



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

February 10, 2021

Mr. Michael Yox  
Regulatory Affairs Director  
Southern Nuclear Operating Company  
7825 River Road, Bldg. 302, Vogtle 3&4  
Waynesboro, GA 30830

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 – NRC INITIAL  
TEST PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED  
INSPECTION REPORTS 05200025/2020010, 05200026/2020010**

Dear Mr. Yox:

On December 31, 2020, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant, Units 3 and 4. The enclosed inspection report documents the inspection results, which the inspectors discussed on January 14, 2021, with Mr. G. Chick, Vogtle 3 & 4 Executive Vice President, and other licensee and contractor staff members.

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

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the Enforcement Policy.

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

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

Sincerely,

*/RA/*

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

Docket Nos.: 5200025, 5200026  
License Nos: NPF-91, NPF-92

Enclosure: NRC Inspection Report (IR) 05200025/2020010, 05200026/2020010  
w/attachment: Supplemental Information

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SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNITS 3 AND 4 – NRC INITIAL  
TEST PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED  
INSPECTION REPORTS 05200025/2020010, 05200026/2020010  
DATED: February 10, 2021

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DATE	2/5/2021	2/5/2021	2/10/2021				

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

Docket Numbers: 5200025  
5200026

License Numbers: NPF-91  
NPF-92

Report Numbers: 05200025/2020010  
05200026/2020010

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Units 3 & 4 Combined Licenses

Location: Waynesboro, GA

Inspection Dates: October 1, 2020 through December 31, 2020

Inspectors: J. Eargle, Senior Resident Inspector – Testing, Division of  
Construction Oversight (DCO)  
P. Carman, Project Manager, DCO  
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Approved by: Bradley J. Davis, Branch Chief  
Construction Inspection Branch 2  
Division of Construction Oversight

## **SUMMARY OF FINDINGS**

Inspection Report (IR) 05200025/2020010, 05200026/2020010; 10/01/2020 through 12/31/2020; Vogtle Unit 3 & 4 Combined License initial test program and operational programs integrated inspection report.

This report covers a 3-month period of announced Inspections, Tests, Analysis, and Acceptance Criteria (ITAAC), preoperational test program, and operational program inspections by resident and regional inspectors. One finding of very low safety significance (Green) was identified by the inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, or Red) using Inspection Manual Chapter (IMC) 2519, "Construction Significance Determination Process". Cross-cutting aspects are determined using IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy and the temporary enforcement guidance outlined in enforcement guidance memorandum (EGM) 11-006. The NRC's program for overseeing the safe construction of commercial nuclear power reactors is described in IMC 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

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

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

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

### **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 preoperational testing program. Major activities completed by the licensee included completion of Unit 3 turbine on gear, condenser vacuum, and cold hydrostatic testing of the RCS. The licensee conducted a graded emergency exercise for Unit 3. Additionally, the licensee completed installation and testing of air operated valves, and motor operated valves; and test calibrations associated with various safety-related and nonsafety-related level transmitters, flow transmitters, pressure transmitters, and temperature elements.

During this report period for Unit 4, the licensee continued with installation of SSCs and performed de-energized testing of breakers and other electrical components.

### **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 2.5.02.06a.ii (530) / Family 10D**

##### **a. Inspection Scope**

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

- 65001.C-02.01 - Program and Procedure Reviews
- 65001.C-02.03 - Construction Test Record Review

##### **Procedure Review**

The inspectors reviewed test procedures APP-PMS-T1P-007, APP-PMS-T1P-008, and associated documentation related to testing the ability of the AP1000 protection and safety monitoring system (PMS) to automatically remove blocks of reactor trip and engineered safety feature actuations to determine if they contained sufficient information to meet the requirements of APP-PMS-T5-001, APP-PMS-J4-020 and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedures for the following attributes:

- the procedures adequately included and reference acceptable testing configurations and objectives;

- adequate test prerequisites and suitable environmental conditions would be met, adequate instrumentation used, appropriate tests and equipment used, and necessary monitoring would be performed;
- prerequisites include calibrated instrumentation, trained personnel, conditions of test equipment, items to be tested, suitable environmental conditions, and appropriate data acquisition equipment;
- the test requirements and acceptance criteria were accurate and were approved by the responsible design organization and were in accordance with applicable design documents and construction specifications;
- appropriate licensee staff and management approval were indicated on the document;
- the procedure required comparison of the test results to the acceptance criteria and provisions were made for the evaluator to indicate whether test data was acceptable or not acceptable;
- step-by-step instructions for the performance of the procedures, including hold points if needed, were included to the extent necessary to ensure that the test objectives were met;
- provisions were made for recording details of the test, including any observed deficiencies, their resolution, and any necessary retesting;
- the procedures and work control instructions provided for trained personnel conducting and evaluating the test data;
- test equipment range and accuracy were consistent with the application and complied with applicable licensing basis design calculations or code requirements;
- the procedure provided for quality control verification (or independent verification) of critical steps or parameters as required by the licensee's administrative or quality assurance program requirements; and
- equipment was properly restored upon test completion, including the removal of installed jumpers and test equipment, and landing of lifted leads; or the procedures reference their control by another procedure.

### Test Record Review

The inspectors reviewed the results of factory acceptance test (FAT) reports SV3-PMS-T2R-007, SV0-PMS-T2R-407, SV3-PMS-T2R-008, and SV0-PMS-T2R-408 related to testing the ability of the AP1000 PMS to automatically remove blocks of reactor trip and engineered safety feature actuations referenced in Chapter 7 of the Updated Final Safety Analysis Report (UFSAR) to determine if they contained sufficient information to meet the requirements associated test reports, and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the test results for the following attributes:

- test records were adequate to furnish identifiable and retrievable evidence of activities affecting quality;
- test records were completed per the test procedures; and
- corrective actions associated with unacceptable test results were consistent with applicable quality and technical requirements.

b. Findings

No findings were identified.

1A02 (Unit 3) ITAAC Number 2.5.02.06a.ii (530) / Family 10D

a. Inspection Scope

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

- 65001.C-02.01 - Program and Procedure Reviews

Procedure Review

The inspectors reviewed procedure B-GEN-ITPCI-006 and associated documentation related to testing visual alerts for the manual initiation of reactor trip and selected engineered safety features and the transfer of control capability from the main control room (MCR) to the remote shutdown workstation (RSW) to determine if the procedure contained sufficient information to satisfy the requirements of Chapter 14 of the UFSAR and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedures for the following attributes:

- the procedure included and referenced acceptable testing configurations and objectives;
- test prerequisites and suitable environmental conditions would be met, adequate instrumentation used, appropriate tests and equipment used, and necessary monitoring would be performed;
- prerequisites included calibrated instrumentation, trained personnel, conditions of test equipment, items to be tested, suitable environmental conditions, and appropriate data acquisition equipment;
- the test requirements and acceptance criteria were accurate and were approved by the responsible design organization and are in accordance with applicable design documents and construction specifications;
- appropriate licensee staff and management approval were indicated on the document;
- the procedure required comparison of the test results to the acceptance criteria and provisions were made for the evaluator to indicate whether test data is acceptable or not acceptable;
- step-by-step instructions for the performance of the procedure, including hold points if needed, were included to the extent necessary to ensure that the test is performed correctly, and the test objectives are met;
- provision was made for recording details of conduct of the test, including any observed deficiencies, their resolution, and any necessary retesting;
- provisions for isolating the equipment during testing are properly controlled;
- the procedure and work control instructions provided for trained personnel conducting and evaluating the test data;

- test equipment range and accuracy were consistent with the application and comply with applicable licensing basis design calculations or code requirements;
- the procedure provided for quality control verification (or independent verification) of critical steps or parameters as required by the licensee's administrative or quality assurance program requirements; and
- equipment would be properly restored upon test completion, including the removal of installed jumpers and test equipment, and landing of lifted leads; or the procedure referenced their control by another procedure.

#### Test Witness

The inspectors observed partial performance of procedure B-GEN-ITPCI-006 associated with testing of the MCR and RSW Hand Switches on the primary dedicated safety panel (PDSP), secondary dedicated safety panel (SDSP), remote shutdown panel (RSP), audio count rate panel, and MCR/RSW control transfer panel.

The inspectors attended the pre-job brief and witnessed the test performance to verify the following attributes:

- test personnel minimum staffing and qualification requirements were met;
- test prerequisites and initial conditions were met and/or those which were waived were reviewed and approved in accordance with current approved administrative procedures;
- testing personnel maintained the required level of training necessary to conduct the test;
- test personnel actions and coordination activities were adequately performed, specifically the assigned individual directing the test activities was knowledgeable and time sequencing, when required, was performed appropriately;
- test anomalies, problems, interruptions, and/or deficiencies were recorded in the test narrative logs and reviewed for inclusion in the licensee's corrective action program, as applicable;
- cognizant test personnel performed a preliminary review of test results to determine that the observed test results met the established acceptance criteria and that the test did not warrant repeating or if repeating was warranted, measures would be taken to ensure the test recurred; and the acceptance criteria was clearly stated in the test procedure.

#### b. Findings

No findings were identified.

1A03 (Unit 3) ITAAC Number E.3.9.08.01.01 (870) / Family 18D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number E.3.9.08.01.01 (870). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.18-02.01 Assignment of Responsibility (Organization Control)
- 65001.18-02.02 Onsite Emergency Organization
- 65001.18-02.03 Emergency Response Support and Resources
- 65001.18-02.04 Emergency Classification System
- 65001.18-02.05 Notification Methods and Procedures
- 65001.18-02.06 Emergency Communications
- 65001.18-02.07 Public Education and Information
- 65001.18-02.08 Emergency Facilities and Equipment

The inspectors observed and evaluated an emergency preparedness (EP) exercise to verify if the exercise was completed within specified time periods and that the onsite exercise objectives were either met or the post-exercise critique corrective actions necessary to protect the health and safety of the public have been completed in accordance with Appendix E of Title 10, Code of Federal Regulations (CFR), Part 50.

The inspectors observed accident assessment and emergency classification to verify if the licensee was able to identify initiating conditions, determine emergency action level parameters, and correctly classify the emergency in accordance with their emergency plan implementing procedures (EPIPs).

The inspectors observed the licensee complete timely notifications to verify if their ability to alert, notify, and mobilize site emergency response personnel in accordance with EPIPs. This included observing the licensee notify state and local government agencies, as well as the NRC. The inspectors also observed the licensee demonstrate the capability of the Alert and Notification System to verify if the system would operate when required in accordance with the licensee's emergency plan and EPIPs.

The inspectors observed the emergency response capabilities of the licensee to verify if the licensee was able to direct and control emergency operations and transfer command and control functions from the control room to the Technical Support Center and the Emergency Operations Facility in accordance with EPIPs.

The inspectors observed and evaluated the emergency response facilities to verify if the licensee was able to activate the operational support center, technical support center, and emergency operations facility in a timely manner; and use the appropriate communications, radiological survey, dose assessment, and meteorological equipment in accordance with EPIPs.

The inspectors observed the licensee's radiological assessment and control to verify if the licensee could obtain onsite radiological surveys and samples, continuously monitor and control radiation exposure to emergency workers, assemble and deploy field monitoring teams, collect and disseminate field team data, develop dose projections, and develop appropriate protective action recommendations, then timely notify the proper authorities of those recommendations in accordance with EIPs.

