify if an actuation signal to the actuated device(s) was generated by the MCR fixed position controls. 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-006, Main Control Room & Remote Shutdown Room, Rev. 3

b. Findings

No findings were identified.

1A10 (Unit 3) ITAAC Number 2.5.02.06a.ii (530) / Family 10C

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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee’s performance of the following component test procedures used to verify if PMS cabinet and divisional diagnostics tests assessed that the software was loaded on to the

cabinets successfully, no software or hardware errors were present, intra cabinet communication links were operable, and the cabinets were communicating the cabinet health status to the interface test processor. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-001-011, PMS Cabinets, Rev. 4
- B-GEN-ITPCI-001, PMS Cabinets – Cabinet Diagnostics, Rev. 1.2
- B-GEN-ITPCI-001-012, PMS Cabinets – Division Diagnostics, Rev. 1

1A11 (Unit 3) ITAAC Number 2.5.02.08a.ii (540) / Family 10C

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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedures used to verify if PMS cabinet and divisional diagnostics tests assessed the software was loaded on to the cabinets successfully, no software or hardware errors were present, intra cabinet communication links were operable, and the cabinets were communicating the cabinet health status to the interface test processor. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-001-011, PMS Cabinets, Rev. 4
- B-GEN-ITPCI-001, PMS Cabinets – Cabinet Diagnostics, Rev. 1.2
- B-GEN-ITPCI-001-012, PMS Cabinets – Division Diagnostics, Rev. 1

1A12 (Unit 3) ITAAC Number 2.5.02.08b.ii (543) / Family 10C

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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedures used to verify if PMS cabinet and divisional diagnostics tests assessed that the software was loaded on to the cabinets successfully, no software or hardware errors were present, intra cabinet communication links were operable, and the cabinets were communicating the cabinet health status to the interface test processor. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-001-011, PMS Cabinets, Rev. 4
- B-GEN-ITPCI-001, PMS Cabinets – Cabinet Diagnostics, Rev. 1.2
- B-GEN-ITPCI-001-012, PMS Cabinets – Division Diagnostics, Rev. 1

1A13 (Unit 3) ITAAC Number 2.5.02.09d (548) / Family 10C

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 IP/section to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following component test procedures used to verify if PMS cabinet and divisional diagnostics tests assessed that the software was loaded on to the cabinets successfully, no software or hardware errors were present, intra cabinet communication links were operable, and the cabinets were communicating the cabinet health status to the interface test processor. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- B-GEN-ITPCI-001-011, PMS Cabinets, Rev. 4
- B-GEN-ITPCI-001, PMS Cabinets – Cabinet Diagnostics, Rev. 1.2
- B-GEN-ITPCI-001-012, PMS Cabinets – Division Diagnostics, Rev. 1

1A14 (Unit 3) ITAAC Number 2.6.09.05c (646) / Family 17F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.05c (646). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.17-02.17 - Communication Requirements

The inspectors used appropriate portions of the IP to observe the licensee's performance of the procedures used to test the security radios and communications systems to verify if the alarm stations were able to communicate with onsite and offsite response personnel. The following were observed to verify if the central and secondary alarm stations satisfied the Vogtle 3 security plan and the ITAAC.

- SV3-SES-ITR-800646, ITAAC 646-SES Alarm Station Single Act Survivability, Rev. 0
- SV3-SES-ITR-800647, ITAAC 647 Vehicle Barrier System Inspection, Rev. 1
- SV3-SES-ITR-800645, Unit 3 ITAAC 645 Walkdown Inspection: ITAAC 2.6.09.05b, Rev. 0
- SVO-SES-ZOC-8000000, Vogtle Site Security Vehicle Barrier System Analysis, Rev. 1

- DOEJ-V34-VBS-SEC001, Comparative Analysis of Vogtle 3 Current Topography Grade Configuration to the Design Requirements for the Vehicle Barrier System (VBS), Rev. 1
- 90017-C, Security Radio and Communication Systems, Rev. 34

The inspectors used appropriate portions of the IP to perform walkdowns and review acceptance testing documents to determine if the central and secondary alarm stations were designed and equipped such that, in the event of a single act, that the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to detect and assess alarms and communicate with onsite and offsite response personnel in accordance with the design basis threat of radiological sabotage. The following test results were reviewed to verify if they satisfied the applicable quality and technical requirements of the Vogtle 3 security plan, and the ITAAC.

- Acceptance Testing documentation for Vehicle Barrier Systems (VBS) and Communications Systems
- SV3-SES-ITR-800646, ITAAC 646-SES Alarm Station Single Act Survivability, Rev. 0
- SV3-SES-ITR-800647, ITAAC 647 Vehicle Barrier System Inspection, Rev. 1
- SV3-SES-ITR-800645, Unit 3 ITAAC 645 Walkdown Inspection: ITAAC 2.6.09.05b, Rev. 0
- SVO-SES-ZOC-8000000, Vogtle Site Security Vehicle Barrier System Analysis, Rev. 1
- DOEJ-V34-VBS-SEC001, Comparative Analysis of Vogtle 3 Current Topography Grade Configuration to the Design Requirements for the Vehicle Barrier System, Rev. 1
- 90017-C, Security Radio and Communication Systems, Rev. 34

b. Findings

No findings were identified.

1A15 (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 IP/section to perform this inspection:

- 65001.17-02.08 - Vehicle Control Measures

The inspectors used appropriate portions of the IP to review the blast analysis and acceptance testing documents to determine if the vehicle barrier system will protect against the design basis threat vehicle bombs based upon the stand-off distance of the system. The following documents were reviewed to verify if they satisfied the applicable quality and technical requirements of the Vogtle 3 security plan, and the ITAAC.

- Acceptance Testing documentation for Vehicle Barrier System

- SV3-SES-ITR-800647- ITAAC 647 Vehicle Barrier System Inspection, Rev. 1
- APP-XV01-ZOC-001- AP 1000 VBS Standoff Distances for a Range of Blast Scenarios, Rev. 0
- SVO-SES-ZOC-8000000- Vogtle Site Security Vehicle Barrier System Analysis, Rev. 1
- DOEJ-V34-VBS-SEC001- Comparative Analysis of Vogtle 3 Current Topography Grade Configuration to the Design Requirements for the Vehicle Barrier System, Rev. 1.0
- ABS-Consulting Calculation ID 4212670-C-102, Units 3 & 4 Vehicle Barrier Design for Pedestrian Bridge, Rev. 2
- ABS-Consulting Calculation ID 4212670-C-103- VBID Blast Effects Assessment of Security Assets, Rev. 1
- Thornton Tomasetti Calculation ID-SCAL-001-Kontek MBRE Blast Analysis, Rev. 1

b. Findings

No findings were identified.

1A16 (Unit 3) ITAAC Number 2.6.09.08 (650) / Family 17C

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.08 (650). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.17-02.06 - Illumination

The inspectors used appropriate portions of the IP to observe the acceptance testing of the illumination in isolation zones within the protected area to verify if they were 0.2-foot candles measured horizontally at ground level or, alternatively, sufficient to permit observation. The inspectors observed these activities to verify if the illumination zones within the protected area satisfied the applicable technical and quality requirements of the Vogtle 3 security plan and the ITAAC.

- SV3-SES-ITR-800650, ITAAC 650 SES Isolation Zone and Protected Area Illumination, Rev. 0
- Vogtle Electric Generating Units 3 and 4 Physical Security Plan, Rev. 6
- 90206-C, Protected Area Lighting Systems, Rev. 15
- Security Standing Order-V-SSO-2021-04, ITAAC Test for Protected Area Lighting Systems, dated December 16, 2021

The inspectors used appropriate portions of the IP to review the acceptance testing documents to determine if the illumination in isolation zones and exterior areas within the protected area were 0.2-foot candles measured horizontally at ground level or, alternatively, sufficient to permit observation. The test results were reviewed to verify if they satisfied the applicable quality and technical requirements of the Vogtle 3 security plan and the ITAAC.

- SV3-SES-ITR-800650, ITAAC 650 SES Isolation Zone and Protected Area Illumination, Rev. 0
- Vogtle Electric Generating Units 3 and 4 Physical Security Plan. Rev. 6
- 90206-C, Protected Area Lighting Systems, Rev. 15
- Security Standing Order-V-SSO-2021-04, ITAAC Test for Protected Area Lighting Systems, dated December 16, 2021

b. Findings

No findings were identified.

