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

September 1, 2023

Ms. Jamie Coleman
Regulatory Affairs Director
Southern Nuclear Operating Company
7825 River Road, BIN 63031
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 4 – NRC INTEGRATED INSPECTION REPORT 05200026/2023003

Dear Ms. Coleman:

On July 21, 2023, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at Vogtle Electric Generating Plant (VEGP), Unit 4. The enclosed inspection report documents the inspection results, which the inspectors discussed on July 31, 2023, with you and other members of your staff.

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

On July 28, 2023, the NRC made the Title 10 of the *Code of Federal Regulations* (10 CFR), Part 52.103(g) finding, for Vogtle Unit 4 based on the determination that inspections, tests, analyses, and acceptance criteria in Appendix C of the Vogtle 4 COL were successfully completed (ML22348A094). As stated in NRC report number 05200026/2023010 "VOGTLE ELECTRIC GENERATING PLANT (VEGP) UNIT 4 – TRANSITION TO THE OPERATING REACTOR ASSESSMENT PROGRAM" (ML23199A147), after an affirmative finding pursuant to the 10 CFR 52.103(g) is made by the NRC for VEGP Unit 4, the reactor oversight process (ROP) described in IMC 0308, "Reactor Oversight Process Basis Document," and the associated licensee assessment requirements in IMC 0305, "Operating Reactor Assessment Program," will apply.

Per NRC report number 05200026/2023010, VEGP Unit 4 has transitioned from the Licensee Response Column of the construction reactor oversight process (cROP) Construction Action Matrix to the Licensee Response Column of the ROP Action Matrix. Per IMC 0305, Vogtle Units 3 and 4 will be a two-unit site in the ROP and cross-cutting aspects (CCAs) are assigned, themes are monitored, and cross-cutting issues (CCIs) are identified on a "per site" basis, not on a "per unit" basis. Thus, the construction CCAs currently assigned to Unit 4 are no longer applicable and Unit 4, by transitioning to the ROP, has now inherited the existing CCAs assigned to Unit 3.

Based on the results of this inspection, no findings of significance were identified. This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at http://www.nrc.gov/reading-rm/adams.html and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Should you have any questions concerning this letter, please contact me at 404-997-4510.

Sincerely,

Signed by Coovert, Nicole
on 09/01/23

Nicole Coovert, Chief
Construction Inspection Branch 1
Division of Construction Oversight

Docket Nos.: 5200026
License Nos: NPF-92

Enclosure:
NRC Inspection Report (IR) 05200026/2023003
w/attachment: Supplemental Information

cc w/ encl: Distribution via LISTSERV

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 4 – NRC INTEGRATED INSPECTION REPORT 05200026/2023003 Dated September 1, 2023

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Region II

Docket Numbers:	5200026
License Numbers:	NPF-92
Report Numbers:	05200026/2023003
Licensee:	Southern Nuclear Operating Company, Inc
Facility:	Vogtle Electric Generating Plant (VEGP), Unit 4
Location	Waynesboro, GA
Inspection Dates:	July 1, 2023, through July 31, 2023
Inspectors:	B. Kemker, Senior Resident Inspector, Division of Construction Oversight (DCO) B. Griman, Resident Inspector, DCO T. Fredette, Reactor Operations Engineer, Office of Nuclear Reactor Regulation – Vogtle Project Office R. Patel, Senior Construction Inspector, DCO A. Ponko, Senior Construction Inspector, DCO
Approved by:	Nicole Coovert, Chief Construction Inspection Branch 1 Division of Construction Oversight

SUMMARY OF FINDINGS

Inspection Report (IR) 05200026/2023003; 07/01/2023 through 07/31/2023; VEGP Unit 4; integrated inspection report.

This report covers a period of inspection by resident, regional, and headquarters inspectors. The NRC's program for overseeing the safe construction of commercial nuclear power reactors is described in Inspection Manual Chapter 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

A. NRC-Identified and Self Revealed Findings

None

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Construction Status

Unit 4: The licensee completed all inspections, tests, analyses, and acceptance criteria (ITAAC) listed in Appendix C of the VEGP Unit 4 Combined License. On July 28, 2023, the NRC made the 10 CFR 52.103(g) finding for VEGP Unit 4 based on the determination that all ITAAC were successfully completed. This finding allows the licensee to load fuel and begin operation of VEGP Unit 4 in accordance with the terms and conditions of the license.

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 4) ITAAC Number 2.1.02.02a (13) / Family 06F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.02a (13). The inspectors used the following NRC inspection procedure (IP)/section to perform this inspection:

- 65001.C-A3.06 - Mechanical Components

The inspectors reviewed the reactor coolant system (RCS) and reactor system (RXS) as-built design report and associated American Society of Mechanical Engineers (ASME) N-5 installation Code data reports to verify the RCS and the components (listed below) were designed, fabricated, constructed, examined, and tested in accordance with design specifications, engineering drawings, and met the requirements of the 1998 Edition, with Addenda up to and including 2000, of the ASME Code Section III, Division 1, Subsections NCA for general requirements, NB for Class 1 components, and NF for supports.

- reactor pressure vessel (RPV) and four reactor coolant pumps (RCPs)
- single hot leg pipe and two cold leg pipes
- two vertical steam generators (SGs) with primary side U-shaped tube bundles with tubesheet and divider plate
- pressurizer with interconnecting piping, and surge line
- safety relief and squib (pyrotechnic actuated) valves with interconnecting piping
- instrument and valve manifolds
- valves within the RCS pressure boundary
- piping module Q-601 (RCS stages 1, 2, and 3 automatic depressurization system (ADS))
- thermowells for resistance temperature detectors
- miscellaneous items include rupture disks, single stage orifices, and spectacle blinds

- pressure-retaining piping (including tubing) with subassemblies and supports
- items, components, and attachments within Code jurisdictional boundaries of piping-to-piping and piping-to-supports (in-line fittings, flanges, valves, nozzles, branch connections, and fasteners)

The inspectors reviewed as-built design report SV4-RCS-S3R-001 to verify certification by a registered professional engineer and contents were in accordance with the requirements of ASME NCA-3260 that include or reference supporting calculations for the design, service, and test loading conditions stated in the certified design specifications for ASME Code jurisdictional pressure boundaries highlighted on piping and instrumentation diagrams (P&IDs) SV4-RCS-M6-001 and -002.

The inspectors verified the reconciliation of design output documents for design changes and design input documents for nonconformances or deviations requiring modifications (including use of Code Cases) were addressed in accordance with the applicable requirements of ASME NCA-3260 and NCA-3500.

The inspectors reviewed the preservice inspection (PSI) required by program plan SV4-GW-GEI-100 to verify the following examinations were completed prior to initial plant startup for a selected number of items and components of the RCS:

- VT-1 visual examinations for detection of surface discontinuities and imperfections were performed on:

    - rigid supports and bolting;
    - nozzle-to-safe ends;
    - globe and gate valve flange bolting, nuts, washers, and bonnet flange surfaces;
    - RPV inlet/outlet nozzle inner radius sections;
    - direct vessel injection (DVI)-A and -B inner radius sections;
    - closure head nuts and washers, and internal surface under the closure head;
    - RCP main flange nuts and vent assembly cap screws;
    - RCP heat exchanger (HX) channel head nuts and upper/lower flange piping bolting;
    - pressurizer safety valve bolting; and
    - squib valve piping flange surface, nuts, and washers.