The inspectors observed and evaluated the licensee's ability to develop and disseminate clear, accurate, and timely information to the news media, in accordance with EIPs.

The inspectors observed and evaluated the post-exercise critique to determine if areas requiring improvement and corrective action were captured in accordance with the licensee's process and procedures.

1A04 (Unit 4) ITAAC Number 2.5.02.06a.ii (530) / Family 10D

a. Inspection Scope

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

- 65001.C-02.01 - Program and Procedure Reviews
- 65001.C-02.03 - Construction Test Record Review

Procedure Review

The inspectors reviewed test procedures APP-PMS-T1P-007, APP-PMS-T1P-008, and associated documentation related to testing the ability of the AP1000 PMS to automatically remove blocks of reactor trip and engineered safety feature actuations to determine if they contained sufficient information to meet the requirements of APP-PMS-T5-001, APP-PMS-J4-020 and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedures for the following attributes:

- the procedures adequately included and reference acceptable testing configurations and objectives;
- adequate test prerequisites and suitable environmental conditions would be met, adequate instrumentation used, appropriate tests and equipment used, and necessary monitoring would be performed;
- prerequisites include calibrated instrumentation, trained personnel, conditions of test equipment, items to be tested, suitable environmental conditions, and appropriate data acquisition equipment;
- the test requirements and acceptance criteria were accurate and were approved by the responsible design organization and were in accordance with applicable design documents and construction specifications;
- appropriate licensee staff and management approval were indicated on the document;

- the procedure required comparison of the test results to the acceptance criteria and provisions were made for the evaluator to indicate whether test data was acceptable or not acceptable;
- step-by-step instructions for the performance of the procedures, including hold points if needed, were included to the extent necessary to ensure that the test was performed and the test objectives were met;
- provisions were made for recording details of the test, including any observed deficiencies, their resolution, and any necessary retesting;
- the procedures and work control instructions provided for trained personnel conducting and evaluating the test data;
- test equipment range and accuracy were consistent with the application and complied with applicable licensing basis design calculations or code requirements;
- the procedure provided for quality control verification (or independent verification) of critical steps or parameters as required by the licensee's administrative or quality assurance program requirements; and
- equipment was properly restored upon test completion, including the removal of installed jumpers and test equipment, and landing of lifted leads; or the procedures reference their control by another procedure.

#### Test Record Review

The inspectors reviewed the results of FAT reports SV3-PMS-T2R-007, SV0-PMS-T2R-407, SV3-PMS-T2R-008, and SV0-PMS-T2R-408 related to testing the ability of the AP1000 PMS to automatically remove blocks of reactor trip and engineered safety feature actuations referenced in Chapter 7 of the UFSAR to determine if they contained sufficient information to meet the requirements associated test reports, and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the test results for the following attributes:

- test records were adequate to furnish identifiable and retrievable evidence of activities affecting quality;
- test records were completed per the test procedures; and
- corrective actions associated with unacceptable test results were consistent with applicable quality and technical requirements.

The inspectors reviewed and compared the FAT procedure acceptance criteria and testing results against the requirements in Appendix C of the COL to verify if they were clearly identified, and the acceptance criteria were met. Specifically, the acceptance criteria reviewed was the PMS blocks are automatically removed when the test signal reaches the specified limit.

The inspectors sampled the following PMS reactor trip and engineered safety features' functions:

- source range high neutron flux reactor trip;
- pressurizer high-3 water level trip;
- safeguards actuation block; and
- flux doubling block

b. Findings

No findings were identified.

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

1P01 Construction Quality Assurance (QA) Criterion 16 - CAP - Assessment of Self-Assessments and Audits

- 35007-A16.04 - Inspection Requirements and Guidance

a. Inspection Scope

The inspectors reviewed the licensee's construction experience database and corrective action program (CAP) to determine if items that were classified as applicable to the site were entered into the CAP in accordance with the construction experience program procedure. The inspectors reviewed a sample of CAP documents to determine if the disposition and handling of applicable industry experience items was performed in accordance with the program procedure.

Assessment

Based on the sample reviewed, the inspectors determined that the licensee identified construction experience, screened and evaluated them for applicability to the project, and entered issues into their CAP.

b. Findings

No findings were identified.

1P02 Construction QA Criterion 16 - CAP - Assessment of the Corrective Action Program Effectiveness

- 35007-A16.04 - Inspection Requirements and Guidance

a. Inspection Scope

The inspectors reviewed the licensee's CAP procedures to determine if the program was implemented in accordance with Section 16 of the licensee's quality assurance data packages, which is required by 10 CFR 50, Appendix B. The inspectors reviewed a sample of implementing procedures to verify if the program established thresholds for problem identification and requirements for the effectiveness of immediate and preventative corrective actions.



The inspectors reviewed the licensee's CAP implementing documents to verify if the program was implemented in accordance with the CAP procedures. As part of the implementation review, the inspectors reviewed the interface requirements for implementing the CAP to Southern Nuclear Company's (SNC's) contractors, Westinghouse and Bechtel; documents related to the identification, evaluation, and resolution of conditions adverse to quality; and adequacy of corrective actions. The inspectors also evaluated the process of handling issues that were introduced into the CAP from such sources as self-assessments, audits, NRC generic communications, and operating and construction experience.

The inspectors reviewed a sample of 15 condition reports (CRs) in design, procurement, construction, and testing that were closed since the last CAP inspection to determine if the CAP program was being implemented in accordance with the procedures. The inspectors reviewed the CRs to verify if the following procedural requirements were incorporated:

- classification, prioritization, and evaluation for reportability of conditions adverse to quality;
- identification of problems in a timely manner fitting with their significance and ease of discovery;
- screening of items entered into the CAP to determine the proper level of evaluation;
- considerations for extent of conditions, generic implications, common causes, and previous occurrences as appropriate;
- classification and prioritization of the resolution of problems fitting the safety significance;
- identification of corrective actions focused to fix the problem;
- completing corrective actions in a timely manner proportional to the safety significance of the issue (including the use of interim corrective actions to minimize the problem and/or mitigate its effects until permanent actions can be done);
- provisions for escalating corrective actions that are not adequate or timely to higher management; and
- evaluation of operating experience information.

As part of the CRs that were reviewed, the inspectors reviewed N&Ds that documented non-conforming conditions to determine if the following procedural requirements were implemented. The reports were reviewed to verify if they:

- clearly identified the nonconformance(s);
- screened for 10 CFR Part 21 and 10 CFR 50.55(e);
- identified and documented applicability to project documents, records, and ITAAC;
- documented and the dispositions; and
- justified the acceptance of a nonconforming item.

## Assessment

### Effectiveness of Problem Identification

Based on the sample of issues reviewed, the inspectors determined that issues were being effectively identified. The samples reviewed indicated that issues were identified in a timely manner; they were described clearly; and a systematic screening process ensured that issues were appropriately entered into the CAP.

### Effectiveness of Prioritization and Evaluation of Issues

Based on the sample of issues reviewed, the inspectors determined that the licensee was adequately evaluating and prioritizing issues. The reviewed sample of issues were screened by appropriate levels of management and they were assigned levels corresponding to their significance. No significant conditions adverse to quality were reviewed as none had been closed during the last 12 months.

### Effectiveness of Corrective Actions

The inspectors determined that in the selected sample, corrective actions for identified deficiencies were timely, adequate, and proportional to their safety significance. Problems found by apparent cause investigations were handled per the licensee's CAP procedures.

#### b. Findings

No findings were identified.

## 1P03 Construction QA Criterion 16 - CAP - Assessment Use of Construction Experience

- 35007-A16.04 - Inspection Requirements and Guidance

#### a. Inspection Scope

The inspectors reviewed a sample of documented audits and self-assessments. The inspectors reviewed the documents to determine if the oversight of the CAP by the licensee was sufficient to verify the health of the program and to identify areas for improvement.

## Assessment

Based on the sample reviewed, the inspectors determined that the conduct of audits and self-assessments was accomplished in accordance with the established plans. Corrective actions to address the identified issues were generally prioritized, evaluated, and completed within procedural guidelines.

#### 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 inspector reviewed the physical protection system documents and performed walkdowns to verify if the system (a) minimized the potential for unauthorized removal of Special Nuclear Material (SNM), (b) facilitated the location and recovery of missing SNM, and (c) mitigated and prevented malevolent acts potentially involving hazardous materials or SNM in accordance with the applicable portions of 10 CFR Part 73. The inspector evaluated the Special Nuclear Material Physical Protection Plan (SNMPPP) and Security Standing Order for implementing the Physical Protection Program requirements for SNM. The inspector conducted a walkdown of the controlled access area (CAA) and temporary CAA area to verify if access to these areas would be controlled and demarcated in accordance with the security program. The inspector reviewed the detection and assessment of unauthorized access and/or activities and unauthorized removal of SNM to verify if the response could facilitate the location and recovery of the missing SNM. The inspector reviewed the organization to verify if the security organization could detect and respond to a threat. The inspector also reviewed the off-site response force to verify if they could respond to all unauthorized penetrations or activities.

###### b. Findings

No findings were identified.

## 3. OPERATIONAL READINESS

### Cornerstones: Operational Programs

#### IMC 2503, Inspections, Tests, Analysis, and Acceptance Criteria (ITAAC) – Related Work Inspections

##### 3T01 (Unit 3) ITAAC Number 2.1.02.12a.iii (55) / Family 07D

###### a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.12a.iii (55). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.01-Procedure Review

The inspectors reviewed 3-PXS-ITPP-505 related to the preoperational test of the automatic depressurization system stages 1-3 motor operated valves to determine if the procedure contained information to meet the requirements of Chapter 14 of the UFSAR and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedure for the following attributes:

- appropriate licensee staff and management approval were indicated on the document;
- test objectives were clearly stated;
- related UFSAR commitments were included;
- required testing prerequisites were identified, including:
  - availability of required plant systems;
  - associated facility procedures;
  - prior completion of calibration checks, limit switch setting, protective device settings, etc. were included where applicable;
  - special supplies and test equipment needs; and
  - test precautions and limitations.
- test acceptance criteria and source of the acceptance criteria were clearly identified;
- the procedure required comparison of results with acceptance criteria;
- initial test conditions were specified, including:
  - valve lineups;
  - electrical power and control requirements;
  - temporary installations or equipment modifications (instrumentation, electrical, and piping); and
  - necessary special conditions such as temperatures, pressures, and flows;
- the procedure included a section listing references to appropriate ITAAC, UFSAR sections, technical specifications, drawings, and other requirements;
- step-by-step instructions for the performance of the procedure, including hold points, were included to the extent necessary to ensure that the tests objectives will be met;
- the procedure included blank spaces for initialing that all items, including prerequisites, were verified as having been performed;
- provisions were made for recording details of the conduct of the test, including any test anomalies;
- the procedure required that all temporary connections be restored to normal at the end of the test;
- provisions were made for the evaluators to document acceptability of the data;
- provisions were made for quality control, quality assurance, engineering, or other specified individual verification of critical steps or test parameters;
- special precautions for personnel and equipment safety were specified;
- expected performance of all automatic functions or controls was specified; and
- provisions were made for verification of calibration of measuring and test equipment (M&TE) and recording of any temporarily installed or used M&TE, equipment identification, and calibration date.

b. Findings

No findings were identified.