1A17 (Unit 3) ITAAC Number 2.6.09.13a (652) / Family 17D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.13a (652). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.17-02.17 - Communication Requirements

The inspectors used appropriate portions of the IP to observe the licensee's performance and review the following acceptance testing results to determine if the (a) the central and secondary alarm stations were equipped with conventional (landline) telephone service with the MCR and local law enforcement authorities and (b) the central and secondary alarm stations were equipped with the capability to continuously communicate with security officers, watchman, armed response individuals, or any security personnel that have responsibilities during a contingency event. The inspectors reviewed acceptance testing documents to verify if they satisfied the technical and quality requirements of the Vogtle 3 security plan and the ITAAC.

- SV3-SES-ITR-800652, ITAAC 652 SES Communications, Rev. 0
- 3-SES-ITAAC 652/654, UPS01-SES Communications on UPS, Rev. 1
- 90017-C, Security Radio and Communications Systems, Rev. 34

b. Findings

No findings were identified.

1A18 (Unit 3) ITAAC Number 2.6.09.13c (654) / Family 17D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.13c (654). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.17-02.17 - Communication Requirements

The inspectors used appropriate portions of the IP to review the acceptance testing results to verify if the non-portable communication devices (including conventional telephones systems) in the central and secondary alarm stations were wired to an independent power supply that enabled the system to remain operational in the event of loss of normal power. The results were reviewed to verify if they satisfied the technical and quality requirements of the Vogtle 3 security plan and the ITAAC.

- SV3-SES-ITR-800654, SES Communications on UPS: ITAAC 2.6.09.13c, Rev. 0
- SV3-SES-ITR-800652, ITAAC 652 SES Communications, Rev. 0
- 3-SES-ITAAC 652/654, UPS01-SES Communications on UPS, Rev. 1
- 90017-C, Security Radio and Communications Systems, Rev. 34

b. Findings

No findings were identified.

1A19 (Unit 3) ITAAC Number 2.6.09.15a (655) / Family 17D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.09.15a (655). The inspectors used the following NRC IP/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 IP to observe acceptance testing and review acceptance testing documents to determine if (a) a report existed and concluded that security alarm devices, including transmission lines to annunciators, were tamper indicating and self-checking (e.g., an automatic indication was provided when failure of the alarm system or a component occurs, or when the system was on standby power) and that alarm annunciation indicated the type of alarm (e.g., intrusion alarms and emergency exit alarms) and location and (b) a report existed and concluded that equipment was capable of recording each onsite security alarm annunciation, including the location of the alarm, false alarm, alarm check, and tamper indication; and the type of alarm, location, alarm circuit, date, and time. The tests were observed, and

documents were reviewed to verify if they satisfied the applicable quality and technical requirements of the Vogtle 3 security plan, and the ITAAC.

- SV3-SES-ITR-800655, ITAAC 655 Alarm and Circuit Supervision Testing, Rev. 0
- SV3-SES-ITR-800644, Intrusion Detection/Video Assessment Testing, Rev. 0
- SV3-SES-ITR-800670, Protected Area Perimeter and Vital Area Boundary Emergency Exit Test, Rev. 0
- 3-SES-ITAAC-655 FEP-U3, FEP Alarm and Circuit Supervision Test, Rev. 1
- 90200-C, Security Seven Day Vital Area Portal Inspections, Rev. 36
- V-SSO-2021-01-7, Day Testing of the Security Perimeter and Duress Alarm Systems, Rev. 1.1
- 3-SES-MIS-001, Site Security System Perimeter Intrusion Detection Tests, Rev. 4

b. Findings

No findings were identified.

1A20 (Unit 3) ITAAC Number C.2.6.09.07 (667) / Family 17A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number C.2.6.09.07 (667). The inspectors used the following NRC IP/sections to perform this inspection:

- 65001.17-02.02 - Vital Areas/Vital Area Barriers
- 65001.17-02.11 - Vital Area Access Controls

The inspectors used appropriate portions of the IP to perform walkdowns and review the following acceptance testing documents to determine if (a) vital equipment was located within a protected area such that access to vital equipment physical barriers requires passage through the protected area perimeter barrier, (b) all vital equipment was located only within a vital area, and (c) vital equipment was located within a protected area such that access to vital equipment requires passage through the vital area barrier. The walkdowns were performed and documents were reviewed to verify if they satisfied the applicable quality and technical requirements of the Vogtle 3 security plan, and the ITAAC.

- SV3-SES-ITR-800667, Vital Equipment Location and Access Inspections, Rev. 0
- ND-20-0913, ITACC Closure Notification on Completion of ITAAC C.2.6.09.02, dated August 11, 2020
- ND-21-0715, Resubmittal of ITAAC Closure Notification on Completion of ITAAC C.2.6.09.05a, dated August 3, 2021
- ND-21-0886, ITAAC Closure Notification of Completion of ITAAC C.2.6.09.3b, dated August 8, 2021
- SV3-SES-ITR-800822, Vital Area Portal Inspections, Rev. 0

b. Findings

No findings were identified.

1A21 (Unit 3) ITAAC Number 3.2.00.01e (744) / Family 16F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.2.00.01e (744). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.23 - Inspection of Human Factors Engineering Verification and Validation ITAAC

The inspectors reviewed the licensee's human factors engineering (HFE) program processes as well as the licensee's engineering change process to verify if the processes adequately considered human factor deficiencies in accordance with the Westinghouse Electric Company's and the licensee's design control processes and procedures. The inspectors sampled the licensee's engineering change (RECs) and engineering service requests (ESRs) to verify if the licensee's process for reviewing, evaluating, and dispositioning proposed engineering modifications or other service requests to address human engineering deficiencies (HEDs) or other design considerations was conducted in conformance with the Westinghouse Electric Company (WEC) and the licensee's design control processes and procedures.

The inspectors discussed the human factors engineering verification and validation (V&V) impact review conducted by WEC and the licensee staff to understand the methodology used to assess design change driver impact on the HFE V&V results. This impact review consisted of a review of the change description, RECs, ESRs, impacted documents or the design change proposals or engineering and design coordination reports to determine detailed impact to HFE and a comparison of the detailed impacts against the ISV results reports and ISV retest detailed scenario descriptions to determine if the affected HSI was used as a success path in a scenario or used to resolve an HED. Changes that had no negative impacts to ISV or ISV Retest were dispositioned and documented. Those with potential negative impacts on ISV or ISV retest conclusions were evaluated to determine if additional ISV retest was needed. Additionally, WEC and the licensee performed an independent quality review by selecting a sample of 10% of the RECs that were previously designated as either having an impact on ISV or not having an impact and determining if the documented resolution path was satisfactory.

The inspectors reviewed letters LTR-GIC-WAPP-21-019 Rev. 1, "List ESRs and RECs requiring review by the Westinghouse Human Factors Engineering team and their review," and LTR-GIC-WAPP-20-008, "10% Quality Review of the impact reviews for the Instrumentation and Controls Projects with regards to the Human Factors Engineering Integrated System Validation," Rev. 1, which captured the results of the HFE Integrated V&V impact reviews, to determine if adequate implementation of the HFE Integrated V&V impact review processes and the independent assessment of those results were performed in accordance with established administrative

requirements. The inspectors independently reviewed a sample of RECs and ESRs, including the proposed or completed dispositions, potential impacts on the ISV testing and ISV retesting results, and planned resolution for remaining issues, to verify if they provided adequate objective evidence to justify and support the conclusions made in the task letters and summary report.

b. Findings

No findings were identified.

1A22 (Unit 3) 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 IP/section to perform this inspection:

- 65001.17-02.03 - Protected Area Barrier

The inspectors used appropriate portions of the IP to conduct walkdowns and review acceptance testing documents to determine if (a) penetrations and openings through the protected area barrier are secured and monitored and (b) 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. The walkdowns were conducted and documents were reviewed to verify if they satisfied the applicable quality and technical requirements of the Vogtle 3 security plan, and the ITAAC.

- SV3-SES-ITR-800668, Inspection of Unattended Openings Intersecting the Protected Area or Vital Area Boundaries, Rev. 0
- SV3-SES-ITR-800668, Inspection of Unattended Openings Intersecting the Protected Area or Vital Area Boundaries, Attachment A, Rev. 0
- SV3-SES-ITR-800646, SES Alarm Station Single Act Survivability- ITAAC 2.6.09.05c, Rev. 0

b. Findings

No findings were identified.

1A23 (Unit 3) ITAAC Number 2.2.05.09c (877) / Family 08C

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.05.09c (877). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.C-02.02 - Construction Test Observation

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following procedure used to partially verify MCR load shed panels could perform their active safety function to deenergize MCR loads after receiving a signal from 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-F226, VES-EP-01A Component Test, Rev. 3
- B-GEN-ITPCI-039-F228, VES-EP-02A Component Test, Rev. 3

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 to test if the passive containment cooling system was capable of transferring heat to the safety-related heat sink for events resulting in significant increase in containment pressure and temperature. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the UFSAR.

