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Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 4
ITAAC Closure Notification on Completion of ITAAC 2.1.02.02a [Index Number 13]

Ladies and Gentlemen:

In accordance with 10 CFR 52.99(c)(1), the purpose of this letter is to notify the Nuclear Regulatory Commission (NRC) of the completion of Vogtle Electric Generating Plant (VEGP) Unit 4 Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.1.02.02a [Index Number 13]. This ITAAC verifies that the Reactor Coolant System (RCS) components listed in the Combined License (COL) Appendix C, Tables 2.1.2-1 and 2.1.2-2 that are identified as American Society of Mechanical Engineers (ASME) Code Section III were designed and constructed in accordance with applicable requirements. The closure process for this ITAAC is based on the guidance described in Nuclear Energy Institute (NEI) 08-01, *Industry Guideline for the ITAAC Closure Process under 10 CFR Part 52*, which was endorsed by the NRC in Regulatory Guide 1.215.

This letter contains no new NRC regulatory commitments. Southern Nuclear Operating Company (SNC) requests NRC staff confirmation of this determination and publication of the required notice in the Federal Register per 10 CFR 52.99.

If there are any questions, please contact Kelli Roberts at 706-848-6991.

Respectfully submitted,

Jamie Coleman

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Regulatory Affairs Director Vogtle 3 & 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.1.02.02a [Index Number 13]

JMC/TL/sfr

cc: Regional Administrator, Region ll
Director, Office of Nuclear Reactor Regulation (NRR)
Director, Vogtle Project Office NRR
Senior Resident Inspector – Vogtle 3 & 4

Southern Nuclear Operating Company
ND-23-0607
Enclosure

Vogtle Electric Generating Plant (VEGP) Unit 4
Completion of ITAAC 2.1.02.02a [Index Number 13]

ITAAC Statement

Design Commitment:

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.

Inspections, Tests, Analyses:

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.

Acceptance Criteria:

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 Tables 2.1.2-1 and 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.

ITAAC Determination Basis

This ITAAC requires inspections, tests, and analyses be performed and documented to ensure the Reactor Coolant System (RCS) components and piping listed in the Combined License (COL) Appendix C, Table 2.1.2-1 (Attachment A) and Table 2.1.2-2 (Attachment B) that are identified as American Society of Mechanical Engineers (ASME) Code Section III, Leak Before Break (LBB), or Functional Capability Required are designed and constructed in accordance with applicable requirements.

2.a and 2.b) 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.

Each component listed in Table 2.1.2-1 as ASME Code Section III was fabricated in accordance with the VEGP Updated Final Safety Analysis Report (UFSAR) and the ASME Code Section III requirements. The ASME Code Section III certified Design Reports for these components exist and document that the as-built components conform to the approved design details. The ASME Section III Design Report for each component is documented in the component's completed ASME Section III Code Data Report. The individual component ASME Section III Code Data Reports are documented on the ASME Section III N-5 Code Data Report(s) for the applicable piping system (Reference 1).

The as-built piping listed in Table 2.1.2-2 including the components listed in Table 2.1.2-1 as ASME Code Section III, were subjected to a reconciliation process (Reference 2), which verifies that the as-built piping were analyzed for applicable loads (e.g. stress reports) and for compliance with all design specification and Code provisions. Design reconciliation of the as-built systems, including installed components, validates that construction completion, including field changes and any nonconforming condition dispositions, are consistent with and bounded by the approved design. All applicable fabrication, installation and testing records, as well as, those for the related Quality Assurance (QA) verification/ inspection activities, which confirm adequate construction in compliance with the ASME Code Section III and design provisions, are referenced in the N-5 data report and/or its sub-tier references.

The applicable ASME Section III N-5 Code Data Report(s), which include the location of the certified Design Reports for all the components listed in Table 2.1.2-1 (Attachment A) and piping listed in Table 2.1.2-2 (Attachment B) as ASME Code Section III, exist and conclude that these installed components are designed and constructed (including their installation within the applicable as-built piping system) in accordance with the ASME Code (1998 Edition, 2000 Addenda and 1989 Edition, 1989 Addenda), Section III requirements as applicable, as described in UFSAR Subsection 5.2.1 (Reference 3). The N-5 Code Data Reports for the piping system(s) containing the components listed in the Table 2.1.2-1 and Table 2.1.2-2 are identified in Attachments A and B, respectively.