3T02 (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 IPs/sections to perform this inspection:

- 65001.D-02.03-Test Results Review

The inspectors reviewed completed portions of procedures B-GEN-ITPCI-039-F025, F026, and F029 through F032 associated with testing the reactor coolant pump trip, corrective action documents, and other test results documentation to determine if they contained sufficient information to meet the requirements of Chapter 14 of the UFSAR, Section 7.3.1.2.5, the ITAAC acceptance criteria, and the licensee's program requirements. Specifically, the inspectors reviewed these documents for the following attributes:

- test records were adequate to furnish identifiable and retrievable evidence of activities affecting quality;
- test records were completed per the licensee's procedures;
- test records met the requirements prescribed by the licensee's record management program; and
- corrective actions associated with unacceptable test results were consistent with applicable quality and technical requirements.

b. Findings

No findings were identified.

3T03 (Unit 3) ITAAC Number 2.2.01.11b (118) / Family 07D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.01.11b (118). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.03-Test Results Review

The inspectors reviewed completed portions of work orders 1100430 and 1100440, relevant corrective action documents, and analyses to determine if they contained sufficient information to meet the ITAAC acceptance criteria, and the licensee's program requirements. Specifically, the inspectors reviewed these documents for the following attributes:

- completed work order packages were assembled;
- procedures in the work orders supported meeting the acceptance criteria;
- completed portions of the "as-run" test procedure included:

- individual procedure steps and data sheets were properly initialed and dated;
- data sheets were completed;
- data had been recorded where required and was within acceptance tolerances;
- procedure had been annotated to identify test changes;
- none of the changes had altered the basic objectives of the test;
- personnel performing test summary and results evaluations applied independent technical analysis and judgment to ensure that the evaluation of test results were performed correctly;
- personnel, responsible for review and acceptance of test results, had documented their review and acceptance of the data package and the results evaluation;
- engineering staff had evaluated the test results and concluded that the testing demonstrated that the equipment met design requirements;
- test results reviews were accomplished as prescribed in the FSAR and licensee commitments;
- adequate implementation of quality assurance program requirements related to operational testing;
- test anomalies and deficiencies were documented, resolved, resolution had been accepted by appropriate management, and that retest requirements, if any, had been completed;
- all deficiencies which constituted a reportable occurrence as defined in 10CFR 50.55e and/or 10CFR50 Part 21 were properly reported; and
- corrective actions addressed extent of condition.

b. Findings

No findings were identified.

3T04 (Unit 3) ITAAC Number 2.2.03.08b.01 (175) / Family 06D

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.08b.01 (175). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.01-Procedure Review

The inspectors reviewed procedure 3-PXS-ITPP-504 related to the passive core cooling system (PXS) passive residual heat removal heat exchanger preoperational test to determine if the procedure contained information to meet the requirements in Chapter 14 of the UFSAR and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedure for the following attributes:

- appropriate licensee staff and management approval were indicated on the document;
- test objectives were clearly stated;
- related UFSAR commitments were included;

- required testing prerequisites were identified, including:
  - availability of required plant systems;
  - associated facility procedures;
  - special supplies and test equipment needs; and
  - test precautions and limitations.
- test acceptance criteria and sources for the acceptance criteria were clearly identified;
- the procedure required comparison of results with acceptance criteria;
- initial test conditions were specified, including:
  - valve lineups;
  - electrical power and control requirements;
  - temporary installations or equipment modifications (instrumentation, electrical, and piping); and
  - necessary special conditions such as temperatures, pressures, and flows;
- the procedure included a section listing references to appropriate ITAAC, UFSAR sections, technical specifications, drawings, and other requirements;
- step-by-step instructions for the performance of the procedure, including hold points, were included to the extent necessary to ensure that the tests objectives will be met;
- the procedure included blank spaces for initialing that all items, including prerequisites, were verified as having been performed;
- provisions were made for recording details of the conduct of the test, including any test anomalies;
- the procedure required that all temporary connections be restored to normal at the end of the test;
- provisions were made for the evaluators to document acceptability of the data;
- provisions were made for quality control, quality assurance, engineering, or other specified individual verification of critical steps or test parameters;
- special precautions for personnel and equipment safety were specified;
- expected performance of all automatic functions or controls was specified; and
- provisions were made for verification of calibration of M&TE and recording of any temporarily installed or used M&TE, equipment identification, and calibration date.

b. Findings

No findings were identified.

3T05 (Unit 3) ITAAC Number 2.2.05.07a.i (265) / Family 12D  
(Unit 3) ITAAC Number 2.2.05.07c (270) / Family 12F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.05.07a.i (265). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.D-02.01-Procedure Review

- 65001.D-02.03-Test Results Review

The inspectors reviewed 3-VES-ITPP-501, "Main Control Room Emergency Habitability System Preoperational Test Procedure," Version 3.0, and several supporting documents referenced in the test procedure related to preoperational testing of the main control room emergency habitability system. The inspectors reviewed the test procedure to determine whether it contained sufficient information to satisfy the ITAAC acceptance criteria and reviewed the procedure for the following attributes:

- appropriate licensee staff and management approval were indicated on the document;
- test objectives were clearly stated;
- required testing prerequisites were identified, including:
  - availability of required plant systems;
  - associated facility procedures;
  - prior completion of calibration checks;
  - special supplies and test equipment needs; and
  - test precautions and limitations;
- test acceptance criteria and source of the acceptance criteria were clearly identified;
- the procedure required comparison of the results with the acceptance criteria;
  - initial test conditions were specified, including:
  - valve lineups;
  - electrical power and control requirements;
  - temporary installations or equipment modifications (instrumentation, electrical, and piping); and
  - necessary special conditions such as temperatures, pressures, and flows;
- the procedure included a section listing references to appropriate ITAAC, UFSAR sections, technical specifications, drawings, and other requirements;
- step-by-step instructions for the performance of the procedure, including hold points, were included to the extent necessary to ensure that the tests objectives will be met;
- the procedure included blank spaces for initialing that all items, including prerequisites, were verified as having been performed;
- provisions were made for recording details of the conduct of the test, including any test anomalies;
- the procedure required that all temporary connections or blind flanges be restored to normal at the end of the test;
- provisions were made for the evaluators to document acceptability of the data;
- provisions were made for quality control, quality assurance, engineering, or other specified individual verification of critical steps or test parameters;
- precautions for personnel and equipment safety were specified;
- expected performance of automatic functions or controls was specified; and
- provisions were made for verification of calibration of M&TE and recording of any temporarily installed or used M&TE, equipment identification, and calibration date.



Additionally, the inspectors reviewed procedure 3-VES-ITPP-501, inputs and outputs of relevant calculations, and other test supporting documentation to verify if testing methodology supported meeting the test objectives and acceptance criteria.

b. Findings

No findings were identified.

3T06 (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.D-02.01-Procedure Review

The inspectors reviewed procedure B-GEN-ITPCI-039 forms F226, F227, F228, and F229 and applicable portions of 3-PMS-OTS-18-001 related to testing of the PMS load shed of MCR electrical loads. Specifically, the inspectors reviewed the procedure for the following attributes:

- appropriate licensee staff and management approval were indicated on the document
- test objectives were clearly stated;
- UFSAR commitments were included and latest codes and standards were referenced where applicable;
- testing prerequisites were identified, including:
  - required plant systems availability was specified;
  - associated facility procedures were specified;
  - prior completion of calibration checks, limit switch setting, protective device settings, etc. were included where applicable;
  - special supplies and test equipment needs were specified;
  - special environmental conditions and hold times, if any, were identified; and
  - test precautions and limitations were specified;
- test acceptance criteria and source of the acceptance criteria were clearly identified;
- procedures required comparison of results with acceptance criteria;
- initial test conditions were specified, including:
  - electrical power and control requirements;
  - temporary installations or equipment modifications (instrumentation and electrical); and
  - necessary special conditions e.g. temperatures and humidity;
- the procedure included a section listing references to appropriate documents for ITAAC, UFSAR sections, technical specifications, drawings, design specifications, industry codes, and other requirements;

- step-by-step instructions for the performance of the procedure, including hold points if needed, were included to the extent necessary to ensure that the test is performed correctly, and the test objectives are met;
- blank spaces were provided for initialing that all items, including prerequisites, are verified as having been performed;
- procedures required that all temporary connections, blind flanges, disconnections or jumpers be restored to normal at the end of the test, or references their control by another procedure;
- procedures provided for the identification of both personnel conducting the testing and those evaluating the test data;
- provisions were made for the evaluator to document acceptability of the data;
- procedures provided for quality control, quality assurance, engineering, or other specified individual verification of critical steps or test parameters;
- special precautions for personnel and equipment safety were specified;
- expected performance of all automatic functions or controls was specified; and
- procedures provided for verification of calibration of M&TE and recording of any temporarily installed or used M&TE equipment identification and calibration date.

b. Findings

No findings were identified.

3T07 (Unit 3) ITAAC Number 2.5.02.06a.ii (530) / Family 10D

a. Inspection Scope

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

- 65001.D-02.01-Procedure Review

Procedure Review

The inspectors reviewed procedure B-GEN-ITPCI-006 and associated documentation related to testing visual alerts for the manual initiation of reactor trip and selected engineered safety features and the transfer of control capability from the MCR to the RSW to determine if the procedure contained sufficient information to satisfy the requirements of Chapter 14 of the UFSAR and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedures for the following attributes:

- the procedure included and referenced acceptable testing configurations and objectives;
- test prerequisites and suitable environmental conditions would be met, adequate instrumentation used, appropriate tests and equipment used, and necessary monitoring would be performed;
- prerequisites included calibrated instrumentation, trained personnel, conditions of test equipment, items to be tested, suitable environmental conditions, and appropriate data acquisition equipment;

- the test requirements and acceptance criteria were accurate and were approved by the responsible design organization and are in accordance with applicable design documents and construction specifications;
- appropriate licensee staff and management approval were indicated on the document;
- the procedure required comparison of the test results to the acceptance criteria and provisions were made for the evaluator to indicate whether test data is acceptable or not acceptable;
- step-by-step instructions for the performance of the procedure, including hold points if needed, were included to the extent necessary to ensure that the test is performed correctly, and the test objectives are met;
- provision was made for recording details of conduct of the test, including any observed deficiencies, their resolution, and any necessary retesting;
- provisions for isolating the equipment during testing are properly controlled;
- the procedure and work control instructions provided for trained personnel conducting and evaluating the test data;
- test equipment range and accuracy were consistent with the application and comply with applicable licensing basis design calculations or code requirements;
- the procedure provided for quality control verification (or independent verification) of critical steps or parameters as required by the licensee's administrative or quality assurance program requirements; and
- equipment would be properly restored upon test completion, including the removal of installed jumpers and test equipment, and landing of lifted leads; or the procedure referenced their control by another procedure.

### Test Witness

The inspectors observed partial performance of procedure B-GEN-ITPCI-006 associated with testing of the MCR and RSW Hand Switches on the PDSP, SDSP, RSP, audio count rate panel, and MCR/RSW control transfer panel.