- VT-2 visual examination was performed to detect evidence of leakage on the following during the conduct of the system pressure test:

    - bare metal external surfaces of the RPV and closure head, including the junction of the closure head nozzles to closure head base metal surfaces of the closure head.

- VT-3 visual examinations for general mechanical and structural conditions were performed on:

    - RPV nozzle supports, vortex suppression plate, and secondary core support;
    - RPV interior surface, flow skirt support pads, lower guide tube, radial support keyways;
    - RPV core barrel, upper core barrel, core shroud, neutron panel, specimen capsule holders;

- RPV lower and upper core support plate, and upper support column;
- RPV outer periphery control rod drive mechanisms (CRDM) supports and cable connections;
- RPV outer periphery CRDM seismic bumpers and cable support attachments;
- piping and component support conditions (including valve supports);
- hydraulic snubbers, restraints, rigid struts, and welded attachments;
- rigid, constant load, and variable spring supports; and
- Q-601 piping module frames, platforms, fire barriers, and grading supports.

- Surface liquid penetration examinations (PT) were performed on:

  - shop and field welds joining pipes, fittings, valves, flanges, nozzles (and weld buildups), nozzle-to-safe ends, branch connections, and thermowells;
  - squib valve piping flange surfaces;
  - squib valve bonnet bolt closure head studs, nuts, and washers;
  - CRDM latch housing welds at hole peripheral;
  - RPV head QuickLoc instrument nozzle to housing welds;
  - RCP pipe-to-flange, elbow-to-elbow, and pipe-to-elbow welds;
  - RCP pipe-to-stator closure end cap; and
  - RCP HX primary water inlet/outlet nozzle to tubesheet.

- Surface magnetic particle examinations (MT) were performed on the RPV upper assembly primary IHP support lugs.

- Volumetric manual or remote ultrasonic examinations (UT) were performed on:

  - shop and field welds joining pipes, fittings, valves, flanges, nozzles (and weld buildups); and nozzle-to-safe end;
  - squib valve bonnet bolting, and piping flange surface and bolting;
  - RPV inlet/outlet nozzle-to-safe end welds, and nozzle inner radius sections;
  - RPV inlet/outlet nozzle-to-vessel welds;
  - RPV DVI-A and B nozzle-to-safe end welds and nozzle inner radius sections;
  - RPV upper shell-to-lower shell weld and transition ring lower head-to-lower shell welds;
  - RPV transition ring-to-lower head dome weld;
  - RPV studs, and internal and external surface of closure head penetrations;
  - RPV threads in flange;
  - RPV head QuickLoc instrument nozzle to housing welds and weld buildups;
  - RCP end closure bolts and main flange studs;
  - CRDM latch housing welds at hole peripheral; and
  - pipe safe-end welds-to-SG1A and B inlet nozzles.

- Eddy current examinations were performed on:

  - RPV closure head studs;
  - RPV head J-groove weld wetted surfaces; and
  - RPV internal and external surface of closure head penetrations.

The inspectors reviewed the as-built design reports for a sample of RCS piping to verify the reports address functional capability and leak before break (LBB) requirements.

Specifically, the review was performed to determine if the reports conclude the as-built lines meet the requirements for functional capability; and the LBB acceptance criteria are met by the as-built piping and piping materials, or a pipe break evaluation report exists and concludes protection from the dynamic effects of a line break is provided. Portions of the following piping lines were considered in the review: ADS inlet headers, pressurizer surge line, and reactor coolant loop (RCL) hot legs.

The inspectors reviewed appropriate sections of the piping analysis reports for portions of the lines listed above to verify the functional capability and LBB requirements were met, and the evaluations were consistent with VEGP 3&4 Updated Final Safety Analysis Report (UFSAR) Section 3.9.3.1.5 and Appendix 3B, respectively. Specifically, the inspectors reviewed the following tables to verify the functional capability requirements of VEGP 3&4 UFSAR Table 3.9-11 were met: Tables 2.1-9, 2.1-6, and 2-3 of the piping analysis for the ADS inlet headers, pressurizer surge line, and RCL hot legs, respectively. The inspectors also reviewed the following figures to verify the points corresponding to the actual normal and maximum stresses, for the governing load combinations at the critical locations for the LBB evaluations, were enveloped by the appropriate bounding analysis curves: Figure A.21-3 of the piping analysis for the ADS inlet headers, Figures A.20-1 and A.20-2 of the piping analysis for the pressurizer surge line, and Figure 5-3 of the piping analysis for the RCL hot legs.

Additionally, the inspectors verified the as-built design reports for the piping lines listed above reconciled deviations between the documents used for construction and the corresponding documents used for the design analysis, as required by ASME Section III, Paragraph NCA-3554. Specifically, the inspectors verified any impacts to the functional capability or LBB analyses were appropriately evaluated and reconciled.

The inspectors reviewed the contents of the final system SV4-RCS-MUR-001 and supporting ASME N-5 Code data reports that include components, items, and supports to verify entries were completed with certification signatures by the certificate holder representative and authorized nuclear inspector in accordance with the applicable requirements of ASME NCA-3350 and NCA-8000.

b. Findings

No findings were identified.

1A02 (Unit 4) ITAAC Number 2.1.02.05a.i (19) / Family 14A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.02.05a.i (19). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.F-02.04 - General QA Review

The inspectors reviewed the equipment qualification reconciliation reports (EQRRs) for the RCS instruments (listed below) to determine whether the licensee assessed work packages, design changes, and nonconformances to confirm the as-built configuration, including anchorage, was seismically bounded by the analyzed conditions in accordance with the applicable data sheets and design specifications, and satisfy the seismic category 1 and harsh environment criteria.

- RPV head vent valve SV4-RCS-PL-V150C
- ADS motor-operated valves SV4-RCS-PL-V002A, SV4-RCS-PL-V002B, SV4-RCS-PL-V003A
- fourth stage ADS squib valve SV4-RCS-PL-V004A
- pressure sensors SV4-RCS-140C and SV4-RCS-191C
- temperature sensors SV4-RCS-TE133C, SV4-RCS-TE121B, and SV4-RCS-125C
- level sensor SV4-RCS-160A
- pump speed sensor SV4-RCS-283

The inspectors reviewed the licensee's methodology and selection of applicable work orders, data sheets, and design drawings, to determine whether the inspections and analyses demonstrated the installed components were bounded by the design characteristics as documented in the analyses. The inspectors reviewed the equipment qualification summary reports and equipment qualification data packages to determine whether installation restrictions from testing were translated to the drawings and EQRRs. The inspectors performed a review of as-installed electrical connections to determine whether the electrical connections were installed as tested so the valves would function during a design basis accident.

The inspectors performed a walk-down of the installed components to confirm the satisfactory installation of the Class 1E sensors, associated wiring, cables and terminations that are qualified for a harsh environment was bounded by the type tests, analyses, or combination of type tests and analyses. The inspectors verified each sensor’s manufacturer make/model/serial number, location, anchorage, electrical and mechanical interfaces, clearance, and mounting orientation were per the design drawings.

The inspectors reviewed the work packages and confirmed the torque values applied were per the required design drawing and the torque wrenches used were within their calibration cycle.

The inspectors also interviewed licensing personnel to determine how inspection and analyses were performed for applicable nonconformances and engineering & design coordination reports (E&DCRs) issued during fabrication, handling, installation, and testing to ensure all deviations were bounded by the seismically analyzed conditions.

b. Findings

No findings were identified.