- 3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Section 4.6, Long-Term Containment Cooling to SFP, Rev. 2
- 3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Section 4.7.1, Long-Term Containment Cooling to Distribution Bucket, Rev. 2
- 3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Section 4.10, PCCWST 72 Hour Drain Down Test, Rev. 2
- SV3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Section 4.1, PCS Annulus Drain Test, Version 2.0

b. Findings

No findings were identified.

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 for performing the channel calibrations for passive core cooling system level transmitters. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the UFSAR.

- B-GEN-ITPCI-019-209, PMS Channel Calibration Test for 3-PXS-LT051, Rev. 3
- B-GEN-ITPCI-019-237, PMS Channel Calibration Test for 3-PXS-LT052, Rev. 2

b. Findings

No findings were identified.

1P03 Pre-operational Testing

- 70702-02.05 - Test Results Review

a. Inspection Scope

The inspectors used the appropriate portions of the IP to review the results of the following procedures to determine whether appropriate leakage testing performed on each containment penetration satisfied the applicable quality and technical requirements of the UFSAR.

- 3-CNS-ITPP-502, Containment Penetration Leak Rate (Type B) Preoperational Test, Rev. 3
- 3-CNS-ITPP-503, LLRT Containment Leak Rate Type C, Rev. 3

b. Findings

No findings were identified.

1P04 Pre-operational Testing

- 70702-02.04 - Test Witnessing

a. Inspection Scope

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following test package used to verify if the residual heat removal pumps had adequate net positive suction head and flow rate to recirculate water to and from the spent fuel pool and circulate water from the cask loading pit to the spent fuel pool. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR.

- 4-RNS-ITPP-501, Normal Residual Heat Removal System Preoperational Test Procedure, Section 4.5, Spent Fuel Pool Flow Test, Rev. 1
- 4-RNS-ITPP-501, Normal Residual Heat Removal System Preoperational Test Procedure, Section 4.6, Cask Loading Pit Recirculation Flow Test, Rev. 1
- 4-RNS-ITPP-501, Normal Residual Heat Removal System Preoperational Test Procedure, Section 4.4.1, Residual Heat Removal Pump A RCS Recirculation, Rev. 1.0
- 4-RNS-ITPP-501, Normal Residual Heat Removal System Preoperational Test Procedure, Section 4.4.3, Dual Residual Heat Removal Pump Recirculation of the RCS, Rev. 1.0

b. Findings

No findings were identified.

1P05 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 leakage for each containment isolation valve or set of isolation valves was appropriately captured. The tests were observed to verify if they satisfied the applicable quality and technical requirements of the UFSAR.

- 4-CNS-ITPP-503, LLRT Containment Leak Rate Test Type C, Attachment 7, 4-CVS-PY-C03 (CVS Makeup Ctmt Pen) Type C Test, Rev. 1
- 4-CNS-ITPP-503, LLRT Containment Leak Rate Test Type C, Attachment 22, 4-VFS-PY-C02 (VFS Exh Ctmt Pen) Type C Test, Rev. 1
- 4-CNS-ITPP-503, LLRT Containment Leak Rate Test Type C, Attachment 23, 4-VWS-PY-C01 (VWS Chilled Water Return) Type C Test, Rev. 1
- 4-CNS-ITPP-503, LLRT Containment Leak Rate Test Type C, Attachment 24, 4-VWS-PY-C02 (VWS Chilled Water Supply) Type C Test, Rev. 1

- 4-CNS-IPTT-503, LLRT Containment Leak Rate Test Type C, Attachment 8, 4-CVS-PY-C04 (CVS Addition CTMT Pen) Type C Test, Rev. 1
- 4-CNS-IPTT-503, LLRT Containment Leak Rate Test Type C, Attachment 6, 4-CVS-PY-C02 (CVS Letdown CTMT Pen) Type C Test, Rev. 1
- 4-CNS-IPTT-503, LLRT Containment Leak Rate Test Type C, Attachment 1, 4-CAS-PY-C02 (Instrument air CNMT Pen) Type C Test, Rev. 1

b. Findings

No findings were identified.

2. SAFEGUARDS PROGRAMS

Cornerstones: Security Programs for Construction Inspection and Operations

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

2P01 Security (operational)

a. Inspection Scope

The inspectors reviewed 39 samples across the licensee's equipment performance, testing, and maintenance program to verify and assess implementation of the licensee's testing and maintenance program for security equipment in accordance with NRC-approved security plans and regulatory requirements. The inspectors reviewed the licensee's testing and maintenance program to verify if had been appropriately developed and is being effectively implemented to assure the functionality and reliability of all security equipment necessary for intrusion detection and assessment, the search process, and a rapid response to a design basis threat and other contingencies. The inspectors reviewed the licensee's physical protection program associated with this sample to verify if the program was designed and implemented, or was prepared to be implemented, to meet the general performance objective of 10 CFR 73.55(b).

b. Findings

No findings were identified.

3. OPERATIONAL READINESS

Cornerstones: Inspection/Testing, Operational Programs

IMC 2503, ITAAC - Related Work Inspections

3T01 (Unit 3) ITAAC Number 2.1.02.11a.i (46) / Family 07D

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 IPs/sections to perform this inspection:

- 65001.D-02.02-Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if the PMS squib valve controllers functioned as designed. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-PMS-ITPP-522, PMS Squib Valve Controller Performance Preoperational Test, Rev. 2

b. Findings

No findings were identified.

3T02 (Unit 3) ITAAC Number 2.1.02.11b.i (48) / Family 07D

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.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if the PMS squib valve controllers functioned as designed. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-PMS-ITPP-522, PMS Squib Valve Controller Performance Preoperational Test, Rev. 2

b. Findings

No findings were identified.

3T03 (Unit 3) ITAAC Number 2.2.01.11a.iii (116) / Family 07D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.11a.iii (116). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if motor operated valves performed their safety function to change position under preoperational test conditions. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-VFS-ITPP-501, Containment Air Filtration System Preoperational Test Procedure, Rev. 1

b. Findings

No findings were identified.

3T04 (Unit 3) ITAAC Number 2.2.01.11a.iv (117) / Family 07D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.11a.iv (117). The inspectors used the following NRC IP/sections to perform this inspection:

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

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedures used to verify if check valves CCS-PL-V201, VWS-PL-V062, VFS-V803A, and VFS-V803B performed their safety function to change position. The tests were observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-DWS-OTS-17-001, Demineralized Water Transfer and Storage System Check Valve Exercise, Rev. 0
- 3-VWS-ITPP-501-V4.0-01, TPC for Central Chilled Water System Preoperational Test, Rev. 4
- 3-VFS-TOP-001, Containment Air Filtration System Check Valve Set Pressure Test and Exercise Test, Rev. 1

The inspectors used the appropriate portions of the IP to review the licensee's test results of check valves CCS-PL-V201, FPS-PL-V052, and SFS-PL-V037 to verify if they performed their safety function to change position. The test packages were reviewed as part of the ITAAC Technical Report to verify if the test results satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

- SV3-CNS-ITR-801117, Unit 3 Recorded Results of CCS Check Valves Position: ITAAC 2.2.01.11a.iv, NRC Index Number: 117, Rev. 0

b. Findings

No findings were identified.

3T05 (Unit 3) ITAAC Number 2.2.02.07b.i (138) / Family 06D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.02.07b.i (138). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if there was adequate wetted coverage measured at the spring line for each of the three standpipe levels. 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

b. Findings

No findings were identified.

3T06 (Unit 3) ITAAC Number 2.2.03.11b.i (209) / Family 07D

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 the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if the PMS squib valve controllers functioned as designed. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-PMS-ITPP-522, PMS Squib Valve Controller Performance Preoperational Test, Rev. 2

b. Findings

No findings were identified.

3T07 (Unit 3) ITAAC Number 2.3.04.04.ii (331) / Family 15D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.3.04.04.ii (331). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if water is simultaneously discharged from each of the two highest fire-hose stations in plant areas containing safety-related equipment at not less than 75 gpm when supplied from the passive containment cooling system water storage tank. 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 PCCWST Preoperational Test Procedure, Rev. 2

b. Findings

No findings were identified.

3T08 (Unit 3) ITAAC Number 2.5.02.06a.ii (530) / Family 15D

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.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if the PMS two-out-of-four initiation logic reverted to a two-out-of-three coincidence logic if one of the four channels was bypassed. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-PMS-ITPP-521, Protection and Safety Monitoring System Logic Test Preoperational Test Procedure, Rev. 3

b. Findings

No findings were identified.

3T09 (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 IP/section to perform this inspection:

- 65001.D-02.03 - Test Results Review

The inspectors used the appropriate portions of the IP to review the licensee's test results of the IDS to determine whether capacity testing performed on each IDS battery satisfied the applicable quality and technical requirements of the UFSAR and ITAAC.