The inspectors attended the pre-job brief and witnessed the test performance to verify the following attributes:

- test personnel minimum staffing and qualification requirements were met;
- test prerequisites and initial conditions were met and/or those which were waived were reviewed and approved in accordance with current approved administrative procedures;
- testing personnel maintained the required level of training necessary to conduct the test;
- test personnel actions and coordination activities were adequately performed, specifically the assigned individual directing the test activities was knowledgeable and time sequencing, when required, was performed appropriately;
- test anomalies, problems, interruptions, and/or deficiencies were recorded in the test narrative logs and reviewed for inclusion in the licensee's corrective action program, as applicable;

- cognizant test personnel performed a preliminary review of test results to determine that the observed test results met the established acceptance criteria and that the test did not warrant repeating or if repeating was warranted, measures would be taken to ensure the test recurred; and the acceptance criteria was clearly stated in the test procedure.

b. Findings

No findings were identified.

3T08 (Unit 3) ITAAC Number 2.5.02.08a.ii (540) / Family 10D  
(Unit 3) ITAAC Number 2.5.02.08b.ii (543) / Family 10D

a. Inspection Scope

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

- 65001.D-02.01-Procedure Review
- 65001.D-02.02-Test Witnessing

The inspectors reviewed procedure B-GEN-ITPCI-006 and associated documentation related to testing the manual initiation of reactor trip and selected engineered safety features, visual alerts that identify challenges to critical safety functions, and transfer of control capability from the MCR to the RSW to determine if the procedure contained sufficient information to satisfy the requirements of Chapter 14 of the UFSAR and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedures for the following attributes:

- the procedure included and referenced acceptable testing configurations and objectives;
- test prerequisites and suitable environmental conditions would be met, adequate instrumentation used, appropriate tests and equipment used, and necessary monitoring would be performed;
- prerequisites included calibrated instrumentation, trained personnel, conditions of test equipment, items to be tested, suitable environmental conditions, and appropriate data acquisition equipment;
- the test requirements and acceptance criteria were accurate and were approved by the responsible design organization and are in accordance with applicable design documents and construction specifications;
- appropriate licensee staff and management approval were indicated on the document;
- the procedure required comparison of the test results to the acceptance criteria and provisions were made for the evaluator to indicate whether test data is acceptable or not acceptable;
- step-by-step instructions for the performance of the procedure, including hold points if needed, were included to the extent necessary to ensure that the test is performed correctly, and the test objectives are met;

- provision was made for recording details of conduct of the test, including any observed deficiencies, their resolution, and any necessary retesting;
- provisions for isolating the equipment during testing were properly controlled;
- the procedure and work control instructions provided for trained personnel conducting and evaluating the test data;
- test equipment range and accuracy were consistent with the application and comply with applicable licensing basis design calculations or code requirements;
- the procedure provided for quality control verification (or independent verification) of critical steps or parameters as required by the licensee's administrative or quality assurance program requirements; and
- equipment would be properly restored upon test completion, including the removal of installed jumpers and test equipment, and landing of lifted leads; or the procedure referenced their control by another procedure.

The inspectors also observed a partial test performance of procedure B-GEN-ITPCI-006 associated with main control room & remote shutdown room hand switches on the PDSP, SDSP, RSP, audio count rate panel, and MCS/RSW control transfer panel.

The inspectors attended the pre-job brief and witnessed the test performance to verify the following attributes:

- test personnel minimum staffing and qualification requirements were met;
- test prerequisites and initial conditions were met and/or those which were waived were reviewed and approved in accordance with current approved administrative procedures;
- testing personnel maintained the required level of training necessary to conduct the test;
- test personnel actions and coordination activities were adequately performed, specifically the assigned individual directing the test activities was knowledgeable and time sequencing, when required, was performed appropriately;
- test anomalies, problems, interruptions, and/or deficiencies were recorded in the test narrative logs and reviewed for inclusion in the licensee's corrective action program, as applicable;
- cognizant test personnel performed a preliminary review of test results to determine that the observed test results met the established acceptance criteria and that the test did not warrant repeating or if repeating was warranted, measures would be taken to ensure the test recurred; and
- the acceptance criteria was clearly stated in the test procedure.

#### b. Findings

No findings were identified.

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

### 3P01 Emergency Preparedness

- 82002-Att1 - Facilities and Equipment
- 82002-Att4 - Emergency Preparedness Exercises
- 82002-Att 6 - Emergency Response Organization, Dose Assessment Drills

#### a. Inspection Scope

The inspectors conducted an inspection of the essential emergency facilities, equipment, instrumentation, and supplies to determine if they were being maintained in a state of operational readiness by the licensee. Specifically, the inspectors evaluated the ERFs, equipment, instrumentation, and supplies to determine if they were in a state of operational readiness in accordance with 10 CFR 50.47(b), 10 CFR Part 50, Appendix E, Technical Specifications, NUREG-0737, "Clarification of TMI Action Plan Requirements," and Supplement 1 to NUREG-0737, "Clarification of TMI Action Plan Requirements - Requirements for Emergency Response Capability." The inspectors evaluated or reviewed the following:

- radiological survey equipment – the types of equipment for the respective purpose was adequately available, operating, and within the calibration time period;
- communications equipment – the type of equipment for the respective purpose was adequately available and operating; capability for offsite communication via phone/fax/email was adequately established; communication of the emergency response organization (ERO) between facilities was also adequately established;
- onsite data acquisition systems – systems such as WebEOC, plant information display, etc. were available and adequately maintained;
- dose assessment hardware/software – validation and verification of the dose assessment (DA) software was performed by the licensee; DA hardware/software was maintained and appeared to be operating within reasonable expectation; training for offsite authorities was provided for DA tools;
- meteorological information/data – the meteorological information necessary to accomplish ERO duties appeared to be available, operating within reasonable expectation, and being adequately maintained.

The inspectors observed the use of the emergency facilities, equipment, instrumentation, and supplies by the ERO during a limited scope drill, a full scope drill, and the evaluated exercise to determine if the ERFs were being maintained in a state of operational readiness in accordance with the site procedures.

The inspectors performed direct inspection of the ERO dose assessment drills. The inspectors used the following NRC Inspection Procedure sections to perform this inspection:

The inspectors reviewed the licensee's scenarios for the Graded Exercise and a dose assessment re-demonstration drill. Specifically, the inspectors reviewed the site-specific emergency plan (E-Plan) "Standard Emergency Plan Annex for Vogtle Electric Generating Plant Units 3 and 4," and NUREG-0654/FEMA-REP-1, Revision 1. The inspectors reviewed the scope of the scenarios to determine if the licensee appropriately utilized NRC guidance to demonstrate the ERO's ability to perform dose assessment for Vogtle Unit 3. These items included:

- various levels of fission product barrier degradation;
- events escalating core damage;
- releases resulting in exceeding radiological emergency action levels;
- events resulting in releases of radioactive material offsite;
- monitored or unmonitored release points; and
- effluent sample data.

The inspectors evaluated the adequacy of the ERO on-shift and augmentation staffing levels related to dose assessment to verify if they were performed in accordance with their emergency plan. Specifically, the inspectors reviewed the licensee's ERO on-shift and augmentation staffing described in the E-plan to verify if the licensee were in compliance with its commitments and the conclusions of the detailed on-shift staffing analysis required by 10 CFR 50, Appendix E §IV.A.9. The inspectors observed the ERO during the evaluated exercise and a limited scope drill to determine if the adequacy of on-shift and augmentation staffing levels and the ERO's ability to perform dose assessment for Vogtle Unit 3 were in accordance with licensee procedures.

The inspectors utilized NRC Inspection Procedure 71114.01, "Exercise Evaluation", to evaluate the adequacy of the ERO performance during an evaluated exercise and a limited scope drill. Specifically, the inspectors observed the licensee's ERO implement requirements of the E-Plan per 10 CFR 50, Appendix E §IV.F. The inspectors performed an independent evaluation of the ERO performance during a Graded Exercise and a dose assessment re-demonstration drill. Performance standards for assessment included:

- responsible personnel ability to correctly perform the calculation in a timely manner;
- dose calculation results incorporated into classification efforts;
- dose calculation results incorporated into protective action recommendation (PAR) decision making;
- personnel on every shift performing dose assessment;
- dose values included total effective dose equivalent and thyroid committed dose equivalent;
- dose calculation results for the applicable distances where PAR considerations are made;
- assumed release duration should be reasonable for the release pathway and projected plant conditions;

- dose assessment personnel should demonstrate ability to incorporate field team survey data in the refinement of dose assessments;
- dose assessment personnel should demonstrate ability to recognize data that is outside the credible range of parameters;
- development of scenarios that are realistic and sufficiently complex to evaluate performance ability; and
- procedure usability and familiarity, as well as equipment, displays, indications, and calculational tool familiarity.

The inspectors reviewed the licensee's corrective actions associated with emergency preparedness issues that were entered into the CAP. Specifically, the inspectors reviewed corrective actions associated with dose assessment during the Graded Exercise to determine whether actions taken to address the issues were adequate and effective.

The inspectors observed the graded exercise and a dose assessment re-demonstration to verify if the ERO implemented the Emergency Plan, as it related to dose assessment, in accordance with site procedures.

b. Findings

No findings were identified.

3P02 Fire Protection Program

- 64705 - Implemented Operational Feature of the FPP

a. Inspection Scope

Due to Covid 19 concerns and restrictions, this inspection was performed remotely to the extent possible to verify if the licensees fire protection program included an adequate fire brigade program as described in Vogtle Units 3 & 4 UFSAR Section 9.5.1. The inspectors reviewed SNC fleet fire brigade administrative procedures addressing the implementation of fire training programs, fire drill programs and fire brigade personnel medical qualification requirements and that it met the overall intent of NFPA 600 "Standard on Facility Fire Brigades", 2005 edition.

The inspectors reviewed the drill procedures to verify if the procedures included the number and identity of participants, effective scenarios, qualification of participants, procedures on documentation, and drill reports with critiques. The inspectors reviewed samples of fire drill reports to verify if the drills were in accordance with the program. The inspectors interviewed program owners and staff members to verify that operations personnel assigned to the fire brigade for each operating shift would have no duties that would conflict with their fire brigade duties and they that they were qualified to respond to a fire. Due to the separation distances between Vogtle Units 1 & 2 and Vogtle 3 & 4, the inspectors confirmed that Vogtle 3 & 4 would have an independent, stand-alone brigade with emergency response times adequate to limit fire growth and support assumptions in the Fire Protection Analysis Report.



The inspectors reviewed the Burke County Emergency Management Agency's Georgia State Mutual Aid Agreement for the Vogtle Electric Generating Plant, dated March 02, 2002 and as amended on December 11, 2019.

The inspectors reviewed the communications system's distributed antennae design to verify if the capability of the communication systems used for fire event notification and fire brigade firefighting activities were in accordance with the UFSAR.

The inspectors reviewed a limited number of firefighting pre-plans to verify if they were developed and implemented in accordance with NFPA 1620. Specifically, the inspectors reviewed the fire pre-plans to verify whether they identified plant areas containing structures, systems, and components important to safety, the locations and layout of equipment, and any hazards.

b. Findings

No findings were identified.

3P03 Quality Assurance (Operations)

- 35101 - QA Program Implementation Inspection for Operational Programs
- 36100 - Inspection of 10 CFR Part 21 and Programs for Reporting Defects and Noncompliance

a. Inspection Scope

The inspectors reviewed the CAP procedures to verify if they were established to identify conditions adverse to quality and significant conditions adverse to quality in accordance with the QA program. The inspectors also reviewed the CAP implementing procedures to verify if the procedures had controls on nonconforming material, parts, or components in accordance with the QA program. The inspectors reviewed the procedures to verify if they contained provisions for identification, evaluation, and use-as-is for nonconforming materials, parts, or components. The inspectors reviewed the procedures to determine whether they required an evaluation to determine if a reportable condition existed under 10 CFR Part 21.

b. Findings

No findings were identified.