3.a and 3.b) A report exists and concludes that the ASME Code Section III requirements are met for non-destructive examination of pressure boundary welds.

Inspections were performed in accordance with ASME Code Section III (1998 Edition, 2000 Addenda) to demonstrate that as-built pressure boundary welds in components identified in Table 2.1.2-1 as ASME Code Section III meet ASME Code Section III requirements (i.e., no unacceptable indications).

The applicable non-destructive examinations (including liquid penetrant, magnetic particle, radiographic, and ultrasonic testing, as required by ASME Code Section III) of the components' pressure boundary welds were documented in the Non-destructive Examination Report(s), which support completion of the respective ASME Section III N-5 Code Data Report(s) certified by the Authorized Nuclear Inspector, as listed in Attachment A.

Per ASME Code Section III, Subarticle NCA-8300, "Code Symbol Stamps," the N-5 Code Data Report(s) (Reference 1) documents satisfactory completion of the required examination and testing of the item, which includes non-destructive examinations of pressure boundary welds. Satisfactory completion of the non-destructive examination of pressure boundary welds ensures that the pressure boundary welds in components identified in Table 2.1.2-1 as ASME Code Section III met ASME Code Section III requirements.

An inspection was performed in accordance with Reference 2 to demonstrate that the as-built pressure boundary welds in piping identified in Table 2.1.2-2 (Attachment B) as ASME Code Section III meet ASME Code Section III requirements (i.e., no unacceptable indications). This portion of the ITAAC was complete when the piping identified in Table 2.1.2-2, which was encompassed within the respective piping system Code Symbol N-Stamp and the corresponding piping system Code N-5 Data Report Form(s) (Reference 1), was completed. The non-destructive examinations (including visual inspection, liquid penetrant, magnetic particle, radiographic, and ultrasonic testing, as required by ASME Code Section III) of the piping pressure boundary welds are documented in the Non-destructive Examination Report(s) within the piping system's supporting data package, which support completion of the respective Code Stamping and Code N-5 Data Report(s). The completion of stamping the respective piping system along with the corresponding ASME Code N-5 Data Report Form(s) (certified by the Authorized Nuclear Inspector) ensure that the piping was constructed in accordance with the design specification(s) and the ASME Code Section III and that the satisfactory completion of the non-destructive examinations of piping pressure boundary welds for the pipe lines identified in Table 2.1.2-2 meet ASME Code Section III requirements and were documented in the Non-destructive Examination Report(s) within the supporting data packages.

4.a and 4.b) A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.1.2-1 and 2.1.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.

A hydrostatic test was performed by the vendor to demonstrate that the components identified in Table 2.1.2-1 (Attachment A) as ASME Code Section III retain their pressure boundary integrity at their design pressure. The completion of the N-5 Data Reports is governed by Reference 2.

This portion of the ITAAC was complete once each component identified in Table 2.1.2-1 had their individual Code Symbol N-Stamp and corresponding Code Data Report (Reference 1) completed, and the components were installed into the respective Code Symbol N-Stamped piping system and documented on the corresponding N-5 Code Data Report(s) (Reference 1). The hydrostatic testing results of the component's pressure boundary were documented in the Hydrostatic Testing Report(s) within the supporting component's data package, which support completion of the respective Code Stamping and Code Data Report(s).

The completion of stamping the individual components and the respective piping system along with the corresponding ASME Code Data Reports (certified by the Authorized Nuclear Inspector) ensures that the components were constructed in accordance with the Design Specifications and the ASME Code Section III and that the satisfactory completion of the hydrostatic pressure testing of each component identified in Table 2.1.2-1 as ASME Code Section III were documented in the Hydrostatic Testing Report(s) within the supporting data packages and meet ASME Code Section III requirements.

This ITAAC also verifies that the piping identified in Table 2.1.2-2 (Attachment B) fully meets all applicable ASME Code, Section III requirements and retains its pressure boundary integrity at its design pressure.

A hydrostatic test was performed in accordance with procedures identified in Reference 1 (as applicable) that complies with the ASME Code (1998 Edition, 2000 Addenda), Section III requirements to demonstrate that the ASME Code Section III piping identified in Table 2.1.2-2 retains its pressure boundary integrity at its design pressure.