- 3-IDS-ITPP-501, Class 1E DC and UPS Preoperational Test, Rev. 6

b. Findings

No findings were identified.

3T10 (Unit 3) ITAAC Number 2.6.03.04.i (609) / Family (08D)

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.6.03.04.i (609). The inspectors used the following NRC inspection procedures (IPs)/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if the operating voltage at each Class 1E motor operated valve was greater than or equal to the minimum design voltage requirements necessary to start and operate the valve. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 3-IDS-ITPP-503, Class 1E DC and UPS System MOV Voltage Test, Rev. 2

b. Findings

No findings were identified.

3T11 (Unit 3) ITAAC Number E.3.9.03.00.02 (848) / Family 18D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number E.3.9.03.00.02 (848). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe if the emergency response data system was able to successfully complete a data transfer to the NRC operations center. The test was observed to verify if the test it had satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

3T12 (Unit 4) ITAAC Number 2.2.01.07.i (107) / Family 11D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.07.i (107). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.11-02.10 - Containment Testing
- 65001.D-02.02 - Test Witnessing

The inspectors used appropriate portions of the IPs to observe the licensee's performance of the following preoperational test procedure used to verify if the leakage from containment for the integrated leak rate test was less than the allowable leak rate. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 4-CNS-ITPP-501, Containment Integrated Leak Rate Test (Type A), Rev. 1

b. Findings

No findings were identified.

3T13 (Unit 4) ITAAC Number 2.2.03.08c.i.02 (178) / Family 06D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.08c.i.02 (178). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.02 - Test Witnessing

The inspectors used the appropriate portions of the IP to observe the licensee's performance of the following preoperational test procedure used to verify if the injection line flow resistance from the accumulator to the reactor vessel was within specified limits. The test was observed to verify if the test satisfied the applicable quality and technical requirements of the UFSAR and the ITAAC.

- 4-PXS-ITPP-502, PXS Accumulator Mapping and Line Resistance Test, Rev. 1

b. Findings

No findings were identified.

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

3P01 Fire Protection Program

- 64705-02.01 - Implemented Operational Feature of the FPP
- 64705-02.02 - Adequacy and operational readiness

a. Inspection Scope

The inspectors reviewed aspects of the licensee's fire protection program (FPP) to determine if reasonable assurance existed at the time of the inspection to verify if the reviewed aspects of the program will meet the requirements of 10 CFR 50.48, Fire Protection, once fully implemented after the 10 CFR 52.103(g) finding. The inspectors reviewed the site's FPP document, fire hazards analysis (FHA), and fleet and site-specific procedures to determine if the requirements of BTP CMEB 9.5-1 were incorporated into the FPP.

Specifically, the inspectors reviewed various aspects of the FPP to determine that:

- the fire hazards analysis (FHA) properly identifies the fire hazards, quantifies combustibles, and identifies ignition sources,
- the site's FPP contains requirements to perform periodic surveillances on FP and post-fire safe shutdown equipment, systems, or features, and the surveillances contain adequate requirements to verify functionality of fire protection structures, systems, and components (SSCs),
- the site's FPP requires the implementation of compensatory measures for FP SSCs that are considered nonfunctional,
- circuit breaker coordination and fuse protection have been properly analyzed and could protect the power source of the designated redundant or alternative safe shutdown system/equipment,
- the staffing levels and qualifications are appropriate and in accordance with the approved FPP,
- the fire brigade is appropriately equipped and that the program is adequate to ensure that the fire brigade equipment is adequately tested and maintained.

- firefighting pre-plans identify the plant areas containing SSCs important to safety and the locations and layout of equipment, and that the pre-fire planning identifies hazards as necessary, and
- firefighting pre-plans prepares the fire brigade members to overcome potential security related access problems and health physics related issues affecting access for fires in radiologically controlled/high radiation areas.

b. Findings

No findings were identified.

3P02 Process and Effluent Monitoring

- 84527 - Part 52, Solid Waste Management System

a. Inspection Scope

The inspectors performed walkdowns of selected portions of the Unit 3 solid radioactive waste system and discussed system operation with licensee staff to determine if WSS components were installed and configured as described in UFSAR, Chapter 11, Radioactive Waste Management. Specifically, the inspectors traced the spent resin transfer piping from the demineralizer beds to the system termination in the waste dewatering/packaging area. The inspectors directly observed the following radioactive waste system, liquid radioactive waste system (WLS), spent fuel pool cooling system, and chemical and volume control system(CVS) components:

- WLS deep bed carbon filter,
- WLS ion exchangers,
- spent fuel pool cooling system, liquid radioactive waste system, CVS common resin headers,
- valves and piping associated with spent resin Tanks A & B (behind shield walls),
- resin transfer pump, and
- resin sampler package.

3P03 Process and Effluent Monitoring

- 84528 – Part 52, Liquid Waste Management Program

a. Inspection Scope

The inspectors performed walkdowns of selected portions of the Unit 3 WLS and discussed system operation with licensee staff to determine if WLS components were installed and configured as described in UFSAR Chapter 11. Specifically, the inspectors traced system piping from the in-board chemical and volume control system containment isolation valve to system termination at the liquid waste discharge valve in the radioactive waste building. The inspectors directly observed the following WLS and CVS components:

- CVS V045 and CVS V047 containment isolation valves,
- degasifier package,
- chemical waste tank,
- Monitor Tanks A, B, C, D, E, and F,
- WLS-JE-RE229 liquid radwaste discharge radiation monitor, and
- WLS V223 automatic isolation valve.

3P04 Process and Effluent Monitoring

- 84529 – Part 52, Gaseous Waste Management Program

a. Inspection Scope

The inspectors performed walkdowns of selected portions of the Unit 3 gaseous radioactive waste system (WGS) and discussed system operation with licensee staff to determine if WGS components were installed and configured as described in UFSAR Chapter 11, Radioactive Waste Management. Specifically, the inspectors traced system piping and ductwork from the inboard containment isolation valve to the discharge point in the Plant Vent. This included observation of several installed airborne effluent monitors and their associated sample lines. The sample piping was inspected to verify the licensee's capability of collecting representative samples of airborne particulate, iodine, and noble gas effluents released through the Plant Vent during routine and accident conditions. The inspectors directly observed the following WGS, WLS, containment air filtration system (VFS), and health physics and hot machine shop HVAC system components:

- WLS V067 and WLS V068 containment isolation valves
- VFS high efficiency particulate air and charcoal filter banks, Trains A & B
- WGS-JE-RE017 gaseous radwaste discharge radiation monitor
- WGS V051 automatic isolation valve
- VFS-JE-RE-101 plant vent particulate radiation monitor
- VFS-JE-RE-102 plant vent iodine radiation monitor
- VFS-JE-RE-103 plant vent gas radiation monitor (normal range)
- VFS-JE-RE-104A plant vent extended range gas radiation monitor (accident mid-range)
- VFS-JE-RE-104B plant vent extended range gas radiation monitor (accident high-range)
- VHS-JE-RE001 health physics and hot machine shop exhaust radiation monitor

b. Findings

No findings were identified.

3P05 Preservice Testing

- 73758-App A.02.02 Preservice and Inservice Testing Program

- 73758-App C Implementation of PST/IST Program for Pumps, Valves, and Dynamic Restraints

a. Inspection Scope

Preservice Testing (PST) Program

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

- The inspectors reviewed procedure B-GEN-ENG-039 for pyrotechnic charge testing of a sample of squib valves as part of the PST Program. In response to inspector questions, the licensee compared the squib valve charge testing procedure to the sample testing required by Alternative Request PST-Alt-01 as authorized by the NRC staff on March 26, 2019 (ADAMS Accession No. ML19071A241).

- The inspectors reviewed Work Package SV3-CVS-T0W-1067850 (completion package dated 9-30-2021), "Perform Dynamic Testing of AOV SV3-CVS-PL-V084," to determine if the dynamic test report demonstrated that the auxiliary pressurizer spray line isolation AOV performed satisfactory with full open and close strokes under normal CVS pressure of 2235 pounds per square inch gauge.