3P04 Pre-operational Testing

- 70702-02.05 - Test Results Review

a. Inspection Scope

The inspectors observed calibration tests of safety-related sensors and transmitters used for Unit 3 reactor trips and engineered safety feature actuations. The calibration tests were performed using sub procedures specified in B-GEN-ITPCI-019, "PMS Sensor Channels."

The inspectors witnessed the performance of the calibration tests to verify the following attributes:

- test prerequisites and initial conditions were met and/or those which were waived were reviewed and approved in accordance with current approved administrative procedures;
- M&TE required by the procedure were calibrated and in service at the time of the test;
- testing personnel maintained the required level of training necessary to conduct the test;
- test personnel actions and coordination activities were adequately performed, specifically the assigned individual directing the test activities was knowledgeable and time sequencing, when required, was performed appropriately;
- test personnel adhered to the procedural limitations and precautions, and the individual test steps;
- test anomalies, problems, interruptions, and/or deficiencies were recorded in the test narrative logs and reviewed for inclusion in the licensee's corrective action program, as applicable;
- cognizant test personnel performed a preliminary review of test results to determine that the observed test results met the established acceptance criteria and that the test did not warrant repeating or if repeating was warranted, measures would be taken to ensure the test recurred; and
- the acceptance criteria was clearly stated in the test procedure.

b. Findings

Introduction

The NRC identified a construction finding of very low safety significance (Green) and an associated non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for the licensee's failure to follow safety related procedure B-GEN-ITPCI-019 for the calibration of RCS pressure transmitters.

Description

From August to October, 2020, the inspectors observed testing and calibration of safety-related transmitters for the sensors used for Unit 3 reactor trips and engineered safety feature actuations. These observations included the reactor coolant system (RCS) pressurizer pressure transmitters (PTs) 3-RCS-PT191A/B/C/D, the pressurizer level transmitters (LTs) 3-RCS-LT195B/C/D, the RCS wide-range PTs 3-RCS-PT140B/C, and the RCS hot leg (HL) Flow transmitter (FT) 3-RCS-FT101A.

The procedure required technicians to manually simulate pressures at the instrument sensors with a hand-pump, maintain the simulated pressure as prescribed in the procedure without fluctuation, and record transmitter signal values indicated on M&TE, the PMS maintenance and test panel display, and main control room displays. During the simulations, the inspectors noted test pressures fluctuated and deviated from those prescribed in the procedures. Although the simulated pressures were not maintained without fluctuation, affecting calibration results, these signal values were recorded on

data sheets, compared against acceptance criteria, and documented as acceptable. The fluctuations in pressure from the setpoints prescribed in the procedure would cause the output signals from the instrument to vary and affect the instrument calibration. Subsequent to the inspector identifying the licensee's failure to satisfy the procedural requirements, the licensee entered this issue into their CAP as CRs 50074114, 50060771, 50062086, and 50062625. The licensee subsequently determined the technicians did not implement the procedures as intended and the transmitters warranted recalibration, and identified the fluctuations were caused by leaks in the test pump and sensors' fittings. In response to this discovery, the licensee took substantive corrective actions that included:

- testing and recalibrating (as necessary) other transmitters to ensure they were within the specified acceptance criteria,
- training of staff on proper methods and practices for accurately calibrating instruments, and
- repairing leaks in the M&TE used for calibrations and performing an extent of condition.

The licensee retested the transmitters and identified several that did not meet the required as-left and as-found acceptance criteria to perform their safety functions.

### Analysis

The inspectors determined the failure to follow procedure B-GEN-ITPCI-019 during the calibration of safety related instruments was a performance deficiency and violation of 10 CFR Part 50, Appendix B, Criterion V. Specifically, the licensee failed to maintain simulated pressures equal to that prescribed in the procedure without fluctuation.

The finding was associated with the Construction Reactor Safety – Inspection/Testing Cornerstone. Using IMC 2519, Appendix A, “Construction Significance Determination Process,” this finding was determined to be of very low safety significance (Green) because the PMS and RCS are in the high risk column, and only one channel of any safety-function could have failed so the system would have been able to meet its design function and it was not a repetitive significant condition adverse to quality.

The performance deficiency did not impact an ITAAC, thus it was determined to be a construction finding.

In accordance with IMC 0613, Appendix F, “Construction Cross-Cutting Areas and Aspects,” the finding was determined to be indicative of present licensee performance and was associated with the cross-cutting aspect of Training in the area of Human Performance. Specifically, the licensee did not provide adequate training for the calibration of safety-related transmitters to ensure technical competency and maintain nuclear safety values [H.9].

### Enforcement

10 CFR Part 50, Appendix B, Criterion V, states in part, “activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type

appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.”

Contrary to the above, on and before October 8, 2020, the licensee failed to perform calibrations of safety-related instruments in accordance with B-GEN-ITPCI-019 and its associated sub-procedures. Specifically, the licensee did not input and maintain pressures as specified in the sub-procedures while recording the signal values of the transmitters. This led to inadequate calibration of the instruments. The licensee entered this issue into its corrective action program as Condition Reports 50074114, 50060771, 50062086, and 50062625. This violation is being treated as an NCV consistent with Section 2.3.2.a of the Enforcement Policy (NCV 05200025/2020009-01, Failure to Complete Procedure B-GEN-ITPCI-019 sub-procedures as Written).

### 3P05 Pre-operational Testing

- 70702-02.03 - Procedure Review

#### a. Inspection Scope

The inspectors reviewed 3-PXS-ITPP-504 related to the PXS core makeup tanks preoperational test to determine if the procedure contained information to meet the requirements of UFSAR Section 14.2.9.1.3.j. Specifically, the inspectors reviewed the procedure to determine if the following attributes were met:

- appropriate licensee staff and management approval were indicated on the document;
- test objectives were clearly stated;
- related UFSAR commitments were included;
- required testing prerequisites were identified, including:
  - availability of required plant systems;
  - associated facility procedures;
  - prior completion of calibration checks, limit switch setting, protective device settings, etc. were included where applicable;
  - special supplies and test equipment needs; and
  - test precautions and limitations.
- test acceptance criteria and source of the acceptance criteria were clearly identified;
- the procedure required comparison of results with acceptance criteria;
- initial test conditions were specified, including:
  - valve lineups;
  - electrical power and control requirements;
  - temporary installations or equipment modifications (instrumentation, electrical, and piping); and
  - necessary special conditions such as temperatures, pressures, and flows;
- the procedure included a section listing references to appropriate ITAAC, UFSAR sections, technical specifications, drawings, and other requirements;
- step-by-step instructions for the performance of the procedure, including hold points, were included to the extent necessary to ensure that the tests objectives will be met;

- the procedure included blank spaces for initialing that all items, including prerequisites, were verified as having been performed;
- provisions were made for recording details of the conduct of the test, including any test anomalies;
- the procedure required that all temporary connections be restored to normal at the end of the test;
- provisions were made for the evaluators to document acceptability of the data;
- provisions were made for quality control, quality assurance, engineering, or other specified individual verification of critical steps or test parameters;
- special precautions for personnel and equipment safety were specified;
- expected performance of all automatic functions or controls was specified; and
- provisions were made for verification of calibration of M&TE and recording of any temporarily installed or used M&TE, equipment identification, and calibration date.

b. Findings

No findings were identified.

3P06 Pre-operational Testing

- 70702-02.03 - Procedure Review

a. Inspection Scope

The inspectors reviewed procedure B-GEN-ITPCI-006 and associated documentation related to testing the manual initiation of reactor trip and selected engineered safety features, visual alerts that identify challenges to critical safety functions, and transfer of control capability from the MCR to the RSW to determine if the procedure contained sufficient information to satisfy the requirements of Chapter 14 of the FSAR and the ITAAC acceptance criteria. Specifically, the inspectors reviewed the procedures for the following attributes:

- the procedure included and referenced acceptable testing configurations and objectives;
- test prerequisites and suitable environmental conditions would be met, adequate instrumentation used, appropriate tests and equipment used, and necessary monitoring would be performed;
- prerequisites included calibrated instrumentation, trained personnel, conditions of test equipment, items to be tested, suitable environmental conditions, and appropriate data acquisition equipment;
- the test requirements and acceptance criteria were accurate and were approved by the responsible design organization and are in accordance with applicable design documents and construction specifications;
- appropriate licensee staff and management approval were indicated on the document;
- the procedure required comparison of the test results to the acceptance criteria and provisions were made for the evaluator to indicate whether test data is acceptable or not acceptable;

- step-by-step instructions for the performance of the procedure, including hold points if needed, were included to the extent necessary to ensure that the test is performed correctly, and the test objectives are met;
- provision was made for recording details of conduct of the test, including any observed deficiencies, their resolution, and any necessary retesting;
- provisions for isolating the equipment during testing were properly controlled;
- the procedure and work control instructions provide for trained personnel conducting and evaluating the test data;
- test equipment range and accuracy were consistent with the application and complied with applicable licensing basis design calculations or code requirements;
- the procedure provided for quality control verification (or independent verification) of critical steps or parameters as required by the licensee's administrative or quality assurance program requirements; and
- equipment would be properly restored upon test completion, including the removal of installed jumpers and test equipment, and landing of lifted leads; or the procedure referenced their control by another procedure.

b. Findings

No findings were identified.

#### **4. OTHER INSPECTION RESULTS**

4OA6 Meetings, Including Exit  
.1 Exit Meeting.