1A03 (Unit 4) ITAAC Number 2.1.03.03 (72) / Family 05F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.03.03 (72). The inspectors used the following NRC IP/section to perform this inspection:

- 65001.F-02.04 - General QA Review

The inspectors reviewed the as-built design reports for the RCS and RXS with associated ASME N-1, N-2, and N-5 Code data reports to verify the RXS and the applicable components (listed below) were designed, fabricated, constructed, examined, and tested in accordance with design specifications, engineering drawings, and Code requirements of the 1998 Edition with Addenda up to and including 2000 of the ASME Section III, Division 1, Subsections NCA for general requirements, NB for Class 1 components, and NF for supports.

- reactor core and internals
- flow skirt
- attachment of latch housing assembly to RPV head
- CRDM with bi-metallic weld of the latch housing to latch housing nozzle
- CRDM power cables, cooling system, and control system
- rod travel housing and latch assembly
- incore instrument QuickLoc Assemblies
- incore instrumentation, digital rod position indication (DRPI) sensors, and excore detectors
- rod cluster control assembly and gray rod cluster assembly
- integrated head package (IHP)
- RPV supports

The inspectors reviewed as-built design report SV4-RCS-S3R-001 to verify certification by a registered professional engineer and contents were in accordance with the requirements of ASME NCA-3260 that include or reference supporting calculations for the design, service, and test loading conditions stated in the certified design specifications for ASME Code jurisdictional pressure boundaries.

The inspectors verified the reconciliation of design output documents for design changes and design input documents for nonconformances or deviations requiring modifications (including use of Code Cases) were addressed in accordance with the applicable requirements of ASME NCA-3260 and NCA-3500.

The inspectors reviewed the PSI required by program plan SV4-GW-GEI-100 to verify the following examinations were completed prior to initial plant startup for a selected number of items and components:

- VT-1 visual examinations for detection of surface discontinuities and imperfections were performed on:
  - rigid supports with applicable bolts, nuts, and washers; and
  - closure head nuts and washers.

- VT-3 visual examinations for general mechanical and structural conditions were performed on:

    - RPV nozzle supports, vortex suppression plate, and secondary core support;
    - RPV interior surface, flow skirt support pads, lower guide tube, radial support keyways;
    - RPV core barrel, upper core barrel, core shroud, neutron panel, specimen capsule holders;
    - RPV lower and upper core support plate, and upper support column;
    - RPV outer periphery CRDM supports and cable connections;
    - RPV outer periphery CRDM seismic bumpers and cable support attachments;
    - restraints, rigid struts, and welded attachments; and
    - rigid and constant load supports.

- Surface PT were performed on:

    - shop and field welds joining tubes, fittings, and weld buildups;
    - CRDM latch housing welds at hole peripheral; and
    - RPV head QuickLoc instrument nozzle-to-housing welds.

- Surface MT were performed on the RPV upper assembly primary IHP support lugs.

- Volumetric manual or remote UT were performed on:

    - shop and field welds joining tubes, fittings, and nozzles (and weld buildups);
    - RPV studs, and internal and external surface of closure head penetrations;
    - RPV threads in flange;
    - RPV head QuickLoc instrument nozzle to housing welds and weld buildups;
    - CRDM bi-metallic weld of the latch housing to latch housing nozzle; and
    - CRDM latch housing welds at hole peripherals of the RPV head.

- Eddy current examinations were performed on:

    - RPV closure head studs;
    - RPV head J-groove weld wetted surfaces; and
    - RPV internal and external surface of closure head penetrations.

The inspectors reviewed the contents of ASME N-5 Code data reports that include components, items, parts, appurtenances, and supports to verify entries were completed with certification signatures by the certificate holder representative and authorized nuclear inspector in accordance with the applicable requirements of ASME NCA-3350 and NCA-8000.

b. Findings

No findings were identified.

1A04 (Unit 4) ITAAC Number 2.1.03.06.i (75) / Family 05A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.1.03.06.i (75). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.09-02.02 - Attributes of Electrical Cable installation
- 65001.09-02.03 - Documentation
- 65001.09-02.04 - Problem Identification and Resolution
- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.E - Inspection of the ITAAC-Related Qualification Program
- 65001.F-02.04 - General QA Review

The inspectors reviewed the EQRRs for the RXS instruments listed below to determine whether the licensee assessed work packages, design changes, and nonconformances to confirm the as-built configuration, including anchorage, was seismically bounded by the analyzed conditions in accordance with the applicable data sheets and design specifications, and to verify the seismic Category 1 and harsh environment criteria were satisfied:

- RXS-JE-NE001A/B/C/D, source range detectors
- RXS-JE-NE002A/B/C/D, intermediate range detectors
- RXS-JE-NE003A/B/C/D, power range detectors (lower)
- RXS-JE-NE004A/B/C/D, power range detectors (upper)

The inspectors reviewed the licensee's methodology and selection of applicable work orders, data sheets, and design drawings to determine whether the inspections and analyses demonstrated the installed components were bounded by the design characteristics that were analyzed in the analyses. The inspectors reviewed the equipment qualification summary reports and equipment qualification data packages to determine whether installation restrictions from testing were translated to the drawings and EQRRs. The inspectors performed a walk-down of the installed components to confirm the satisfactory installation of the Class 1E detectors, associated wiring, cables, and terminations that are qualified for a harsh environment was bounded by the type tests, analyses, or combination of type tests and analyses. The inspectors verified each detector’s manufacturer make/model/serial number, location, and mounting orientation were per the design drawings.

The inspectors reviewed the work packages and confirmed the torque values applied were per the required design drawing and the torque wrenches used were within their calibration cycle.

The inspectors also interviewed licensing personnel to determine how inspection and analyses were performed for applicable nonconformances and E&DCRs issued during fabrication, handling, installation, and testing to ensure all deviations were bounded by the seismically analyzed conditions.

b. Findings

No findings were identified.

1A05 (Unit 4) ITAAC Number 2.2.03.02a (159) / Family 06F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.02a (159). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.03-02.08 - Problem Identification and Resolution
- 65001.F - Inspection of the ITAAC-Related Design and Fabrication Requirements
- 65001.F-02.01 - Design Document Review

The inspectors reviewed the passive core cooling system (PXS) as-built design report and associated ASME N-5 installation Code data reports to verify the PXS and the components, listed below, were designed, fabricated, constructed, examined, and tested in accordance with design specifications, engineering drawings, and met the requirements of the 1998 Edition, with Addenda up to and including 2000, of the ASME Code, Section III, Division 1, Subsections NCA for general requirements, NB for Class 1 components, and NF for supports.

Major components within the PXS pressure boundary reviewed include, but were not limited to:

- passive residual heat removal (PRHR) HX (PXS-ME-01);
- accumulator tanks (PXS-MT-01A and B);
- core makeup tanks (CMT) (PXS-MT-02A and B);
- automatic depressurization system spargers (PXS-MW-01A and B);
- valves within the PXS pressure boundary;
- thermowells for resistance temperature detectors;
- pressure-retaining piping and tubing subassemblies;
- instruments and instrument manifolds;
- standard piping penetrations within portions of the piping system, and
- items, components, and attachments within Code jurisdictional boundaries of piping-to-piping and piping-to-supports (in-line fittings, flanges, valves, nozzle and branch connections, and fasteners).