Inservice Testing (IST) Program

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 if they meet the applicable testing requirements of 10 CFR 50.55a and the ASME OM Code, and support the implementation of the IST program:

  - 3-CAS-OTS-10-001, Compressed Air System Valve Stroke Test, 12-16-2021
  - 3-CVS-OTS-10-001, Chemical and Volume Control System Valve Stroke Test, 05-13-2021
  - 3-PXS-OTS-10-001, Passive Core Cooling System Train A Valves Stroke Test, 1-4-2022
  - 3-PXS-OTS-10-002, Passive Core Cooling System Train B Valves Stroke Test, 02-11-2022
  - 3-RCS-OTS-10-001, Reactor Coolant System Valve Stroke Test, 07-23-2021
  - 3-RNS-OTS-10-003, Normal Residual Heat Removal System Valve Stroke Test, 12-22-2021
  - 3-SGS-OTS-10-003, Steam Generating System Valve Stroke Test Train A: Modes 3-6, 12/29/2020

- 3-SGS-OTS-10-004, Steam Generating System Valve Stroke Test Train B: Modes 3-6, 12/29/2020
- B-GEN-ITPCM-017, Air-Operated Valve Test, 3-13-2019

- The inspectors reviewed the air-operated valve (AOV) program to be implemented for the startup of Vogtle Units 3 & 4, including the implementation checklist, SNC fleet procedures, plant-specific procedures, and licensee responses to inspector questions. The inspectors reviewed the AOV program and procedures for Vogtle Units 3 & 4 to determine if they met the 2012 Edition of the American Society of Mechanical Engineers Operation and Maintenance of Nuclear Plants Code as incorporated by reference in 10 CFR 50.55a; the Joint Owners Group AOV Program NX-1018; and NRC Regulatory Issue Summary 2000-03, "Resolution of Generic Safety Issue 158: Performance of Safety-Related Power-Operated Valves under Design Basis Conditions."

4. OTHER INSPECTION RESULTS

4OA5 Other Activities

.01 The inspectors reviewed corrective actions developed and implemented by the licensee to verify if the violation identified as 05200025/2021008-01, Failure to Prescribe Instructions or Procedures for ITAAC Activities that Affect Quality, was corrected. The inspectors reviewed the analysis to verify if the vehicle barrier system could protect against a design basis threat vehicle bomb.

4OA6 Meetings, Including Exit

.01 Exit Meeting.

On April 1, 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

Item Number	Type	Status	Description
05200025/2021008-01	NCV	Closed	Failure to Prescribe Instructions or Procedures for ITAAC Activities that Affect Quality

LIST OF DOCUMENTS REVIEWED

Section 1A02

B-GEN-ITPCI-039-F165, RCS-PL-V150A Component Test, Rev. 3
B-GEN-ITPCI-039-F166, RCS-PL-V150B Component Test, Rev. 3
B-GEN-ITPCI-039-F167, RCS-PL-V150C Component Test, Rev. 3
B-GEN-ITPCI-039-F168, RCS-PL-V150D Component Test, Rev. 3

Section 1A03
WO 1272570
WO 1272565

Section 1A04
WO 1272570
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Section 1A010
WO 1272570
WO 1272565

Section 1A11
WO 1272570
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Section 1A12
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Section 1A13
WO 1272570
WO 1272565

Section 1A05
WO 1261029

Section 1A06
WO 1241511

Section 1A07
SV3-PXS-ITR-802206, Unit 3 Inspection results of : ITAAC 2.2.03.10 (Item 11b), Rev. 0
SV3-PXS-ITR-803206, Unit 3 Recorded Results of Remotely Operated PXS Valves Response to Loss of Motive Power: ITAAC 2.2.03.10 (Item 12b), Rev. 0

Section 1A08
WO 1229658

Section 1A14
Vogtle Electric Generating (VEGP) Units 3 and 4 Physical Security Plan, Rev. 6
SVO-SES-OOX-800000- Vogtle Plant Security System Database, Rev. 8
3-SES-ITAAC 644-FEP01-Intrusion Detection/Video Assessment-FEP01, Rev. 1.0
3-SES-ITAAC 644-FEP02-Intrusion Detection/Video Assessment-FEP02, Rev. 1.0
3-SES-ITAAC 661-UPS01-PA IDS/Assessment-UPS01, Rev. 1.1

Section 1A20

Vogtle Electric Generating (VEGP) Units 3 and 4 Physical Security Plan. Rev. 6
NMP-SE-015 Target Set Identification, Development, and Maintenance, Rev. 8.0
SV3-SES-ITR-800668, Inspection of Unattended Openings Intersecting the Protected Area or Vital Area Boundaries, Rev. 0
Unit 3 & 4 Vital Equipment List, dated September 7, 2021
APP-SES-M3C-001, AP 1000 Vital Equipment List, Rev. 1

Section 1A21

APP-GW-GEE-5162, “Changes to PMS Logic to Address Human Factors Concerns,” Rev. 0, dated October 9, 2015
APP-GW-GEE-4485, “Revision of Diverse Actuation System (DAS) Interface with Hydrogen Igniters,” Rev. 0,
APP-GW-GAP-420, “Engineering and Design Coordination Reports (E&DCR), Rev. 20, dated June 11, 2020
APP-OCS-GEH-420, AP1000 Human Factors Engineering Discrepancy Resolution Process, Rev. 20
APP-OCS-GEH-520, AP1000 Plant Startup Human Factors Engineering Design Verification Plan, Rev. 4
B-GEN-ENG-025-001, Human Factors Engineering Verification Instruction, Version 3., dated August 20, 2020
ESR 50037985, TCPS Maintenance Screens do not Include Function to Bypass Chest Warming
ESR 50038089, Soft controls not implemented for some VBS components (8 heaters)
ESR 50039084, TMOD SV3-PMS-TM-002-01 Engineering Review
ESR 50048674, CMS Pressure Transmitter Calibration Range
LTR-GIC-WAPP-21-019 Rev. 1, List ESRs and RECs requiring review by the Westinghouse Human Factors Engineering team and their review, Revision 1, dated December 2, 2021
LTR-GIC-WAPP-20-008, 10% Quality Review of the impact reviews for the Instrumentation and Controls Projects with regards to the Human Factors Engineering Integrated System Validation, dated April 9, 2020
ND-EN-VNP-024, Engineering Service Request, Version 5.0, dated August 27, 2021
ND-EN-VNP-018, Plant Startup Human Factors Engineering Design Verification Work Instruction, Version 3.0, dated August 31, 2020
REC AP1000-06934, APP-GW-GEE-5162A, Changes to PMS Logic to Address Human Factors Concerns
REC AP1000-05904, APP-RCS-GEF-100 - Modification to ADS Stage 1 Jog Mode
REC AP1000-05344, APP-GW-GEE-4485 - Revision of Diverse Actuation System (DAS) Interface with Hydrogen Igniters
REC AP1000-05232 Calculation APP-TDS-M3C-005 E and DCR APP-TDS-GEF-875007
REC AP1000-05344, “Revision of Diverse Actuation System (DAS) Interface with Hydrogen Igniters (DCP 4485 RA/0),” Revision 0, dated June 14, 2013
REC AP1000-06068, “Detailed Description of RMCS Operation (E and DCR APP-CVS-GEF-188),” dated Apr 17, 2014
REC AP1000-06983, “WLS MP05 Stop Control Logic Addition,” dated October 20, 2015
REC AP1000-07536, “E&DCR No. APP-CCS-GEF-265 - Revision to Valve CCS-PL-V221 Setpoints,” dated August 11, 2016
WNA-WI-00451-WAPP, “HFE ISV Impacts for a Request for Engineering Change,” Revision 1, dated March 2016

Section 1A22

Vogtle Electric Generating (VEGP) Units 3 and 4 Physical Security Plan. Rev. 6
SV0-0000-XD-800000 Vogtle Electric Generating Plant Power Block Drainage Plan, Rev. 11
SV0-0000-XD-800001 Vogtle Electric Generating Plant Power Block Drainage Plan, Rev. 7
SV0-CWS-XE-001 Vogtle Electric Generating Plant Units 3&4 Circulating Water System Piping Excavation and Backfill Plan, Rev. 5
Underground Pathways UAO Unit 3, dated May 31, 2021

Section 1A23

WO 11098888
Condition Report (CR) 50127327, Unable to Perform Test Step in PMS CIM VES-EP-01A, 02/23/2022

Section 1P01

3-PCS-ITPP-502, Passive Containment Cooling System Preoperational Test Procedure, Rev. 2
CR 50128844, 3-PCS-ITPP-502 TDR-009 Distribution Trough No Flow, 03/06/2022
CR 50128843, 3-PCS-ITPP-502 TDR-008 PCS-FT003 and PCS-FT004, 03/06/2022
CR 50128849, 3-PCS-ITPP-502 TDR-010 PCS 72-hour Insufficient Flow, 03/06/2022

Section 1P02

WO 1243359
B-GEN-ITPA-004, Conduct of Test, Ver. 26
CR 50124523, NRC Procedure Use and Adherence Challenge, 02/04/2022
Ultrasonic Calibrator ID# 34VP301, calibration due date 01/21/2023

Section 1P03

4-CNS-ITPP-503, LLRT Containment Leak Rate Test Type C, Rev. 1
WO 1198239
WO 1270678