On January 14, 2021, 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**

E. Riffle, ITP Director  
A. Nix, NI Manager  
T. Petrak, 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  
S. Leighty, SNC Licensing Supervisor  
C. Castell, SNC Licensing Engineer  
N. Patel, SNC Licensing Engineer  
J. Cole, SNC Licensing Engineer  
J. Weathersby, SNC Licensing Engineer  
C. Main, ITAAC Project Manager  
D. Wade, ITAAC Project Manager  
B. Macioce, Principle Engineer Digital Testing  
R. McKay, ITP Test Engineer  
S. Turner, ITP Test Engineer  
G. Weaver, ITP Test Engineer  
R. Nicoletto, ITP Test Engineer  
W. Pipkins, ITP Test Engineer  
D. Melton, ITP Test Engineer  
R. Espara, ITP Test Engineer  
J. Clark, ITP Test Engineer  
K. Morgan, ITP Test Engineer

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

<u>Item Number</u>	<u>Type</u>	<u>Status</u>	<u>Description</u>
05200025/2020010-01	NCV	Open/Closed	Failure to Complete Procedure B-GEN-ITPCI-019 sub- procedures as Written

## LIST OF DOCUMENTS REVIEWED

### 1. Construction Reactor Safety

#### Section 1A01

##### Procedures

APP-PMS-T1P-007, AP1000 Protection and Safety Monitoring System Reactor Trip Channel Integration Test Procedure, Rev. 2

APP-PMS-T1P-007, AP1000 Protection and Safety Monitoring System Reactor Trip Channel Integration Test Procedure, Rev. 3

APP-PMS-T1P-008, AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Procedure, Rev. 1

APP-PMS-T1P-008, AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Procedure, Rev. 2

##### Test Reports

SV3-PMS-T2R-007, Vogtle Unit 3 AP1000 Protection and Safety Monitoring System System-Level Reactor Trip Channel Integration Test Report, Rev. 0

SV0-PMS-T2R-407, Vogtle AP1000 Protection and Safety Monitoring System System-Level Reactor Trip Channel Integration Test Report, Rev. 0

SV3-PMS-T2R-008, Vogtle Unit 3 AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Report, Rev. 1

SV0-PMS-T2R-408, Vogtle AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Report, Rev. 0

##### Drawings

APP-PMS-J3-306, AP1000 Detailed Functional Diagram Reactor Trip Division D, Rev. 6

APP-PMS-J3-307, AP1000 Detailed Functional Diagram Reactor Trip Logic, Rev. 5

APP-PMS-J3-309, AP1000 Detailed Functional Diagram Source Range Neutron Detector Reactor Trip, Rev. 8

APP-PMS-J3-310, AP1000 Detailed Functional Diagram Intermediate Range Neutron Detector Reactor Trips Divisions A and B, Rev. 11

APP-PMS-J3-311, AP1000 Detailed Functional Diagram Intermediate Range Neutron Detector Reactor Trips Divisions C and D, Rev. 11

APP-PMS-J3-314, AP1000 Detailed Functional Diagram Power Range Neutron Detector Reactor Trip, Rev. 10

APP-PMS-J3-319, AP1000 Detailed Functional Diagram Pressurizer Pressure Reactor Trip, Rev. 7

APP-PMS-J3-320, AP1000 Detailed Functional Diagram Pressurizer Level Reactor Trip, Rev. 8

APP-PMS-J3-343, AP1000 Detailed Functional Diagram Low Pressurizer Pressure Safeguards Block Control, Rev. 5

APP-PMS-J3-344, AP1000 Detailed Functional Diagram S Signal Division A, Rev. 6

APP-PMS-J3-346, AP1000 Detailed Functional Diagram S Signal Division C, Rev. 6

APP-PMS-J3-380, AP1000 Detailed Functional Diagram Flux Doubling Block Control Divisions A and B, Rev. 9



#### Miscellaneous

ND-RA-001-008-F01, PCD Review for ITAAC 2.5.02.06a.ii (Item 9.a), 9/25/2020  
APP-PMS-J4-020, AP1000 System Design Specification for the Protection and Safety Monitoring System, Rev. 16  
APP-PMS-T5-001, AP1000 Protection and Safety Monitoring System Test Plan, Rev. 5

#### Condition Reports

CR 50066834, ITAAC 530 PCD, 10/23/2020

### **Section 1A02**

#### Procedures

B-GEN-ITPCI-006, Main Control Room & Remote Shutdown Room, Rev. 2  
NMP-AP-002, SNC Fleet Procedures Writers' Guide, Rev. 8.2

#### Drawings

APP-OCS-J8Y-002, AP1000 Operation and Control Centers System Primary Dedicated Safety Panel Drawing Package, Rev. 2  
APP-OCS-J8Y-003, AP1000 Operation and Control Centers System Secondary Dedicated Safety Panel Drawing Package, Rev. 3  
APP-OCS-J8Y-014, AP1000 Operation and Control Centers System Main Control Room/Remote Shutdown Room Transfer Panel Drawing Package, Rev. 3

#### Miscellaneous

WNA-DT-00071-WAPP, MAF Database Release Record for the System Design Specification for the Protection and Safety Monitoring System, Rev. 13 (Attachment SD-  
DER\_pdf\_1483731473\_WNA-DT-00071-WAPP, Rev. 10)  
SV3/4-PMS-T1-501, AP1000 Protection and Safety Monitoring System Preoperational and Component Test Specification, Rev. 3  
SV3-PMS-J0M-003, AP1000 Protection and Safety Monitoring System – Technical Manual, Rev. 3

### **Section 1A03**

#### Procedures

NMP-EP-142-F01, Emergency Notification Form (ENF), Rev. 2.2  
NMP-EP-144, Protective Actions, Rev. 5.0  
NMP-EP-144-F01, PAR Worksheet, Rev. 3.0  
NMP-EP-146-F06, EOF Dose Analyst, Rev. 4.0  
NMP-EP-146-F07, EOF Dose Assessment Supervisor, Rev. 5.0  
NM-EP-147, Offsite Dose Assessment Automated MIDAS, Rev. 4.0  
Southern Nuclear Company Standard Emergency Plan Annex for Vogtle Electric Generating Plant Units 3 & 4, Rev. 3  
Emergency Directory [phonebook] 9/21/2020  
NMP-EP-003, WebEOC Setup and Use, Rev. 12.0  
NMP-EP-140 Accident Assessment, Rev. 3.0  
NMP-EP-140-004, Vogtle 3&4 Core Damage Assessment, Rev. 1.0  
NMP-EP-141-004 Vogtle 3 & 4 Emergency Action Levels and Basis (Amendments 77 and 76 (Vogtle Electric Generating Plant Units 3 and 4 LAR 16-002)), Rev. 3.0  
NMP-EP-141-004-F01, EAL Classification Matrix HOT CONDITIONS, Rev. 2.1  
NMP-EP-141-004-F02, EAL Classification Matrix COLD CONDITIONS, Rev. 2.1

NMP-EP-143, Facility Activation, Rev. 5.0  
NMP-EP-143-001, Alternative Facility Operation, Rev. 3.0  
NMP-EP-143-F01, Command and Control Turnover and Transfer, Rev. 2.0  
NMP-EP-146, Emergency Response Organization, Rev. 3.0  
NMP-EP-147-001, SNC Field Monitoring Team Sampling, Rev. 4.0  
NMP-EP-147-005, VEGP 3 & 4 MIDAS NU Dose Projections, Rev. 1.0 and 2.0  
NMP-EP-147-F12, VEGP 3 & 4 AP1000 Plant Schematic, Rev. 1.0  
NMP-OS-019-001, EOF Support for Beyond Design Based Events, Rev. 4.0

#### Records and Data

VEGP U3 Dose Assessment Demonstration, dated 11/20/20  
Various dose assessment data forms, dated 11/20/20  
Various logs, dated 11/20/20  
PowerPoint presentation to Offsites, dated 2/18/20  
Multiple VEGP 3 MIDAS Software QA Test Results (dose assessment runs), dated 1/25/20

#### Corrective Action Documents

CR 50063699  
CR 50063829  
CR 50063841  
CR 10741201

#### **Section 1A04**

#### Test Procedures

APP-PMS-T1P-007, AP1000 Protection and Safety Monitoring System Reactor Trip Channel Integration Test Procedure, Rev. 2  
APP-PMS-T1P-007, AP1000 Protection and Safety Monitoring System Reactor Trip Channel Integration Test Procedure, Rev. 3  
APP-PMS-T1P-008, AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Procedure, Rev. 1  
APP-PMS-T1P-008, AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Procedure, Rev. 2

#### Test Reports

SV3-PMS-T2R-007, Vogtle Unit 3 AP1000 Protection and Safety Monitoring System System-Level Reactor Trip Channel Integration Test Report, Rev. 0  
SV0-PMS-T2R-407, Vogtle AP1000 Protection and Safety Monitoring System System-Level Reactor Trip Channel Integration Test Report, Rev. 0  
SV3-PMS-T2R-008, Vogtle Unit 3 AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Report, Rev. 1  
SV0-PMS-T2R-408, Vogtle AP1000 Protection and Safety Monitoring System System-Level Engineered Safety Features Channel Integration Test Report, Rev. 0

#### Drawings

APP-PMS-J3-306, AP1000 Detailed Functional Diagram Reactor Trip Division D, Rev. 6  
APP-PMS-J3-307, AP1000 Detailed Functional Diagram Reactor Trip Logic, Rev. 5  
APP-PMS-J3-309, AP1000 Detailed Functional Diagram Source Range Neutron Detector Reactor Trip, Rev. 8  
APP-PMS-J3-310, AP1000 Detailed Functional Diagram Intermediate Range Neutron Detector Reactor Trips Divisions A and B, Rev. 11

APP-PMS-J3-311, AP1000 Detailed Functional Diagram Intermediate Range Neutron Detector Reactor Trips Divisions C and D, Rev. 11  
APP-PMS-J3-314, AP1000 Detailed Functional Diagram Power Range Neutron Detector Reactor Trip, Rev. 10  
APP-PMS-J3-319, AP1000 Detailed Functional Diagram Pressurizer Pressure Reactor Trip, Rev. 7  
APP-PMS-J3-320, AP1000 Detailed Functional Diagram Pressurizer Level Reactor Trip, Rev. 8  
APP-PMS-J3-343, AP1000 Detailed Functional Diagram Low Pressurizer Pressure Safeguards Block Control, Rev. 5  
APP-PMS-J3-344, AP1000 Detailed Functional Diagram S Signal Division A, Rev. 6  
APP-PMS-J3-346, AP1000 Detailed Functional Diagram S Signal Division C, Rev. 6  
APP-PMS-J3-380, AP1000 Detailed Functional Diagram Flux Doubling Block Control Divisions A and B, Rev. 9

#### Miscellaneous

ND-RA-001-008-F01, PCD Review for ITAAC 2.5.02.06a.ii (Item 9.a), 9/25/2020  
APP-PMS-J4-020, AP1000 System Design Specification for the Protection and Safety Monitoring System, Rev. 16  
APP-PMS-T5-001, AP1000 Protection and Safety Monitoring System Test Plan, Rev. 5

#### Condition Reports

CR 50066834, ITAAC 530 PCD, 10/23/2020

#### **Section 1P01**

##### Condition Reports

50040859  
50040999  
50036593

#### **Section 1P02**

##### SNC Procedures

ND-AD-002, Nuclear Development Corrective Action Program, Rev. 30.0  
ND-AD-002-026, Nuclear Development Corrective Action Program Processing, Rev. 2.0  
ND-AD-002-025, Issue Identification and Condition Report Screening, Rev. 2  
ND-AD-002-027, Nonconforming Items, Rev. 7  
ND-AD-VNP-028, VEGP Units 3&4 Site Corrective Action Interface Protocol, Rev. 1  
ND-LI-001, 10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and Noncompliance for Nuclear Development, Rev. 13  
Project ECP Work Instructions, Version 1.0

##### Condition Reports

50036811  
50038819  
50041741  
50043011  
50046595  
50033004  
50035336  
50038128

50040859  
50040999  
50036593  
50045858  
50047983  
50048208  
50051115

**Corrective Action Reports**

80001855  
80002613  
80001413  
80001579

**Nonconformance & Disposition Reports**

SV3-SFS-GNR-000087, Rev. 0  
SV4-CA20-GNR-000319, Rev. 0

**SNC Technical Evaluations**

60008714  
60010908  
60008567  
60011728

**WEC Reportability Initial Evaluation**

EIN 20-003, 13 Feb 2020

**Engineering & Design Coordination Reports**

APP-AX01-GEF-019, Rev. 0

**Section 1P03**

60012308, PO&C 2013-2 (OE.1) & (OE.2) Check-In Self-Assessment, 06/01/2020

**2. SAFEGUARDS PROGRAMS**

**Section 2P01**

Southern Nuclear Operating Company Vogtle 3&4 Special Nuclear Material (SNM) Physical Protection Program Description. Revision 1  
V-SSO-2020-02 Special Nuclear Material Receipt and Protection, dated October 7, 2020