A hydrostatic test verifies that there were no leaks at welds or piping, and that the pressure boundary integrity was retained at its design pressure. The hydrostatic testing results of the pipe lines are documented in the Hydrostatic Testing Report(s). The Hydrostatic Testing Report(s) supports completion of the ASME Section III N-5 Code Data Report(s) for the applicable piping system (i.e., RCS) (Reference 1).

The applicable ASME Section III N-5 Code Data Report(s) (Reference 1) identified in Attachments A and B documents that the results of the hydrostatic testing of the components and piping identified in Table 2.1.2-1 and Table 2.1.2-2 respectively conform with the requirements of the Code (1998 Edition, 2000 Addenda), Section III.

5.b) 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 inspection was performed of the ASME Section III as-built piping design report (Reference 4) to verify that the report demonstrates that each of the RCS piping lines identified in ITAAC Table 2.1.2-2 that requires functional capability are designed to withstand combined normal and seismic design basis loads without a loss of its functional capability. "Functional capability," in this context, refers to the capability of the piping to withstand the effects of earthquakes, without a loss of safety function (to convey fluids from one location to another). Specific functional capability requirements are defined in the VEGP UFSAR Table 3.9-11 (Reference 3).

Piping functional capability is not a specific ASME Code requirement but it is a requirement in the VEGP UFSAR (Reference 3). As such, information demonstrating that UFSAR functional capability requirements are met is included in the ASME Section III As-Built Design Reports for safety class piping prepared in accordance with ASME Section III NCA-3550 under the ASME Boiler & Pressure Vessel Code (1998 Edition, 2000 Addenda) Section III requirements. The as-built piping systems were subjected to a reconciliation process (Reference 2), which verifies that the as-built piping systems were analyzed for functional capability and for compliance with the design specification and ASME Code provisions. Design reconciliation of the as-built systems validates that construction completion, including field changes and any nonconforming condition dispositions, are consistent with and bounded by the approved design. As required by ASME Code, the As-Built Design Report includes the results of physical inspection of the piping and reconciliation to the design pipe stress report.

Inspections of the ASME Code Section III As-Built Piping Design Reports (Reference 4) for the RCS piping lines identified in Table 2.1.2-2 were completed and conclude that each of the as-built RCS piping lines for which functional capability is required meets the requirements for functional capability. The ASME Section III As-Built Piping Design Reports for each of the as-built RCS piping lines in Table 2.1.2-2 are identified in Attachment B.

6. 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.

Inspections were performed for the as-built lines identified in Table 2.1.2-2 (Attachment B) to verify that each of the as-built lines designed for LBB met the LBB criteria, or an evaluation was performed of the protection from the dynamic effects of a rupture of the line. VEGP COL Appendix C, 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.

LBB evaluations were performed as described in UFSAR subsection 3.6.3 to confirm that the as-built RCS piping (and corresponding piping materials) identified in Attachment A meet the LBB acceptance criteria described in the UFSAR, Appendix 3B, Leak-Before-Break Evaluation of the AP1000 Piping (Reference 3). In cases where an as-built RCS piping line in Attachment B cannot meet the LBB acceptance criteria, a pipe break evaluation was performed which concludes that protection from the dynamic effects of a line break were provided. The pipe break evaluation criteria is discussed in UFSAR, Section 3.6.4.1, Pipe Break Hazards Analysis (Reference 3) and was documented as a pipe rupture hazards analysis report (pipe break evaluation report).

Inspections were performed to verify that LBB as-built piping evaluation reports for the RCS piping (and corresponding piping materials) identified in Attachment B conclude that the as-built piping analysis is bounded by the applicable bounding analysis curves provided in Appendix 3B of the UFSAR (Reference 3). The results were documented in either the applicable ASME Section III as-built piping design report(s) or in separate LBB evaluation report(s). For cases where an as-built RCS piping line in Attachment B cannot meet the LBB acceptance criteria, inspections were performed to verify that a pipe rupture hazards analysis evaluation report (pipe break evaluation report) exists which concludes that protection from the dynamic effects of a line break is provided.

The applicable ASME Section III as-built piping design report(s), LBB evaluation report(s), or pipe rupture hazards analysis report(s) (pipe break evaluation report(s)) exist and are identified in Attachment B.