Section 1P04

Measuring and Test Equipment Traveler Mets Activity Number: 489803

SAFEGUARDS PROGRAMS

Section 2P01

90017-C- Security Radio and Communications Systems, Version 34.0
90200-C- Security Seven Day Vital Area Portal Inspections, Version 36.0
90201-C- Closed Circuit Television Camera System Testing, Version 21.0
90202-C- Testing Explosive Detector Units
90203-C- Metal Detector Testing, Version 19.0
90204-C- X-Ray Equipment Test Procedure, Version 16.0
90206-C- Protected Area Lighting Systems, Version 15.0
90207-C- Security Barrier Inspection, Version 22.0
90318-C- Testing and Maintenance of Security Personnel Equipment, Version 21.1
V-SSO-2021-01- 7 Day Testing of the Security Perimeter and Duress Alarms Systems, Version 1.1
V-SSO-2021-02- Startup, Operation, and Termination of the Unit 3 Interim Boundary Exit Terminal, Version 1.0
V-SSO-2021-04- ITAAC Test for Protected Area Lighting Systems, Version 1.0
Security ITAAC Acceptance Testing Documentation

3. OPERATIONAL READINESS

Section 3T03

WO 1063395

Section 3T04

WO 1068270
WO 1272361
B-GEN-ITPA-015, Temporary Operating Plan (TOP) Cover Sheet," Rev. 4. Signed/dated 3/3 2022

Section 3T07

WO 1056002
APP-PY89-Z0-001, Fire Hose Stations, Rev. 6
ESR 50124411, Insufficient PCCWST Flow to FPS, Rev. 001
CR 50124410, 3-PCS-ITPP-501 TDR-007 (Insufficient Flow to FPS), 02/03/2022

Section 3T08

WO 1225188

Section 3T09

3-IDS-ITPP-501, Class 1E DC and UPS Preoperational Test, Rev. 6

Section 3T10

WO 1071704
B-GEN-ITPCM-001, Limitorque SMB/SB Motor Operated Valve Component Testing, Attachment 7, Rev. 4
CR 50132840

Section 3T12

Procedures:
165766-830-05-PR-000011, Pneumatic Testing of Unit 4 Containment, Rev. 1
4-CNS-ITPP-501, Containment Integrated Leak Rate Test (Type A), Rev. 1
4-CNS-ITPP-502, Containment Penetration Leak Rate (Type B) Preoperational Test, Rev. 1
4-CNS-ITPP-503, LLRT Containment Leak Rate Test Type C, Rev. 1
NMP-AD-006, Infrequently Performed Tests and Evolutions, Rev. 13.1

Drawings:
165766-830-05-FM-046015, Pressure Test Safety Distance Map, Rev. 3
165766-830-05-FM-046016, Pressure Test Safety Distance Map, Rev. 2
165766-830-05-FM-046117, Vertical Vessel Pneumatic Test Layout, Rev. 1
165766-830-05-FM-046114, Vertical Vessel Pneumatic Test Layout, Rev. 1
165766-830-05-SK-46211, Instrument Locations, Rev. 2

Section 3T13

4-PXS-ITPP-502, PXS Accumulator Mapping and Line Resistance Test, Rev. 1
WO 1191256

Section 3P01

Drawings

APP-1030-AF-001 Fire Area Drawing Nuclear Island Plan AT EL. 100'-0" & 107'-2" Rev. 6
APP-1040-AF-001 Fire Area Drawing Nuclear Island Plan AT EL. 117'-6" Rev. 5
APP-1010-AF-001 Fire Area Drawing Nuclear Island Plan AT EL. 66'-6" Rev. 5
APP-1020-AF-001 Fire Area Drawing Nuclear Island Plan AT EL. 82'-6" Rev. 6
APP-VBS-M6-005 PIPING AND INSTRUMENTATION DIAGRAM NI NONRADIOACTIVE VENTILATION SYSTEM REV. 12
APP-VBS-M6-006 PIPING AND INSTRUMENTATION DIAGRAM NI NONRADIOACTIVE VENTILATION SYSTEM REV. 11

Calculations

APP-IDS-E0C-011, Class 1E (IDS) 250V DC System – Coordination Study, Rev. 4
APP-GW-E0X-050, Class 1E 250 VDC and UPS Load List (Automatically Generated from Smart Plant Electrical), Rev. 4
APP-IDSA-E3-DD101, Panel Schedule IDSA-DD-1 250 VDC Distribution Panel, Rev. 6
APP-IDSB-E3-DD101, Panel Schedule IDSB-DD-1 250 VDC Distribution Panel, Rev. 5
APP-IDSD-E3-DD101, Panel Schedule IDSD-DD-1 250 VDC Distribution Panel, Rev. 5
SV0-AW20-AWR-800019, Baumert Groupe Gorge Company - Non-Loadbearing Composite Partition Assembly ASTM E119 - 3 Hours, 2/23/2021

Licensing & Design Basis Docs

B-GEN-ENG-008 Fire Equipment Functionality and Fire Protection Impairments (FPI) Requirements – NRC REQUIRED FIRE DAMPERS Version 2.0
APP-AB01-Z0-001, Block-outs and Barriers (Penetrations, Seals, and Fire Stops), Rev. 8

Procedures

3-EFS-ITPP-501, Communications System (EFS) Preoperational Test, Version 1.0
B-GEN-OPS-004, Fire Brigade Equipment – Quarterly Inspection, Version 2.2
3-AOP-601, Evacuation of Main Control Room, Rev. 2.0
B-GEN-ENG-008, Fire Protection Functionality and Fire Protection Impairments (FPI) Requirements, Version 2.0
B-GEN-ENG-008-GL02, Fire Equipment Functionality and Fire Protection Impairments (FPI) Basis, Version 1.0

Miscellaneous

B-PFP-ENG-001-F3113 Pre-Fire Plan – Auxiliary Building Non-RCA El 100'-0"
B-PFP-ENG-001-F3114 Pre-Fire Plan – Auxiliary Building Non-RCA El 117'-6"
B-PFP-ENG-001-F3110 Pre-Fire Plan – Auxiliary Building Non-RCA El 66'-6"
B-PFP-ENG-001-F3111 Pre-Fire Plan – Auxiliary Building Non-RCA El 82'-6"

Condition Reports Reviewed During Inspection

50124410, 3-PCS-ITPP-502 TDR-007 (Insufficient Flow to FPS), 2/3/2022

Condition Reports Generated During Inspection

50126132, Update Phone Locations on Pre-Fire Plans To Show As-Built, 2/16/2022
50125872, Update B-PFP-ENG-001-F3113 to Correct Fire Wall Rating for 12312, 2/14/2022
50125503, Need Clarification of Which Penetration Seals Detail Have Been Replaced By New Details, 2/11/2022
50126228, Typos in Fire Door Locations in B-GEN-ENG-008, 2/16/2022

50126358, NRC Identified Issue: Missing Seal Detail for I-Beam in ITAAC Fire Barrier Wall, 2/17/2022

Section 3P05

Procedures

3-SGS-OTS-10-003, Steam Generating System Valve Stroke Test Train A Modes 3-6, 12-29-2020

3-SGS-OTS-10-004, Steam Generating System Valve Stroke Test Train B Modes 3-6,12-29-2020

B-GEN-ADM-001-F06, Air Operated Valve Program Implementation Checklist, 10-20-2021

B-GEN-ENG-039, PST Squib Valve Charge Test, 1-7-2022

NMP-ES-014, Air Operated Valve (AOV) Program, 3-12-2021

NMP-ES-014-001, Air Operated Valve (AOV) Scoping and Categorization, 3-12-2021

NMP-ES-014-002, Air Operated Valve (AOV) Design Basis Review and Setpoint Control, 9-20-2021

NMP-ES-014-003, Air Operated Valve (AOV) Datasheet Preparation and Testing, 7/9/2021

NMP-ES-014-004, Air Operated Valve (AOV) Tracking and Trending, 4-5-2021

Work Orders

Work Package #SV3-CVS-T0W-1067850, Perform Dynamic Testing of AOV SV3-CVS-PL-V084, 9/30/2021

Miscellaneous

RER SNC1173137-01, Justification for Excluding DDS Master Time Server (MTS) Atomic Clock from M&TE Requirements, 2/10/2022

Corrective Action Documents

CR 8005635

TE 60036478.