**3. OPERATIONAL READINESS**

**Section 3T01**

**Procedures**

3-PXS-ITPP-505, ADS Stages 1-3 MOV Dynamic Test, Rev. 1.0  
B-GEN-ITPA-004, Conduct of Test, Rev. 19.0  
B-GEN-ITPCM-001, Limitorque SMB/SB Motor Operated Valve Component Testing, Rev. 3.0

#### Miscellaneous

APP-RCS-M3-001, Reactor Coolant System, System Specification Document, Rev. 12  
ND-17-0974, Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load Item  
2.1.02.12a.iii [Index Number 55], 8/9/2019  
SV3-PXS-T1-501, Passive Core Cooling System Preoperational Test Specification, Rev. 3

#### Drawings

SV3-RCS-M6-001, Piping and Instrumentation Diagram Reactor Coolant System, Rev. 7  
SV3-RCS-M6-002, Piping and Instrumentation Diagram Reactor Coolant System, Rev. 9

#### Corrective Action Documents

CR 5068240, CR to document procedure revision after NRC review, 11/7/2020

### **Section 3T02**

3-PMS-OTS-18-001, "Engineered Safeguards Actuation System 24-Month Actuation Device Test,"  
SV3-RCS-ITR-800064, "ITAAC Technical Report- Unit 3 Testing Results of RCP Switchgear Trip: ITAAC 2.1.02.13b NRC Index Number:64, Rev. 0,"  
ND-19-0717, "Southern Nuclear Operating Company Vogtle Electric Generating Plant Unit 3 and Unit 4 Resubmittal of Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load Item 2.1.02.13b [Index Number 641],"  
B-GEN-ITPCI-039-F025, "ECS-ES-31 Component Test,"  
B-GEN-ITPCI-039-F026, "ECS-ES-32 Component Test,"  
B-GEN-ITPCI-039-F027, "ECS-ES-41 Component Test,"  
B-GEN-ITPCI-039-F028, "ECS-ES-42 Component Test,"  
B-GEN-ITPCI-039-F029, "ECS-ES-51 Component Test,"  
B-GEN-ITPCI-039-F030, "ECS-ES-52 Component Test,"  
B-GEN-ITPCI-039-F031, "ECS-ES-61 Component Test,"  
B-GEN-ITPCI-039-F032, "ECS-ES-62 Component Test."

### **Section 3T03**

ND-18-0666, "Southern Nuclear Operating Company, Vogtle Electric Generating Plant Unit 3 and Unit 4, Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load, Item 2.2.01.11b [Index Number 118]"  
SV3-CNS-ITR-801118, "Unit 3 Test Results for CCS Containment Isolation Valves -Loss of Motive Power Testing: ITAAC 2.2.01.11 b, NRC Index Number: 118"  
SV3-CCS-TOW-1100430 NRC Transmittal, completed "Static Diagnostic Testing Of MOV SV3-CCS-PL-V200"  
SV3-CCS-TOW-1100440 NRC Transmittal, completed "Static Diagnostic Testing Of MOV SV3-CCS-PL-V208"

### **Section 3T04**

3-PXS-ITPP-504, Passive Core Cooling System Hot Functional Test, Rev. 2.0  
APP-PXS-M3-001, Passive Core Cooling System, System Specification Document, Rev. 10  
APP-PXS-M3C-516, AP1000 Plant Hot Functional Tests of PRHR Performance, Rev. 1  
B-GEN-ITPA-004, Conduct of Test, Rev. 19.0  
ND-20-0490, Notice of Revised Uncompleted ITAAC Item 2.2.03.08b.01 [Index Number 175], 5/5/2020

SV3-PXS-M6-001, Piping and Instrumentation Diagram Passive Core Cooling System, Rev. 6  
SV3-PXS-M6-002, Piping and Instrumentation Diagram Passive Core Cooling System, Rev. 10  
SV3-PXS-T1-501, Passive Core Cooling System Preoperational Test Specification, Rev. 3  
SV3-PXS-T2C-011, Vogtle Unit 3 PXS Hot Functional Test Results Validation for PRHR  
Performance, Rev. A  
SV3-RCS-M6-001, Piping and Instrumentation Diagram Reactor Coolant System, Rev. 7  
CR 5068240, CR to document procedure revision after NRC review, 11/7/2020

## **Section 3T05**

### Procedures

3-VES-ITPP-501, Main Control Room Emergency Habitability System PreOperational Test  
Procedure, Ver. 3.0

### Miscellaneous

SV3-VES-T2C-600, Six Hour Main Control Room Heatup Acceptance Criteria for Vogtle Unit 3,  
Rev. A

APP-VES-T1-501, Main Control Room Emergency Habitability System Preoperational Test  
Specification, Rev. 4

APP-VES-M3C-107, Main Control Room Relative Humidity during VES Operation, Rev. 1

APP-VES-M3R-002, Tracer Gas Method, Rev. 0

APP-VES-M3C-011, Emergency Habitability System (VES) Thermal Analysis using the  
GOTHIC Thermal Hydraulic Code, Rev. 2

## **Section 3T06**

B-GEN-ITPCI-039-F226, VES-EP-01A Component Test, Ver. 1  
B-GEN-ITPCI-039-F227, VES-EP-01C Component Test, Ver. 1  
B-GEN-ITPCI-039-F228, VES-EP-02A Component Test, Ver. 1  
B-GEN-ITPCI-039-F229, VES-EP-02C Component Test, Ver. 1  
3-PMS-OTS-18-001, Engineered Safeguards Actuation System 24-Month Actuation Device  
Test, Ver. 0  
SV3-GW-J4-122, AP1000 Interface Specification for Main Control Room Load Shed Control  
Panels, Rev. 0

## **Section 3T07**

### Procedures

B-GEN-ITPCI-006, Main Control Room & Remote Shutdown Room, Rev. 2  
NMP-AP-002, SNC Fleet Procedures Writers' Guide, Rev. 8.2

### Drawings

APP-OCS-J8Y-002, AP1000 Operation and Control Centers System Primary Dedicated Safety Panel Drawing Package, Rev. 2  
APP-OCS-J8Y-003, AP1000 Operation and Control Centers System Secondary Dedicated Safety Panel Drawing Package, Rev. 3  
APP-OCS-J8Y-014, AP1000 Operation and Control Centers System Main Control Room/Remote Shutdown Room Transfer Panel Drawing Package, Rev. 3

### Miscellaneous

WNA-DT-00071-WAPP, MAF Database Release Record for the System Design Specification for the Protection and Safety Monitoring System, Rev. 13 (Attachment SD-  
DER\_pdf\_1483731473\_WNA-DT-00071-WAPP, Rev. 10)  
SV3/4-PMS-T1-501, AP1000 Protection and Safety Monitoring System Preoperational and Component Test Specification, Rev. 3  
SV3-PMS-J0M-003, AP1000 Protection and Safety Monitoring System – Technical Manual, Rev. 3

### **Section 3T08**

B-GEN-ITPCI-006, Main Control Room & Remote Shutdown Room, Revision 2.0  
APP-OCS-J8Y-002, AP1000 Operation and Control Centers System Primary Dedicated Safety Panel Drawing Package, Rev. 2  
APP-OCS-J8Y-003, AP1000 Operation and Control Centers System Secondary Dedicated Safety Panel Drawing Package, Rev. 3  
APP-OCS-J8Y-014, AP1000 Operation and Control Centers System Main Control Room/Remote Shutdown Room Transfer Panel Drawing Package, Rev. 3  
WNA-DT-00071-WAPP, MAF Database Release Record for the System Design Specification for the Protection and Safety Monitoring System, Rev. 13 (Attachment SD-  
DER\_pdf\_1483731473\_WNA-DT-00071-WAPP, Rev. 10)  
NMP-AP-002, SNC Fleet Procedures Writers' Guide, Rev. 8.2  
SV3/4-PMS-T1-501, AP1000 Protection and Safety Monitoring System Preoperational and Component Test Specification, Rev. 3  
SV3-PMS-J0M-003, AP1000 Protection and Safety Monitoring System – Technical Manual, Rev. 3

### **Section 3P01**

VEGP 3 & 4 UFSAR; Table 9.5.1.1, AP 1000 Fire Protection Program Compliance with BTP CMEB 9.5-1 (Section 9.5-1.8.2.2 and 13.1.2.1.5 as-Applicable), Rev. 9  
APP-GW-N4R-003; Fire Protection Analysis Report, Rev. 1  
NMP-ES-035; Fire Protection Program, Rev. 6.1  
NMP-ES-035.001; Fire Protection Program Implementation, Rev. 14.0  
NMP-TR-425; Fire Drill Program, Rev. 11.0  
NMP-TR-426; Fire Training Program, Rev. 8.0  
NMP-TR-426-F01, Fire Brigade Leader Qualifications, Rev. 8.0  
B-GEN-OPS-004-Fire Brigade Equipment Quarterly Inspection, Rev. 1.0  
S-FP-PP-10600; Fire Brigade Forcible Entry and Rescue, Rev. 4.2  
S-FP-PP-10700, Ventilation/Salvage and Overhaul, Rev. 4.1  
S-FP-PP-10800; Fire Fighting Strategy and Tactics, Rev. 4.2  
SVO-SES-EF900009, Distributed Antenna System Design, Rev. 2

Burke County Emergency Management Agency Georgia State Mutual Aid Agreement for Vogtle  
Electric Generating Plant; original dated March 02, 2002, as amended December 11, 2019  
CR 50069490  
Unannounced Fire Drill Report, 09/30/2020  
Unannounced Fire Drill Report, 11/13/2020  
Qualified Fire Brigade Member List 11/19/2020 (63 total)  
Qualified Fire Team Leader List (19 total)  
Qualified Fire Brigade Member List Medical Physicals with Restrictions, 11/19/2020  
Status of Nuclear Operations Department Review of Completed Fire Plans to Date, 11/19/2020

## **Section 3P02**

### **SNC Procedures**

ND-AD-002, Nuclear Development Corrective Action Program, Rev. 30.0  
ND-AD-002-026, Nuclear Development Corrective Action Program Processing, Rev. 2.0  
ND-AD-002-025, Issue Identification and Condition Report Screening, Rev. 2  
ND-AD-002-027, Nonconforming Items, Rev. 7  
ND-AD-VNP-028, VEGP Units 3&4 Site Corrective Action Interface Protocol, Rev. 1  
ND-LI-001, 10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and  
Noncompliance for Nuclear Development, Rev. 13  
Project ECP Work Instructions, Version 1.0

## **Section 3P03**

### **SNC Procedures**

ND-AD-002, Nuclear Development Corrective Action Program, Rev. 30.0  
ND-AD-002-026, Nuclear Development Corrective Action Program Processing, Rev. 2.0  
ND-AD-002-025, Issue Identification and Condition Report Screening, Rev. 2  
ND-AD-002-027, Nonconforming Items, Rev. 7  
ND-AD-VNP-028, VEGP Units 3&4 Site Corrective Action Interface Protocol, Rev. 1  
  
ND-LI-001, 10 CFR Part 21 and 10 CFR 50.55(e) Evaluating and Reporting of Defects and  
Noncompliance for Nuclear Development, Rev. 13