The inspectors reviewed certified as-built design report SV4-PXS-S3R-001 to verify contents were in accordance with the requirements of ASME NCA-3260 using reference supporting calculations for the design, service, and test loading conditions for jurisdictional pressure boundaries highlighted on P&IDs APP-PXS-M6-001 and APP-PXS-M6-001-002.

The inspectors verified reconciliation of design output and input documents for design changes and nonconformances or deviations requiring modifications (including use of Code Cases) were addressed in accordance with the applicable requirements of ASME NCA-3260 and NCA-3500.

The inspectors reviewed the PSI program plan SV4-GW-GEI-100 to verify the following examinations were completed prior to initial plant startup for a selected number of items and components of the PXS:

- VT-1 visual examinations for detection of surface discontinuities and VT-3 visual examinations for general mechanical and structural conditions were performed on welded anchor attachments, rigid supports, flange bolting, valve flanges surfaces, nozzle-to-safe ends, and manway studs, nuts, and washers;

- VT-3 visual examinations for general mechanical and structural conditions were performed on supports for piping and components, valve supports, rigid supports, hydraulic snubbers, and penetration anchors;

- weld surface PT and volumetric UT were performed on shop and field welds for joining pipes, fittings, valves, flanges, nozzles, branch connections (PT only), and instruments to socket welds (PT only); and

- augmented volumetric UT were performed on the following field and shop welds to establish a reference baseline of selected circumferential pipe welds to protect against postulated degradation mechanism for LBB analyzed piping:

    - SV4-PXS-PLW-013-FW-1 for accumulator tank PXS-MT-01A nozzle N02-to-elbow fitting of 8-inch(") diameter;
    - SV4-PXS-PLW-014-FW-10 for 8" diameter pipe-to-check valve V028A;
    - SV4-PXS-PLW-023-FW-1 for 8” diameter pipe to check valve V027B;
    - SV4-PXS-PLW-024-SW5 for 8” diameter pipe to swing check valve V028B;
    - SV4-PXS-PLW-023-SW-3 for 8” diameter pipe to elbow, and
    - SV4-PXS-PLW-02X-SW-10 for 8” diameter pipe to squib valve V123B flange.

The inspectors reviewed the contents of the final system SV4-PXS-MUR-001 and supporting ASME N-5 Code data reports that include components, items, and supports along with system physical nameplate Code symbol stampings to verify entries were completed with certification signatures by the certificate holder representative and authorized nuclear inspector in accordance with the applicable requirements of ASME NCA-3350 and NCA-8000.

The inspectors reviewed the as-built design reports for a sample of PXS piping to verify the reports address functional capability and LBB requirements. Specifically, the review was performed to determine if the reports conclude the as-built lines meet the requirements for functional capability; and the LBB acceptance criteria are met by the as-built piping and piping materials, or a pipe break evaluation report exists and concludes protection from the dynamic effects of a line break is provided. Portions of the following piping lines were considered in the review: PRHR inlet line from hot leg, normal residual heat removal system (RNS) A discharge line to PXS from RNS check valve RNS-PL-V017A to DVI line A, and in-containment refueling water storage tank (IRWST) injection line A to DVI line A.

The inspectors reviewed appropriate sections of the piping analysis reports for portions of the lines listed above to verify the functional capability and LBB requirements were met, and the evaluations were consistent with VEGP 3&4 UFSAR Section 3.9.3.1.5 and Appendix 3B, respectively. Specifically, the inspectors reviewed the following tables to

verify the functional capability requirements of VEGP 3&4 UFSAR Table 3.9-11 were met: Table 2.1-9 of the piping analysis for portions of the PRHR inlet line from hot leg, and Tables 2.1-2 and 2.1-3 of the piping analyses for portions of the RNS A discharge line to PXS from RNS check valve RNS-PL-V017A to DVI line A, and IRWST injection line A to DVI line A. The inspectors also reviewed the following figures to verify the points corresponding to the actual normal and maximum stresses, for the governing load combinations at the critical locations for the LBB evaluations, were enveloped by the appropriate bounding analysis curves: Figure A.27-1 of the piping analysis for the PRHR inlet header from hot leg, Figure A.23.4-3 of the piping analysis for the RNS A discharge line to PXS from RNS check valve RNS-PL-V017A to DVI line A, and Figures A.23-4.1 and A.23.4-2 of the piping analysis for the IRWST injection line A to DVI line A.

Additionally, the inspectors verified the as-built design reports, for the piping lines listed above, reconciled deviations between the documents used for construction and the corresponding documents used for the design analysis, as required by ASME Section III, Paragraph NCA-3554. Specifically, the inspectors verified any impacts to the functional capability or LBB analyses were appropriately evaluated and reconciled.

b. Findings

No findings were identified.

1A06 (Unit 4) ITAAC Number 2.2.03.05a.i (165) / Family 14A

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 2.2.03.05a.i (165). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.A - As-Built Attributes for SSCs associated with ITAAC
- 65001.A.02.02 - Installation Records Review
- 65001.A.02.04 - Review As-built Deviations/Nonconformance
- 65001.F-02.02 - Fabrication Records Review

The inspectors reviewed the EQRRs for the PXS safety related components listed below and performed walkdowns to confirm the as-built configuration, including anchorage, was seismically bounded by the analyzed conditions in accordance with the applicable data sheets and design specifications.

- IRWST injection check valves – SV4-PXS-PL-V122A and SV4-PXS-PL-124B
- CMT discharge check valves – SV4-PXS-PL-V016B and SV4-PXS-PL-V017A

The inspectors also reviewed EQRRs of the structures, systems, and components (SSCs) listed below and performed walkdowns to verify the as-built equipment satisfied the seismic Category 1 and harsh environment acceptance criteria of ITAAC 2.2.03.05.

- CMT inlet isolation motor operated valve (MOV) – SV4-PXS-PL-V002B
- CMT discharge isolation air operated valves (AOVs) – SV4-PXS-PL-V014B and SV4-PXS-PL-V015A

- CMT B level sensor – SV4-PXS-LE014C and SV4-PXS-LE012B
- containment recirculation squib valve – SV4-PXS-PL-V120A
- containment recirculation isolation MOV – SV4-PXS-PL-V117A
- containment flood-level sensor – SV4-PXS-051
- IRWST injection isolation squib valve – SV4-PXS-PL-V125B
- IRWST lower narrow range level sensor – SV4-PXS-LT067
- IRWST wide range level sensor – SV4-PXS-LT047
- PRHR HX inlet isolation MOV – SV4-PXS-PL-V101
- PRHR HX control AOV – SV4-PXS-PL-V108A
- PRHR HX flow sensor – SV4-PXS-FT049A

The inspectors reviewed the licensee's methodology and selection of applicable work orders, data sheets, and design drawings, to determine whether the inspections and analyses demonstrated the installed components were bounded by the design characteristics that were analyzed in the analyses. The inspectors reviewed the equipment qualification summary reports and equipment qualification data packages to determine whether installation restrictions were translated to the drawings and EQRRs. The inspectors performed a review of as-installed electrical and pneumatic connections for the valves to determine whether the electrical and pneumatic connections were installed as tested so the valves would function during a design basis accident.

The inspectors examined the installation of the valves, and flow and level sensors to verify the make/model/serial number, mounting, orientation, and location were in accordance with the design specifications and construction drawings. The inspectors also verified the mechanical anchorage and electrical connections were bounded by the tested conditions.

The inspectors also interviewed licensing personnel to determine how inspection and analyses were performed for applicable nonconformances and E&DCRs issued during fabrication, handling, installation, and testing to ensure all deviations were bounded by the seismically analyzed conditions.

b. Findings

No findings were identified.