LIST OF ACRONYMS

AOV	air operated valve
COL	Combined License
CVS	chemical and volume control system
ESR	engineering service request
FHA	fire hazard analysis
FPP	fire protection program
HED	human engineering deficiencies
HFE	human factors engineering
IDS	Class IE direct current and uninterruptable power supply system
IMC	inspection manual chapter
IST	inservice testing
IP	inspection procedure
ITAAC	inspections, tests, analyses, and acceptance criteria
MCR	main control room
NRC	Nuclear Regulator Commission
PARS	Publicly Available Records
PMS	protection and monitoring system
PST	preservice testing
RCP	reactor coolant pump
REC	engineering change
Rev	revision
UFSAR	Updated Final Safety Analysis Report
V&V	verification and validation
VFS	containment air filtration system
WEC	Westinghouse Electric Company
WGS	gaseous radioactive waste system
WLS	liquid radioactive waste system
WO	work order

ITAAC INSPECTED

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
47	2.1.02.11a.ii	10. Safety-related displays identified in Table 2.1.2-1 can be retrieved in the MCR. 11.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.1.2-1 to perform active functions. 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. 12.b) After loss of motive power, the remotely operated valves identified in Table 2.1.2-1 assume the indicated loss of motive power position.	Inspection will be performed for retrievability of the safety-related displays in the MCR. ii) Stroke testing will be performed on the other remotely operated valves listed in Table 2.1.2-1 using controls in the MCR. ii) Testing will be performed on the other remotely operated valves identified in Table 2.1.2-1 using real or simulated signals into the PMS. iii) Testing will be performed to demonstrate that remotely operated RCS valves RCS-V001A/B, V002A/B, V003A/B, V011A/B, V012A/B, V013A/B open within the required response times. Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	Safety-related displays identified in Table 2.1.2-1 can be retrieved in the MCR. ii) Controls in the MCR operate to cause the remotely operated valves (other than squib valves) to perform active functions. ii) The other remotely operated valves identified in Table 2.1.2-1 as having PMS control perform the active function identified in the table after receiving a signal from PMS. iii) These valves open within the following times after receipt of an actuation signal: V001A/B < 40 sec V002A/B, V003A/B < 100 sec V011A/B < 30 sec V012A/B, V013A/B < 60 sec Upon loss of motive power, each remotely operated valve identified in Table 2.1.2-1 assumes the indicated loss of motive power position.
64	2.1.02.13b	13.b) The RCPs trip after receiving a signal from the PMS.	Testing will be performed using real or simulated signals into the PMS.	The RCPs trip after receiving a signal from the PMS.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
107	2.2.01.07.i	7. The CNS provides the safety-related function of containment isolation for containment boundary integrity and provides a barrier against the release of fission products to the atmosphere.	i) A containment integrated leak rate test will be performed.	i) The leakage rate from containment for the integrated leak rate test is less than La.
110	2.2.01.09	9. Safety-related displays identified in Table 2.2.1-1 can be retrieved in the MCR. 10.a) Controls exist in the MCR to cause those remotely operated valves identified in Table 2.2.1-1 to perform active functions. 10.b) The valves identified in Table 2.2.1-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	Inspection will be performed for retrievability of the safety-related displays in the MCR. Stroke testing will be performed on remotely operated valves identified in Table 2.2.1-1 using the controls in the MCR. Testing will be performed on remotely operated valves listed in Table 2.2.1-1 using real or simulated signals into the PMS.	Safety-related displays identified in Table 2.2.1-1 can be retrieved in the MCR. Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.1-1 to perform active safety functions. The remotely operated valves identified in Table 2.2.1-1 as having PMS control perform the active function identified in the table after receiving a signal from PMS.
116	2.2.01.11a.iii	11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table.	iii) Tests of the motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.2.1-1 under pre-operational test conditions.
117	2.2.01.11a.iv	11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table.	iv) Exercise testing of the check valves with active safety functions identified in Table 2.2.1-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.2.1-1.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
138	2.2.02.07b.i	7.a) The PCS delivers water from the PCCWST to the outside, top of the containment vessel. 7.b) The PCS wets the outside surface of the containment vessel. The inside and the outside of the containment vessel above the operating deck are coated with an inorganic zinc material. 7.c) The PCS provides air flow over the outside of the containment vessel by a natural circulation air flow path from the air inlets to the air discharge structure. 7.d) The PCS drains the excess water from the outside of the containment vessel through the two upper annulus drains. 7.e) The PCS provides a flow path for long-term water makeup to the PCCWST. 9. Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR. 10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.2-1 to perform active functions. 10.b) The valves identified in Table 2.2.2-1 as having PMS control perform	i) Testing will be performed to measure the PCCWST delivery rate from each one of the three parallel flow paths. ii) Testing and or analysis will be performed to demonstrate the PCCWST inventory provides 72 hours of adequate water flow. i) Testing will be performed to measure the outside wetted surface of the containment vessel with one of the three parallel flow paths delivering water to the top of the containment vessel. ii) Inspection of the containment vessel exterior coating will be conducted. iii) Inspection of the containment vessel interior coating will be conducted. Inspections of the air flow path segments will be performed. Testing will be performed to verify the upper annulus drain flow performance. ii) Testing will be performed to measure the delivery rate from the long-term makeup connection to the PCCWST. Inspection will be performed for retrievability of the safety-related displays in the MCR. Stroke testing will be performed on the remotely operated	i) When tested, each one of the three flow paths delivers water at greater than or equal to: – 469.1 gpm at a PCCWST water level of 27.4 ft + 0.2, - 0.0 ft above the tank floor – 226.6 gpm when the PCCWST water level uncovers the first (i.e. tallest) standpipe – 176.3 gpm when the PCCWST water level uncovers the second tallest standpipe – 144.2 gpm when the PCCWST water level uncovers the third tallest standpipe – or a report exists and concludes that the as-measured flow rates delivered by the PCCWST to the containment vessel provides sufficient heat removal capability such that the limiting containment pressure and temperature values are not affected and the PCS is able to perform its safety function to remove heat from containment to maintain plant safety. ii) When tested and/or analyzed with all flow paths delivering and an initial water level at 27.4 + 0.2, - 0.00 ft, the PCCWST water inventory provides

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
		an active safety function after receiving a signal from the PMS. 11.a) The motor-operated valves identified in Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table. 11.b) After loss of motive power, the remotely operated valves identified in Table 2.2.2-1 assume the indicated loss of motive power position.	valves identified in Table 2.2.2-1 using the controls in the MCR. Testing will be performed on the remotely operated valves in Table 2.2.2-1 using real or simulated signals into the PMS. iii) Tests of the motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions. Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	greater than or equal to 72 hours of flow, and the flow rate at 72 hours is greater than or equal to 100.7 gpm or a report exists and concludes that the as-measured flow rates delivered by the PCCWST to the containment vessel provides sufficient heat removal capability such that the limiting containment pressure and temperature values are not affected and the PCS is able to perform its safety function to remove heat from containment to maintain plant safety. i) A report exists and concludes that when the water in the PCCWST uncovers the standpipes at the following levels, the water delivered by one of the three parallel flow paths to the containment shell provides coverage measured at the spring line that is equal to or greater than the stated coverages. - 24.1 ± 0.2 ft above the tank floor; at least 90% of the perimeter is wetted. - 20.3 ± 0.2 ft above the tank floor; at least 72.9% of the perimeter is wetted. -