## **Section 3P04**

### **Procedures**

B-GEN-ITPCI-019, PMS Sensor Channels  
B-GEN-ITPCI-019-F102, PMS Channel Calibration Test for RCS-FT101A  
B-GEN-ITPCI-019-F106, PMS Channel Calibration Test for RCS-PT191A  
B-GEN-ITPCI-019-F126, PMS Channel Calibration Test for RCS-LT195B  
B-GEN-ITPCI-019-F127, PMS Channel Calibration Test for RCS-PT140B  
B-GEN-ITPCI-019-F128, PMS Channel Calibration Test for RCS-PT191B  
B-GEN-ITPCI-019-F151, PMS Channel Calibration Test for RCS-LT195C  
B-GEN-ITPCI-019-F152, PMS Channel Calibration Test for RCS-PT140C  
B-GEN-ITPCI-019-F153, PMS Channel Calibration Test for RCS-PT191C  
B-GEN-ITPCI-019-F173, PMS Channel Calibration Test for RCS-LT195D  
B-GEN-ITPCI-019-F175, PMS Channel Calibration Test for RCS-PT191D



#### Miscellaneous

APP-PMS-GS-001, Protection and Safety Monitoring System and Diverse Actuation System Setpoints for the AP1000 Plants

#### Corrective Action Documents

CR50074114

CR50060771

CR50062086

CR50062625

#### **Section 3P05**

#### Procedures

3-PXS-ITPP-504, Passive Core Cooling System Hot Functional Test, Rev. 2.0

APP-PXS-M3-001, Passive Core Cooling System, System Specification Document, Rev. 10

B-GEN-ITPA-004, Conduct of Test, Rev. 19.0

#### Drawings

SV3-PXS-M6-001, Piping and Instrumentation Diagram Passive Core Cooling System, Rev. 6

SV3-RCS-M6-001, Piping and Instrumentation Diagram Reactor Coolant System, Rev. 7

#### Miscellaneous

SV3-PXS-T1-501, Passive Core Cooling System Preoperational Test Specification, Rev. 3

#### Corrective Action Documents

CR 50069479, CR to document procedure revision after NRC review, 11/19/2020

#### **Section 3P06**

B-GEN-ITPCI-006, Main Control Room & Remote Shutdown Room, Rev. 2

APP-OCS-J8Y-002, AP1000 Operation and Control Centers System Primary Dedicated Safety Panel Drawing Package, Rev. 2

APP-OCS-J8Y-003, AP1000 Operation and Control Centers System Secondary Dedicated Safety Panel Drawing Package, Rev. 3

APP-OCS-J8Y-014, AP1000 Operation and Control Centers System Main Control Room/Remote Shutdown Room Transfer Panel Drawing Package, Rev. 3

WNA-DT-00071-WAPP, MAF Database Release Record for the System Design Specification for the Protection and Safety Monitoring System, Rev. 13 (Attachment SD-  
DER\_pdf\_1483731473\_WNA-DT-00071-WAPP, Rev. 10)

NMP-AP-002, SNC Fleet Procedures Writers' Guide, Rev. 8.2

SV3/4-PMS-T1-501, AP1000 Protection and Safety Monitoring System Preoperational and Component Test Specification, Rev. 3

SV3-PMS-J0M-003, AP1000 Protection and Safety Monitoring System – Technical Manual, Rev. 3

## LIST OF ACRONYMS

CAA	controlled access area
CAP	corrective action program
CFR	Code of Federal Regulations
COL	Combined License
CR	condition report
DCO	Division of Construction Oversight
DRS	Division of Reactor Safety
EGM	enforcement guidance memorandum
EP	emergency preparedness
EPIP	emergency plan implementing procedures
E-Plan	site-specific emergency plan
ERO	emergency response organization
FAT	factory acceptance test
FT	flow transmitter
HL	hot leg
IMC	inspection manual chapter
IR	inspection report
ITAAC	inspections, tests, analysis and acceptance criteria
LT	level transmitter
M&TE	measuring and test equipment
MCR	main control room
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
PAR	protective action recommendation
PDSP	primary dedicated safety panel
PMS	protection and safety monitoring system
PT	pressure transmitter
PXS	passive core cooling system
QA	quality assurance
QADP	quality assurance data packages
RCS	reactor coolant system
RSP	remote shutdown panel
RSW	remote shutdown workstation
SDSP	secondary dedicated shutdown panel
SNC	Southern Nuclear Company
SNM	special nuclear material
SNMPPP	Special Nuclear Material Physical Protection Plan
UFSAR	Updated Final Safety Analysis Report

### ITAAC INSPECTED

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
55	2.1.02.12a.iii	12.a) The automatic depressurization valves identified in Table 2.1.2-1 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 pre-operational flow, differential pressure and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.1.2-1 under pre-operational test conditions.
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.
118	2.2.01.11b	11.b) After loss of motive power, the remotely operated valves identified in Table 2.2.1-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.1-1 assumes the indicated loss of motive power position.
175	2.2.03.08b.01	8.b) The PXS provides core decay heat removal during design basis events.	1. A heat removal performance test and analysis of the PRHR HX will be performed to determine the heat transfer from the HX. For the test, the reactor coolant hot leg temperature will be initially at $\geq 350^{\circ}\text{F}$ with the reactor coolant pumps running. The IRWST water level for the test will be above the top of the HX. The test will continue until the hot leg temperature is $\leq 250^{\circ}\text{F}$ .	1. A report exists and concludes that the PRHR HX heat transfer rate with the design basis number of PRHR HX tubes plugged is: $\geq 8.46 \times 10^7$ Btu/hr with $250^{\circ}\text{F}$ HL Temp and an initial IRWST temperature of $80^{\circ}\text{F}$ . The heat transfer rate measured in the test should be adjusted to account for differences in the HL and IRWST temperatures and the number of tubes plugged.

265	2.2.05.07a.i	<p>7.a) The VES provides a 72-hour supply of breathable quality air for the occupants of the MCR. 7.b) The VES maintains the MCR pressure boundary at a positive pressure with respect to the surrounding areas. 7.d) The system provides a passive recirculation flow of MCR air to maintain main control room dose rates below an acceptable level during VES operation. 8. Safety-related displays identified in Table 2.2.5-1 can be retrieved in the MCR. 9.a) Controls exist in the MCR to cause remotely operated valves identified in Table 2.2.5-1 to perform their active functions. 9.b) The valves identified in Table 2.2.5-1 as having PMS control perform their active safety function after receiving a signal from the PMS. 10. After loss of motive power, the remotely operated valves identified in Table 2.2.5-1 assume the indicated loss of motive power position. 11. Displays of the parameters identified in Table 2.2.5-3 can be retrieved in the MCR. 12. The background noise level in the MCR does not exceed 65 dB(A) at the operator workstations when VES is operating.</p>	<p>i) Testing will be performed to confirm that the required amount of air flow is delivered to the MCR. iii) MCR air samples will be taken during VES testing and analyzed for quality. i) Testing will be performed with VES flow rate between 60 and 70 scfm to confirm that the MCR is capable of maintaining the required pressurization of the pressure boundary. ii) Air leakage into the MCR will be measured during VES testing using a tracer gas. Testing will be performed to confirm that the required amount of air flow circulates through the MCR passive filtration system. 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 2.2.5-1 using the controls in the MCR. Testing will be performed on remotely operated valves listed in Table 2.2.5-1 using real or simulated signals into the PMS. Testing of the remotely operated valves will be performed under</p>	<p>i) The air flow rate from the VES is at least 60 scfm and not more than 70 scfm. iii) The MCR air is of breathable quality. i) The MCR pressure boundary is pressurized to greater than or equal to 1/8-in. water gauge with respect to the surrounding area. ii) Air leakage into the MCR is less than or equal to 10 cfm. The air flow rate at the outlet of the MCR passive filtration system is at least 600 cfm greater than the flow measured by VES-003A/B. Safety-related displays identified in Table 2.2.5-1 can be retrieved in the MCR. Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.5-1 to perform their active safety functions. The remotely operated valves identified in Table 2.2.5-1 as having PMS control perform the active safety function identified in the table after receiving a signal from the PMS. After loss of motive power, each remotely operated valve identified in Table 2.2.5-1 assumes the</p>
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No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
			the conditions of loss of motive power. Inspection will be performed for retrievability of the parameters in the MCR. The as-built VES will be operated, and background noise levels in the MCR will be measured at the operator work stations with the plant not operating.	indicated loss of motive power position. The displays identified in Table 2.2.5-3 can be retrieved in the MCR. The background noise level in the MCR does not exceed 65 dB(A) at the operator work stations when the VES is operating.
270	2.2.05.07c	7.c) The heat loads within the MCR, the I&C equipment rooms, and the Class 1E dc equipment rooms are within design basis assumptions to limit the heatup of the rooms identified in Table 2.2.5□4.	An analysis will be performed to determine that the heat loads from as-built equipment within the rooms identified in Table 2.2.5-4 are less than or equal to the design basis assumptions.	A report exists and concludes that: the heat loads within rooms identified in Table 2.2.5-4 are less than or equal to the specified values or that an analysis report exists that concludes: – The temperature and humidity in the MCR remain within limits for reliable human performance for the 72□hour period. – The maximum temperature for the 72-hour period for the I&C rooms is less than or equal to 120°F. – The maximum temperature for the 72-hour period for the Class 1E dc equipment rooms is less than or equal to 120°F.

530	2.5.02.06a.ii	<p>6.a) The PMS initiates an automatic reactor trip, as identified in Table 2.5.2-2, when plant process signals reach specified limits.</p> <p>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.</p> <p>6.c) The PMS provides manual initiation of reactor trip and selected engineered safety features as identified in Table 2.5.2-4.</p> <p>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.</p> <p>8.c) Displays of the open/closed status of the reactor trip breakers can be retrieved in the MCR.</p> <p>9.a) The PMS automatically 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</p>	<p>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.</p> <p>i) An inspection will be performed for retrievability of plant parameters in the MCR.</p> <p>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.</p> <p>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.</p>	<p>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.</p> <p>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.</p> <p>i) The plant parameters listed in Table 2.5.2-5 with a "Yes" in the "Display" column, can be retrieved in the MCR.</p> <p>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. Tests</p>
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No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
		<p>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.</p> <p>9.c) The PMS does not allow simultaneous bypass of two redundant channels.</p>		<p>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.</p>

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
540	2.5.02.08a.ii	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.	ii) An inspection and test will be performed to verify that the plant parameters are used to generate visual alerts that identify challenges to critical safety functions.	ii) The plant parameters listed in Table 2.5.2-5 with a "Yes" in the "Alert" column are used to generate visual alerts that identify challenges to critical safety functions. The visual alerts actuate in accordance with their correct logic and values.
543	2.5.02.08b.ii	8.b) The PMS provides for the transfer of control capability from the MCR to the RSW using multiple transfer switches. Each individual transfer switch is associated with only a single safety-related group or with nonsafety-related control capability.	ii) An operational test of the as-built system will be performed to demonstrate the transfer of control capability from the MCR to the RSW.	ii) Actuation of each transfer switch results in an alarm in the MCR and RSW, the activation of operator control capability from the RSW, and the deactivation of operator control capability from the MCR for the associated safety-related division and nonsafety-related control capability.
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.