1A07 (Unit 4) ITAAC Number 3.3.00.08 (813) / Family 04F

a. Inspection Scope

The inspectors performed a direct inspection of construction activities associated with ITAAC Number 3.3.00.08 (813). The inspectors used the following NRC IPs/sections to perform this inspection:

- 65001.21.02.03 - As Built Inspections
- 65001.21 - Inspection of Pipe Rapture Hazard Analysis Design Acceptance Criteria (DAC) – Related ITAAC

The inspectors performed a walkdown with licensee field engineers of the as-built piping systems to assess the overall projected spray areas of the RCS and SG ‘A’ to

verify the SSCs identified as essential targets can withstand the effects of postulated pipe rupture without loss of required safety function as defined in the pipe rupture hazard analysis (PRHA) report. The inspectors performed walkdown of line breaks listed below.

- Line Break No. RCS-105-UZ0I-JET-D / RCS-105-UZ0I-JET-U, RCS-106-RZOI-JET (line RCS-PL-L010A to V011A room 11703)
- RCS-006-ZOI (line RCS-PL-L215 room 11503)
- RCS-107-UZOI-JET-D/ RCS-107-UZOI-JET-U (line RCS-L010B room 11603)
- RCS-108-RZOI-JET (line RCS-PL-L010B to V011B room 11603)
- SGS-001-ZOI-JET (line SGS-PL-L005A SG A, room 11503)

The inspectors reviewed the as-built PRHA summary reports for the auxiliary and containment buildings to verify the SSCs identified as essential targets are protected from the dynamic and environmental effects of postulated pipe ruptures and can withstand the effects of postulated pipe rupture without loss of required safety function.

The inspectors reviewed the as-built PRHA summary reports to verify deviations between the as-designed and as-built conditions were identified, evaluated, and reconciled as described in VEGP 3&4 UFSAR Section 3.6.

The inspectors reviewed four piping stress analysis reports associated with piping segments of the RCS and PXS systems to verify intermediate pipe break evaluations were performed, if applicable, for the piping segments within the scope of the analyses. The inspectors verified the actual stress was less than the allowable limits of VEGP 3&4 UFSAR Subsection 3.6.2.1, if applicable, at locations where intermediate pipe breaks were not postulated to occur. Where the dynamic effects of sudden pipe breaks were eliminated by assuming mechanistic pipe break criteria, the inspectors verified the calculated stresses are enveloped by the LBB bounding analysis curves. Additionally, the inspectors verified loads due to transient and sustained design basis pipe breaks were evaluated, if applicable, in the analyses.

The inspectors also verified the as-built PRHA summary reports conclude the results of the as-designed PRHA remain valid and are not impacted by the as-built condition of the plant, based on engineering evaluation of as-built deviations, E&DCRs and field walkdown information. Specifically:

- no new intermediate pipe breaks need to be postulated;
- no new or different pipe break mitigation features (pipe whip restraints, jet shields, etc.) are required;
- the pipe break mitigation features in the design are adequate (pipe whip and jet impingement loads have not changed) and are installed correctly;
- no new or different targets of pipe breaks were identified;
- no new or different room environmental conditions (pressure, temperature, humidity, radiation) need to be postulated or evaluated; and
- no new or different room flooding conditions need to be postulated or evaluated.

b. Findings

No findings were identified.

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

1P01 Construction QA Criterion 16

- 35007-A16.04 - Inspection Requirements and Guidance
- 35007-A16.04.01 - Inspection of QA Implementing Documents
- 35007-A16.04.02 - Inspection of QA Program Implementation

a. Inspection Scope

The inspectors reviewed issues entered into the licensee's corrective action program (CAP) daily to assess issues that might warrant additional follow-up inspection, to assess repetitive or long-term issues, to assess adverse performance trends, and to ensure the CAP appropriately included regulatory required nonsafety-related SSCs. The inspectors periodically attended the licensee's CAP review meetings, held discussions with licensee and contractor personnel, and performed reviews of CAP activities during the conduct of other baseline inspection procedures. The inspectors reviewed conditions entered into the licensee's CAP to determine whether the issues were classified in accordance with the licensee's quality assurance program and CAP implementing procedures. The inspectors reviewed corrective actions associated with conditions entered into the CAP to determine whether appropriate actions to correct the issues were identified and implemented effectively, including immediate or short-term corrective actions, in accordance with the applicable quality assurance program requirements and Title 10 of the Code of Federal Regulations, Part 50, Appendix B, Criterion XVI. Additionally, the inspectors reviewed the corrective actions taken to determine whether they were commensurate with the significance of the associated conditions in accordance with the licensee's CAP implementing procedures. The inspectors completed reviews of CAP entry logs to verify issues from all aspects of the project, including equipment, human performance, and program issues, were being identified by the licensee and its contractors at an appropriate threshold and entered into the CAP as required by licensee's CAP implementing procedures.

b. Findings

No findings were identified.

4. OTHER INSPECTION RESULTS

4OA6 Meetings, Including Exit

.1 Exit Meeting.

On July 31, 2023, the inspectors discussed the results of this inspection with Ms. Jamie Coleman, Regulatory Affairs Director, Vogtle 3 & 4, 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

C. Castell, WEC Licensing Engineer
N. Chapman, SNC Licensing Engineer
K. Durrwachter, SNC Licensing Engineer
W. Garrett, SNC Licensing Manager
D. Kettering; SNC Engineering
K. Roberts, SNC ITAAC Manager
G. Scott, SNC Licensing Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Item Number	Type	Status	Description
None			

LIST OF DOCUMENTS REVIEWED

Section 1A01

Southern Nuclear Operating Company ND-RA-001-008-F01-ITAAC 13, “ITAAC Principal Closure Document Review Form,” 7/21/2023
Westinghouse Electric Company (WEC) SV4-RCS-S3R-001 “Vogtle Unit 4 Reactor Coolant System (RCS) ASME Section III As-Built Piping System Design Report,” Revision 0
WEC SV4-RCS-M6-001, "Piping & Instrumentation Diagram (P&ID), Reactor Coolant System," Revision 8
WEC SV4-RCS-M6-002, "P&ID Reactor Coolant System, Class 1," Revision 11
WEC SV4-GW-GEI-100, AP1000 Preservice Inspection Program Plan for Vogtle Unit 4, Revision 0
WEC SV4-RCS-S3R-002, “Assessment of Vogtle Unit 4 AP1000 Reactor Coolant System (RCS) Code Case N-887 Uses,” Revision 0
WEC SV4-RNS-P0R-0102, “AP1000 Piping for APP-RNS-PLR-010 – Vogtle Unit 4 As-Built Design Report,” Revision 1
WEC "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MUR-001 installed for the Southern Nuclear Operating Company, 7/20/2023
Stone & Webster (S&W) "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-006 installed for WEC, 6/10/2022
S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-007 installed for WEC, 1/3/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-008 installed for WEC, 12/20/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-012 installed for WEC, 3/1/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-020 installed for WEC, 5/3/2023

SV4-PV01-VDR-132001, “Determination, Review, and Certification of Review of SV4-RCS-PL-V002B Repair Plan in Accordance with Code Case N-801,” Revision 1

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-022 installed for WEC, 4/1/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-023 installed for WEC, 5/25/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-MP01A installed for WEC, 5/27/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-MP01B installed for WEC, 5/27/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-MP02A installed for WEC, 6/1/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-MP02B installed for WEC, 6/2/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-Q601 installed for WEC, 4/28/2023