References 1, 4, and 6 through 11 provide the evidence that the following ITAAC Acceptance Criteria requirements are met:

- 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 Tables 2.1.2-1 and 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; and
- 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.

This ITAAC also verified that a Preservice Inspection (PSI) for the applicable portions of the Reactor Coolant System (RCS) identified in Tables 2.1.2-1 and 2.1.2-2 have been completed (Reference 12), in accordance with the Unit 4 PSI program plan (Reference 13), and that the results of the PSI conforms with the requiments of the ASME Boiler & Pressure Vessel (B&PV) Code.

Examinations are conducted for each system in accordance with Section XI of the ASME B&PV Code, Subsections IWB, IWC, and IWD to satisfy the requirements for PSI.

References 1, 4, and 6 through 11 are available for NRC inspection as part of the Unit 4 ITAAC 2.1.02.02a Completion Package (Reference 5).

ITAAC Finding Review

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all findings pertaining to the subject ITAAC and associated corrective actions. This review, which included now consolidated ITAAC Indexes 14, 15, 16, 17, 18, 22, and 23, found that there are two (2) relevant ITAAC findings associated with this ITAAC.

1) Noncited violation 05200026/2017002-01 (Closed - ML18317A395)

2) Notice of Nonconformance 99901431/2013-201-01 (Closed - ML18152B785)

The corrective actions for each finding have been completed and each finding is closed. The ITAAC completion review is documented in the ITAAC Completion Package for ITAAC 2.1.02.02a (Reference 5) and is available for NRC review.

ITAAC Completion Statement

Based on the above information, SNC hereby notifies the NRC that ITAAC 2.1.02.02a was performed for VEGP Unit 4 and that the prescribed acceptance criteria were met.

Systems, structures, and components verified as part of this ITAAC are being maintained in their as designed, ITAAC compliant condition in accordance with approved plant programs and procedures.

References (available for NRC inspection)

1. SV4-RCS-MUR-001, Rev. 0, “AP1000 Vogtle Unit 4 ASME Section III System Code Data Report for the Reactor Coolant System (RCS)”

2. APP-GW-GAP-139, Rev. 9, “Westinghouse/Stone & Webster ASME Code Data Report and As-Built Documentation Interface Procedure”

3. VEGP 3&4 Updated Final Safety Analysis Report, Rev. 12:
    a. Subsection 5.2.1 - Compliance with Codes and Code Cases,
    b. Table 3.9-11 - Piping Functional Capability – ASME Class 1, 2, and 3,
    c. Subsection 3.6.3 - Leak before Break Evaluation Procedures
    d. Subsection 3.6.4.1- Pipe Break Hazards Analysis
    e. Appendix 3B - Leak-Before-Break Evaluation of the AP1000 Piping

4. SV4-RCS-S3R-001, Rev. 0, “Vogtle Unit 4 Reactor Coolant System (RCS) ASME Section III As-Built Piping System Design Report”

5. 2.1.02.02a-U4-CP-Rev0, ITAAC Completion Package

6. SV4-RCS-P0R-0102, Rev. 0, “AP1000 Piping for APP-RCS-PLR-010 - Vogtle Unit 4 ASME III As-Built Design Report”

7. SV4-RCS-P0R-0302, Rev. 0, “AP1000 Piping for APP-RCS-PLR-030 - Vogtle Unit 4 ASME III As-Built Design Report”

8. SV4-RCS-P0R-0402, Rev. 0, “AP1000 Piping for APP-RCS-PLR-040 - Vogtle Unit 4 ASME III As-Built Design Report”

9. SV4-RCS-P0R-0502, Rev. 0, “AP1000 Piping for APP-RCS-PLR-050 - Vogtle Unit 4 ASME III As-Built Design Report”

10. SV4-RNS-P0R-0102, Rev. 1, “AP1000 Piping for APP-RNS-PLR-010 - Vogtle Unit 4 ASME III As-Built Design Report”

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

12. APE-10-00029, “Incomplete Preservice Inspection for the Vogtle Unit 4 RCS Class 1, 2 and 3 Portions of Systems

13. SV4-GW-GEI-100, Rev. 1, “AP1000 Preservice Inspection Program Plan for Vogtle Unit 4”

Attachment A

SYSTEM: Reactor Coolant System (RCS)