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
				16.8 ± 0.2 ft above the tank floor; at least 59.6% of the perimeter is wetted. ii) A report exists and concludes that the containment vessel exterior surface is coated with an inorganic zinc coating above elevation 135'-3". iii) A report exists and concludes that the containment vessel interior surface is coated with an inorganic zinc coating above the operating deck. Flow paths exist at each of the following locations: – Air inlets – Base of the outer annulus – Base of the inner annulus – Discharge structure With a water level within the upper annulus 10" + 1" above the annulus drain inlet, the flow rate through each drain is greater than or equal to 525 gpm. ii) With a water supply connected to the PCS long-term makeup connection, each PCS recirculation pump delivers greater than or equal to 100 gpm when tested separately. Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
				Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.2-1 to perform active functions. The remotely operated valves identified in Table 2.2.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS. iii) Each motor-operated valve changes position as indicated in Table 2.2.2-1 under preoperational test conditions. After loss of motive power, each remotely operated valve identified in Table 2.2.2-1 assumes the indicated loss of motive power position.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
178	2.2.03.08c.i.02	8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events.	i) A low-pressure injection test and analysis for each CMT, each accumulator, each IRWST injection line, and each containment recirculation line will be conducted. Each test is initiated by opening isolation valve(s) in the line being tested. Test fixtures may be used to simulate squib valves. 2. Accumulators: Each accumulator will be partially filled with water and pressurized with nitrogen. All valves in these lines will be open during the test. Sufficient flow will be provided to fully open the check valves.	i) The injection line flow resistance from each source is as follows: 2. Accumulators: The calculated flow resistance between each accumulator and the reactor vessel is ≥ 1.47 x 10-5 ft/gpm2 and ≤ 1.83 x 10-5 ft/gpm2.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
206	2.2.03.10	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.	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.	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.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
331	2.3.04.04.ii	4. The FPS provides for manual fire fighting capability in plant areas containing safety-related equipment.	ii) Testing will be performed by measuring the water flow rate as it is simultaneously discharged from the two highest fire-hose stations and when the water for the fire is supplied from the PCS storage tank.	ii) Water is simultaneously discharged from each of the two highest fire-hose stations in plant areas containing safety-related equipment at not less than 75 gpm.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
530	2.5.02.06a.ii	6.a) The PMS initiates an automatic reactor trip, as identified in Table 2.5.2-2, when plant process signals reach specified limits. 6.b) The PMS initiates automatic actuation of engineered safety features, as identified in Table 2.5.2-3, when plant process signals reach specified limits. 6.c) The PMS provides manual initiation of reactor trip and selected engineered safety features as identified in Table 2.5.2-4. 8.a) The PMS provides for the minimum inventory of displays, visual alerts, and fixed position controls, as identified in Table 2.5.2-5. The plant parameters listed with a "Yes" in the "Display" column and visual alerts listed with a "Yes" in the "Alert" column can be retrieved in the MCR. The fixed position controls listed with a "Yes" in the "Control" column are provided in the MCR. 8.c) Displays of the open/closed status of the reactor trip breakers can be retrieved in the MCR. 9.a) The PMS automatically	An operational test of the as-built PMS will be performed using real or simulated test signals. An operational test of the as-built PMS will be performed using real or simulated test signals. An operational test of the as-built PMS will be performed using the PMS manual actuation controls. i) An inspection will be performed for retrievability of plant parameters in the MCR. iii) An operational test of the as-built system will be performed using each MCR fixed position control. Inspection will be performed for retrievability of displays of the open/closed status of the reactor trip breakers in the MCR. An operational test of the as-built PMS will be performed using real or simulated test signals. An operational test of the as-built PMS will be performed. An operational test of the as-built PMS will be performed. With one channel in bypass, an attempt will be made to place a redundant channel in bypass.	ii) PMS output signals to the reactor trip switchgear are generated after the test signal reaches the specified limit. This needs to be verified for each automatic reactor trip function. Appropriate PMS output signals are generated after the test signal reaches the specified limit. These output signals remain following removal of the test signal. Tests from the actuation signal to the actuated device(s) are performed as part of the system-related inspection, test, analysis, and acceptance criteria. ii) PMS output signals are generated for reactor trip and selected engineered safety features as identified in Table 2.5.2-4 after the manual initiation controls are actuated. i) The plant parameters listed in Table 2.5.2-5 with a "Yes" in the "Display" column, can be retrieved in the MCR. iii) For each test of an as-built fixed position control listed in Table 2.5.2-5 with a "Yes" in the "Control" column, an actuation signal is generated.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
		removes blocks of reactor trip and engineered safety features actuation when the plant approaches conditions for which the associated function is designed to provide protection. These blocks are identified in Table 2.5.2-6. 9.b) The PMS two-out-of-four initiation logic reverts to a two-out-of-three coincidence logic if one of the four channels is bypassed. All bypassed channels are alarmed in the MCR. 9.c) The PMS does not allow simultaneous bypass of two redundant channels.		Tests from the actuation signal to the actuated device(s) are performed as part of the system-related inspection, test, analysis and acceptance criteria. Displays of the open/closed status of the reactor trip breakers can be retrieved in the MCR. The PMS blocks are automatically removed when the test signal reaches the specified limit. The PMS two-out-of-four initiation logic reverts to a two-out-of-three coincidence logic if one of the four channels is bypassed. All bypassed channels are alarmed in the MCR. The redundant channel cannot be placed in bypass.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
603	2.6.03.04c	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	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 270±2 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 270±2 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	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 208 ± 2% V at a frequency of 60 ± 0.5% Hz. Each 72-hour inverter supplies a line-to-line output voltage of 208 ± 2% V at a frequency of 60 ± 0.5% 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-

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
		480 V MCC. 6. Safety-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±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	hour battery charger provides an output current of at least 150 A with an output voltage in the 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 ± 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
			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. Inspection will be performed for retrievability of the displays identified in Table 2.6.3-2 in the MCR.	
646	2.6.09.05c	5.c) The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to detect and assess alarms and communicate with onsite and offsite response personnel.	Inspections and/or analysis of the central and secondary alarm station will be performed.	The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, equipment needed to maintain the functional capability of either alarm station to detect and assess alarms and communicate with onsite and offsite response personnel exists.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
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.
650	2.6.09.08	8. Isolation zones and exterior areas within the protected area are provided with illumination to permit observation of abnormal presence or activity of persons or vehicles.	Inspection of the illumination in the isolation zones and external areas of the protected area will be performed.	The illumination in isolation zones and exterior areas within the protected area is 0.2 foot candles measured horizontally at ground level or, alternatively, sufficient to permit observation.
652	2.6.09.13a	13.a) The central and secondary alarm stations have conventional (landline) telephone service with the main control room and local law enforcement authorities. 13.b) The central and secondary alarm stations are capable of continuous communication with security personnel.	Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations' conventional telephone services will be performed. Tests, inspections, or a combination of tests and inspections of the central and secondary alarm stations' continuous communication capabilities will be performed.	The central and secondary alarm stations are equipped with conventional (landline) telephone service with the main control room and local law enforcement authorities. The central and secondary alarm stations are equipped with the capability to continuously communicate with security officers, watchmen, armed response individuals, or any security personnel that have responsibilities during a contingency event.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
654	2.6.09.13c	13.c) Non-portable communication equipment in the central and secondary alarm stations remains operable from an independent power source in the event of loss of normal power. 14. Not used.	Tests, inspections, or a combination of tests and inspections of the non-portable communications equipment will be performed.	Non-portable communication devices (including conventional telephone systems) in the central and secondary alarm stations are wired to an independent power supply that enables the system to remain operable in the event of loss of normal power.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
655	2.6.09.15a	15.a) Security alarm devices, including transmission lines to annunciators, are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power). Alarm annunciation shall indicate the type of alarm (e.g., intrusion alarms and emergency exit alarm) and location. 16. Equipment exists to record onsite security alarm annunciation, including the location of the alarm, false alarm, alarm check, and tamper indication; and the type of alarm, location, alarm circuit, date, and time.	A test will be performed to verify that security alarms, including transmission lines to annunciators, are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power) and that alarm annunciation indicates the type of alarm (e.g., intrusion alarms and emergency exit alarms) and location. Test, analysis, or a combination of test and analysis will be performed to ensure that equipment is capable of recording each onsite security alarm annunciation, including the location of the alarm, false alarm, alarm check, and tamper indication; and the type of alarm, location, alarm circuit, date, and time.	A report exists and concludes that security alarm devices, including transmission lines to annunciators, are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power) and that alarm annunciation indicates the type of alarm (e.g., intrusion alarms and emergency exit alarms) and location. A report exists and concludes that equipment is capable of recording each onsite security alarm annunciation, including the location of the alarm, false alarm, alarm check, and tamper indication; and the type of alarm, location, alarm circuit, date, and time.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
667	C.2.6.09.07	7. Access to vital equipment physical barriers requires passage through the protected area perimeter barrier. 7.a) Vital equipment is located only within a vital area. 7.b) Access to vital equipment requires passage through the vital area barrier.	Inspection will be performed to confirm that access to vital equipment physical barriers requires passage through the protected area perimeter barrier. Inspection will be performed to confirm that vital equipment is located within a vital area Inspection will be performed to confirm that access to vital equipment requires passage through the vital area barrier.	Vital equipment is located within a protected area such that access to vital equipment physical barriers requires passage through the protected area perimeter barrier. All vital equipment is located only within a vital area. Vital equipment is located within a protected area such that access to vital equipment requires passage through the vital area barrier.
668	C.2.6.09.08a	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.	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.	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.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
744	3.2.00.01e	1. The HFE verification and validation program is performed in accordance with the HFE verification and validation implementation plan and includes the following activities: e) Plant HFE/HSI (as designed at the time of plant startup) verification	e) An evaluation of the implementation of the plant HFE/HSI (as designed at the time of plant startup) verification will be performed.	e) A report exists and concludes that: The plant HFE/HSI, as designed at the time of plant startup, is consistent with the HFE/HSI verified in 1.a) through 1.d).
877	2.2.05.09c	9.c) The MCR Load Shed Panels identified in Table 2.2.5-1 perform their active safety function after receiving a signal from the PMS.	Testing will be performed on the MCR Load Shed Panels listed in Table 2.2.5-1 using real or simulated signals into the PMS.	The MCR Load Shed Panels identified in Table 2.2.5-1 perform their active safety function identified in the table after receiving a signal from the PMS.