PCI Energy Services, "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-022-1 installed for WEC, 3/6/2023

PCI Energy Services, "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Vessel Internals by Certificate Holder's Serial No. SV4-RXS-MJR-MI01 installed for S&W, 6/21/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-099 installed for WEC, 7/11/2023

EMD “Form NPV-1, Certificate Holder’s Data Report for Nuclear Pumps or Valves, As Required by the Provisions of ASME Code, Section III, Division 1,” for Reactor Coolant Pump Serial No. 511, 1/10/2023

WEC SV4-MP01-VQQ-007, “Quality Release & Certificate of Conformance, - QR-17-1622,” for AP1000 Reactor Coolant Pump Serial No. 511, 4/4/2023

WEC SV4-MI01-VQQ-025, “Quality Release & Certificate of Conformance, -QR-23-302,” for Vogtle Unit 4 RVI Upper Internals (S/N 6029), CSS for WEC, 7/10/2023

Section 1A02

2.1.02.05a.i-U4-EQRR-PCD002, “Reactor Coolant System (RCS) EQ Reconciliation Report (EQRR),” Revision 0

2.1.02.05a.i-U4-EQRR-PCD03, “Reactor Coolant System (RCS) EQ Reconciliation Report (EQRR),” Revision 0

2.1.02.05a.i-U4-EQRR-PCD04, “Reactor Coolant System (RCS) EQ Reconciliation Report (EQRR),” Revision 0

SV4-PV13-VBR-011, “Equipment Qualification Summary Report for Valcor Solenoid-Operated Globe Valve Assemblies for Use in the AP1000 Plant,” Revision 0

SV4-PV13-VBR-012, “Equipment Qualification Data Package for Valcor Solenoid-Operated Globe Valve Assemblies for Use in the AP1000 Plant,” Revision 0

SV4-PV01-VBR-013, “Equipment Qualification Summary Report for Flowserve Globe Stop Valves with Limitorque Motor Operators for Use in the AP1000 Plant,” Revision 1

SV4-PV01-VBR-014, “Equipment Qualification Data Package for Flowserve Globe Stop Valves with Limitorque Motor Operators for Use in the AP1000 Plant,” Revision 1

SV4-PV70-VBR-005, “Equipment Qualification Data Package for 14” Squib Valves for Use in the AP1000 Plant,” Revision 0

SV4-JE52-VBR-001, “Equipment Qualification Summary Report for Model DTN2070, Pressure and Differential Pressure Transmitter for Use in the AP1000 Plant,” Revision 1

SV4-JE52-VBR-002, “Equipment Qualification Data Package for Model DTN2070, Pressure and Differential Pressure Transmitter for Use in the AP1000 Plant,” Revision 1

SV4-JE52-VBR-003, “Equipment Qualification Summary Report for 3155N Pressure Transmitter for Use in the AP1000 Plant,” Revision 2

SV4-JE52-VBR-004 “Equipment Qualification Data Package for 3155N Pressure Transmitter for Use in the AP1000 Plant,” Revision 2

SV4-JE53-VBR-001, “Equipment Qualification Summary Report for Weed Instrument N90002 and N90004 Resistance Temperature Detectors for Use in the AP1000 Pant,” Revision 1

SV4-JE53-VBR-002, “Equipment Qualification Data Package for Weed Instrument N90002 and N90004 Resistance Temperature Detectors for Use in the AP1000 Pant,” Revision 0

SV4-JE62-VBR-001, “Equipment Qualification Summary Report for Reactor Coolant Pump Speed Sensor for Use in the AP1000 Plant,” Revision 1

SV4-JE62-VBR-002, “Equipment Qualification Data Package for Reactor Coolant Pump Speed Sensor for Use in the AP1000 Plant,” Revision 1

SV4-JE52-VQQ-001, “Vendor Equipment Quality Release 16-1284 for AP1000 JE52 Class 1E Pressure and Differential Pressure Transmitter,” Revision 0

SV4-JE52-VQQ-002, “Vendor Equipment Quality Release 16-1472 for AP1000 JE52 Class 1E Pressure and Differential Pressure Transmitter,” Revision 0

Work Package SV4-RCS-P0W-1004242, “ASME III – Assemble Valves SV4-RCS-PL-V001A/B, RCS-PL-V002A/B, RCS-PL-V003A/B,” Revision 0

SV4-RCS-JEW-1122918, “Work Package – Attachment B-1 Instrument Installation Assembly/Rack Sheet for SV4-RCS-JE-ST283 and SV4-RCS-JE-ST284 Sensors,” Revision 0
Work Order 1267393, “SV4-RCS-JE-TE122B – Install RCS TEs (Ultra Energy’s Failure Analysis) Safety-Related,” Revision 0
Condition Report (CR) 50178697, “ITAAC 19 ICN Submittal in ITAAC Maintenance"
CR 50178665, “RCS Temperature Sensors May Be Mislabeled"
CR 50173486, “RTD Time Response Failure – 4-RCS-TE125A"
CR 50173576, “Damaged RTD SV4-RCS-JE-TE125B”
CR 50116780, “Ultra Energy Report Detailing Inspection Report of Returned RTDs that Failed ITP Component Tests in 2021”
Corrective Action Report 80002916, “APP-PV01-Z0D-132 As-Found Spring Pack Do Not Match Design”
Engineering and Design Coordination Report (E&DCR) APP-GW-GEF-1628, “Implementation of Updated Zone 1 Abnormal Group 1 Pressure Per APP-GW-GEE-5226,” Revision 0
E&DCR SV0-PV01-GEF-003, “PV01 Valve Yoke Assembly Rotation,” Revision 0
E&DCR APP-PV70-GEF-001, “Squib Valve ASME Code report update,” Revision 0
&DCR APP-MP01-GEF-050, “AP1000 Reactor Coolant Pump Seismic Analysis,” Revision 0
E&DCR APP-GW-GEF-1889, “Revision of Equipment Qualification Summary Reports and Data Packages for JE62 and SMS VIMS Commodities,” Revision 0
E&DCR SV4-JE53-GNR-000001, “Resolution of ESR 50151514 4-RCS-22 Unscheduled Flex Length for SV4-RCS-JE-TE131B,” Revision 0
E&DCR SV4-RCS-GEF-000007, “New Mounting Detail for Instruments SV4-RCS-JE-PT140C and PT140D (ESR 50093023),” Revision 0

Section 1A03
Southern Nuclear Operating Company ND-RA-001-008-F01-ITAAC 72, “ITAAC Principal Closure Document Review Form,” for ITAAC 2.1.03.03 (Index No. 72) 7/20/2023
Westinghouse Electric Company (WEC) SV4-RCS-S3R-001, “Vogtle Unit 4 Reactor Coolant System (RCS) ASME Section III As-Built Piping System Design Report,” Revision 0
WEC "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Coolant System by Certificate Holder's Serial No. SV4-RCS-MUR-001 installed for the Southern Nuclear Operating Company,” 7/20/2023
WEC SV4-RCS-S3R-002, “Assessment of Vogtle Unit 4 AP1000 Reactor Coolant System (RCS) Code Case N-887 Uses,” Revision 0
WEC SV4-GW-GEI-100, "AP1000 Preservice Inspection Program Plan for Vogtle Unit 4," Revision 1
WEC SV4-MV01-Z0R-101, "Southern Nuclear Vogtle Unit 4 As-Built AP1000 Reactor Vessel ASME Code Design Report," Revision 1
WEC SV4-MV11-S3R-001, "SV4 Control Rod Drive Mechanism (CRDM) As-Built Reconciliation Report." Revision 1
WEC APP-MV11-Z0-001, "Design Specification for AP1000 Control Rod Drive Mechanism (CRDM) for System: RXS," Revision 8
SV4-RCS-P0R-0102, “AP1000 Piping for APP-RCS-PLR-010 – Vogtle Unit 4 ASME III As-Built Design Report,” Revision 0
SV4-RCS-P0R-0202, “AP1000 Piping for APP-RCS-PLR-020 - Vogtle Unit 3 ASME III As-Built Design Report,“ Revision 0
SV4-RCS-P0R-0302, “AP1000 Piping for APP-RCS-PLR-030 – Vogtle Unit 4 ASME III As-Built Design Report,” Revision 0

SV4-RCS-P0R-0402, “AP1000 Piping for APP-RCS-PLR-040 – Vogtle Unit 4 ASME III As-Built Design Report,” Revision 0
SV4-RCS-P0R-0502, “AP1000 Piping for APP-RCS-PLR-050 – Vogtle Unit 4 ASME III As-Built Design Report,” Revision 0
SV4-RCS-P0R-05302, “AP1000 Piping for APP-RCS-PLR-0530 - Vogtle Unit 4 ASME III As-Built Design Report,” Revision 0
SV4-RCS-P0A-040, “As-Built Control Document Package for APP-RCS-PLR-040 for Vogtle Unit 4,” Revision 1
SV4-RCS-P0A-050, “As-Built Control Document Package for APP-RCS-PLR-050 for Vogtle Unit 4,” Revision 0
WEC "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-0010001, installed for the Southern Nuclear Operating Company, 3/1/2022
WEC "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-0020001, installed for the Southern Nuclear Operating Company, 3/8/2022
WEC "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-002, installed for the Southern Nuclear Operating Company, 9/6/2022
WEC "Form N-5 Certificate Holder's Data Report for Installation or Shop Assembly of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Reactor Cooling System by Certificate Holder's Serial No. SV4-RCS-MJR-Q601, installed for the Southern Nuclear Operating Company, 4/27/2023
Engineering and Design Coordination Report (E&DCR) SV4-RCS-GEF-000010, “Revise SV4-RCS-P0A-260 from Revision 0 to Revision 1,” Revision 0
E&DCR SV4-RCS-GEF-000013, “Revise SV4-RCS-P0A-480 from Revision 0 to Revision 1,” Revision 0
E&DCR SV4-RCS-GEF-000178, “Evaluate of Missing Two Bends on Installed Piping (ESR 50150318),” Revision 0
Nonconformance and Disposition Report (N&D) SV4-PV01-GNR-000044, “SV4-RNS-PL-V055 Potential Overthrust Condition in the Open Direction (ESR 50138466),” Revision 0
N&D SV4-MI01-GNR-000053, “Vogtle Unit 4 – RV Clevis Inserts and Core Shroud Top Plate Gaps – ESR 50176151,” Revision 0

Section 1A04
2.1.03.06.1-U4-EQRR-PCD003, “Reactor System (RXS) EQ Reconciliation Report (EQRR),” Revision 0
SV4-JE92-VBR-001, “Equipment Qualification Summary Report for Nuclear Instrumentation System Detectors for Use in the AP1000 Plant,” Revision 2
SV4-JE92-VBR-002, “Equipment Qualification Data Package for Nuclear Instrumentation System Detectors for Use in the AP1000 Plant,” Revision 2
SV4-JE92-Z0-001, “AP1000 Excore Source Range Detector Design Specification,” Revision 2
SV4-JE92-Z0-002, “AP1000 Excore Intermediate Range Detector Design Specification,” Revision 3

SV4-JE92-Z0-003, “AP1000 Excore Power Range Detector Design Specification,” Revision 3
condition report 50175156, “Cracked conduit hub ceramic,”

Section 1A05

Westinghouse Electric Company (WEC) Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MUR-001, Passive Core Cooling System installed for Southern Nuclear Operating Company, Inc., 7/16/2023

Stone & Webster (S&W) "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-001 installed for WEC, 2/27/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-002 installed for WEC, 2/24/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-003 installed for WEC, 3/8/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-004 installed for WEC, 2/24/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-005 installed for WEC, 12/15/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-006 installed for WEC, 2/1/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-009 installed for WEC, 11/1/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-010 installed for WEC, 9/12/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-011 installed for WEC, 6/23/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-012 installed for WEC, 2/24/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the

ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-013 installed for WEC, 7/6/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-014 installed for WEC, 6/15/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-015 installed for WEC, 5/13/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-016 installed for WEC, 6/15/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-017 installed for WEC, 9/21/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-018 installed for WEC, 7/12/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-019 installed for WEC, 3/18/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-020 installed for WEC, 6/14/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-021 installed for WEC, 11/2/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-022 installed for WEC, 5/11/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-024 installed for WEC, 7/20/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-025 installed for WEC, 4/14/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-026 installed for WEC, 11/2/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-027 installed for WEC, 5/5/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-028 installed for WEC, 5/3/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-029 installed for WEC, 8/31/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-030 installed for WEC, 9/6/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-031 installed for WEC, 4/9/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-099 installed for WEC, 7/6/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-099001 installed for WEC, 7/6/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-ME02 installed for WEC, 5/1/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-MT01A installed for WEC, 2/15/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-MT01B installed for WEC, 2/15/2023

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-MT02A installed for WEC, 3/8/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-MT02B installed for WEC, 3/8/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the

ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-PXS-MJR-PH02G installed for WEC, 3/14/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-RNS-MJR-003 installed for WEC, 2/24/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-RNS-MJR-004 installed for WEC, 6/1/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-RNS-MJR-007 installed for WEC, 3/10/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-RNS-MJR-009 installed for WEC, 10/13/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-RNS-MJR-011 installed for WEC, 10/28/2022

S&W "Form N-5 Certificate Holder's Data Report for Installation of Nuclear Power Plant Components, Parts, Supports, and Appurtenances, As Required by the Provisions of the ASME Code, Section III, Division 1," for Certificate Holder's Serial No. SV4-RNS-MJR-012 installed for WEC, 10/28/2021

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SV4-PXS-P0R-0202, “AP1000 Piping for APP-PXS-PLR-020 – Vogtle Unit 4 ASME As-Built Design Report,” Revision 0

SV4-PXS-P0R-0202A, “AP1000 Piping for APP-PXS-PLR-020 – Vogtle Unit 4 ASME As-Built Design Report Addendum for SV4-PXS-P0R-0202,” Revision 0

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SV4-PXS-P0R-0302, “AP1000 Piping for APP-PXS-PLR-030 – Vogtle Unit 4 ASME Section III As-Built Design Report,” Revision 0

SV4-PXS-P0R-0402, “AP1000 Piping for APP-PXS-PLR-040 – Vogtle Unit 4 ASME Section III As-Built Design Report,” Revision 0

SV4-PXS-P0R-0502, “AP1000 Piping for APP-PXS-PLR-050 – Vogtle Unit 4 ASME Section III As-Built Design Report,” Revision 0

SV4-PXS-P0R-0602, “AP1000 Piping for APP-PXS-PLR-060 – Vogtle Unit 4 ASME Section III As-Built Design Report,” Revision 0

SV4-PXS-P0R-0102A, “AP1000 Piping for APP-PXS-PLR-010 – Vogtle Unit 4 ASME Section III As-Built Design Report Addendum for SV4-PXS-P0R-0102,” Revision 1

SV4-PXS-S3R-001, “Vogtle Unit 4 Passive Core Cooling System (PXS) ASME Section III As-Built Piping Design Report,” Revision 0

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LIST OF ACRONYMS

ADS	Automatic Depressurization System
AOV	Air Operated Valve
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CMT	Core Makeup Tank
CR	Condition Report
DVI	Direct Vessel Injection
E&DCR	Engineering & Design Coordination Report
EQRR	Equipment Qualification Reconciliation Report
HX	Heat Exchanger
ICN	ITAAC Closure Notice
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
IRWST	In-Containment Refueling Water Storage Tank
ITAAC	Inspections, Tests, Analyses, and Acceptance Criteria
LBB	Leak Before Break
MOV	Motor Operated Valve
MT	Magnetic Particle Examination
N&D	Nonconformance and Disposition Report
NRC	Nuclear Regulatory Commission
P&ID	Piping and Instrumentation Diagram
PRHA	Pipe Rupture Hazard Analysis
PRHR	Passive Residual Heat Removal
PSI	Preservice Inspection
PT	Liquid Penetrant Examination
PXS	Passive Core Cooling System
QA	Quality Assurance
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RPV	Reactor Pressure Vessel
RNS	Normal Residual Heat Removal System
RXS	Reactor System
SG	Steam Generator
SNC	Southern Nuclear Company
SSC	Structure, System, and Component
S&W	Stone & Webster
UFSAR	Updated Final Safety Analysis Report
UT	Ultrasonic Examination
VEGP	Vogtle Electric Generating Plant
VT	Visual Examination

WEC	Westinghouse Electric Company
WP	Work Package
ZOI	Zone of Influence

ITAAC INSPECTED

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
13	2.1.02.02a	2.a) The components identified in Table 2.1.2-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.1.2-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements. 3.a) Pressure boundary welds in components identified in Table 2.1.2-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.1.2-2 as ASME Code Section III meet ASME Code Section III requirements. 4.a) The components identified in Table 2.1.2-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.1.2-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure. 5.b) Each of the lines identified in Table 2.1.2-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability. 6. Each of the as-built lines identified in Table 2.1.2-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports. Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III. A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested. Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability. Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.1.2-1 and 2.1.2-2 as ASME Code Section III. A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds. A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Table 2.1.2-1 and Table 2.1.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III. A report exists and concludes that each of the as-built lines identified in Table 2.1.2-2 for which functional capability is required meets the requirements for functional capability. An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
19	2.1.02.05a.i	5.a) The seismic Category I equipment identified in Table 2.1.2-1 can withstand seismic design basis loads without loss of safety function. 7.a) The Class 1E equipment identified in Table 2.1.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.1.2-1 are located on the Nuclear Island. ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed. iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions. i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment. ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	i) The seismic Category I equipment identified in Table 2.1.2-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function. iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions. i) A report exists and concludes that the Class 1E equipment identified in Table 2.1.2-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function. ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.1.2-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
72	2.1.03.03	3. The components identified in Table 2.1.3-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 4. Pressure boundary welds in components identified in Table 2.1.3-1 as ASME Code Section III meet ASME Code Section III requirements. 5. The pressure boundary components (RV, CRDMs, and incore instrument QuickLoc assemblies) identified in Table 2.1.3-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	Inspection will be conducted of the as-built components as documented in the ASME design reports. Inspection of as-built pressure boundary welds will be performed in accordance with the ASME Code Section III. A hydrostatic test will be performed on the components of the RXS required by the ASME Code Section III to be hydrostatically tested.	The ASME Code Section III design reports exist for the as-built components identified in Table 2.1.3-1 as ASME Code Section III. A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds. A report exists and concludes that the results of the hydrostatic test of the pressure boundary components (RV, CRDMs, and incore instrument QuickLoc assemblies) conform with the requirements of the ASME Code Section III.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
75	2.1.03.06.i	6. The seismic Category I equipment identified in Table 2.1.3-1 can withstand seismic design basis loads without loss of safety function. 9.a) The Class 1E equipment identified in Table 2.1.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.1.3-1 is located on the Nuclear Island. ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed. iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions. i) Type tests, analysis, or a combination of type tests and analysis will be performed on Class 1E equipment located in a harsh environment. ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	i) The seismic Category I equipment identified in Table 2.1.3-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function. iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions. i) A report exists and concludes that the Class 1E equipment identified in Table 2.1.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function. ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.1.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
159	2.2.03.02a	2.a) The components identified in Table 2.2.3-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.2.3-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements. 3.a) Pressure boundary welds in components identified in Table 2.2.3-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.2.3-2 as ASME Code Section III meet ASME Code Section III requirements. 4.a) The components identified in Table 2.2.3-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.2.3-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure. 5.b) Each of the lines identified in Table 2.2.3-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability. 6. Each of the as-built lines identified in Table 2.2.3-2 as designed for LBB meets the LBB criteria, or an evaluation is performed of the protection from the dynamic effects of a rupture of the line.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports. Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III. A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested. Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability. Inspection will be performed for the existence of an LBB evaluation report or an evaluation report on the protection from dynamic effects of a pipe break. Section 3.3, Nuclear Island Buildings, contains the design descriptions and inspections, tests, analyses, and acceptance criteria for protection from the dynamic effects of pipe rupture.	The ASME Code Section III design reports exist for the as-built components and piping identified in Table 2.2.3-1 and 2.2.3-2 as ASME Code Section III. A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds. A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Table 2.2.3-1 and 2.2.3-2 as ASME Code Section III conform with the requirements of the ASME Code Section III. A report exists and concludes that each of the as-built lines identified in Table 2.2.3-2 for which functional capability is required meets the requirements for functional capability. An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built RCS piping and piping materials, or a pipe break evaluation report exists and concludes that protection from the dynamic effects of a line break is provided.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
165	2.2.03.05a.i	5.a) The seismic Category I equipment identified in Table 2.2.3-1 can withstand seismic design basis loads without loss of safety function. 7.a) The Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.2.3-1 are located on the Nuclear Island. ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I equipment will be performed. iii) Inspection will be performed for the existence of a report verifying that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions. i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment. ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	i) The seismic Category I equipment identified in Table 2.2.3-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of safety function. For the PXS containment recirculation and IRWST screens, a report exists and concludes that the screens can withstand seismic dynamic loads and also post-accident operating loads, including head loss and debris weights. iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions. For the PXS containment recirculation and IRWST screens, a report exists and concludes that the as-built screens including their anchorage are bounded by the seismic loads and also post-accident operating loads, including head loss and debris weights. i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.3-1 as being qualified for a harsh environment can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of safety function for the time required to perform the safety function. ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.3-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analysis	Acceptance Criteria
813	3.3.00.08	8. Systems, structures, and components identified as essential targets are protected from the dynamic and environmental effects of postulated pipe ruptures.	Following as-built reconciliation, an inspection will be performed of the as-built high and moderate energy pipe rupture mitigation features for systems, structures, and components identified as essential targets.	An as-built Pipe Rupture Hazard Analysis Report exists and concludes that systems, structures, and components identified as essential targets can withstand the effects of postulated pipe rupture without loss of required safety function.