Equipment Name*	Tag No.*	ASME Code Section III*	ASME III as-built Design Report	N-5 Report
Steam Generator 1	RCS-MB-01	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Steam Generator 2	RCS-MB-02	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
RCP 1A	RCS-MP-01A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
RCP 1B	RCS-MP-01B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
RCP 2A	RCS-MP-02A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
RCP 2B	RCS-MP-02B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Pressurizer	RCS-MV-02	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Automatic Depressurization System (ADS) Sparger A	PXS-MW-01A	Yes	SV4-PXS-S3R-001	SV4-PXS-MUR-001
ADS Sparger B	PXS-MW-01B	Yes	SV4-PXS-S3R-001	SV4-PXS-MUR-001
Pressurizer Safety Valve	RCS-PL-V005A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Pressurizer Safety Valve	RCS-PL-V005B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
First-stage ADS Motor-operated Valve (MOV)	RCS-PL-V001A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
First-stage ADS MOV	RCS-PL-V001B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Second-stage ADS MOV	RCS-PL-V002A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Second-stage ADS MOV	RCS-PL-V002B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Third-stage ADS MOV	RCS-PL-V003A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Third-stage ADS MOV	RCS-PL-V003B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Fourth-stage ADS Squib Valve	RCS-PL-V004A	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Fourth-stage ADS Squib Valve	RCS-PL-V004B	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001
Fourth-stage ADS Squib Valve	RCS-PL-V004C	Yes	SV4-RCS-S3R-001	SV4-RCS-MUR-001

Attachment A

SYSTEM: Reactor Coolant System (RCS)

Equipment Name*	Tag No.*	ASME Code Section III*	ASME III as-built Design Report	N-5 Report
Fourth-stage ADS Squib Valve	RCS-PL-V004D	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
ADS Discharge Header A Vacuum Relief Valve	RCS-PL-V010A	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
ADS Discharge Header B Vacuum Relief Valve	RCS-PL-V010B	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
First-stage ADS Isolation MOV	RCS-PL-V011A	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
First-stage ADS Isolation MOV	RCS-PL-V011B	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Second-stage ADS Isolation MOV	RCS-PL-V012A	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Second-stage ADS Isolation MOV	RCS-PL-V012B	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Third-stage ADS Isolation MOV	RCS-PL-V013A	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Third-stage ADS Isolation MOV	RCS-PL-V013B	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Fourth-stage ADS MOV	RCS-PL-V014A	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Fourth-stage ADS MOV	RCS-PL-V014B	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Fourth-stage ADS MOV	RCS-PL-V014C	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Fourth-stage ADS MOV	RCS-PL-V014D	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Reactor Vessel Head Vent Valve	RCS-PL-V150A	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Reactor Vessel Head Vent Valve	RCS-PL-V150B	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Reactor Vessel Head Vent Valve	RCS-PL-V150C	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001
Reactor Vessel Head Vent Valve	RCS-PL-V150D	Yes	SV4-RCS-S3R-001	SV4- RCS -MUR-001

*Excerpts from COL Appendix C Table 2.1.2-1

Attachment B

SYSTEM: Reactor Coolant System (RCS)

Line Name*	Line No.*+	ASME Code Section III*	Leak Before Break*	Functional Capability Required*	ASME III As-Built Design Report	LBB evaluation / pipe break evaluation	N-5 Report
Hot Legs	RCS-PL-L001A, L001B	Yes	Yes	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0502	SV4-RCS-MUR-001
Cold Legs	RCS-PL-L002A, L002B, L002C, L002D	Yes	Yes	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0502	SV4-RCS-MUR-001
Pressurizer Surge Line	RCS-PL-L003	Yes	Yes	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0402	SV4-RCS-MUR-001
ADS Inlet Headers	RCS-PL-L004A/B, L006A/B, L030A/B L020A/B	Yes	Yes	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0102	SV4-RCS-MUR-001
Safety Valve Inlet Piping	RCS-PL-L005A, L005B	Yes	Yes	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0102	SV4-RCS-MUR-001
Safety Valve Discharge Piping	RCS-PL-L050A/B, L051A/B	Yes	No	Yes	SV4-RCS-S3R-001	N/A	SV4-RCS-MUR-001
	RCS-PL-L064A/B	Yes	No	No	SV4-RCS-S3R-001	N/A	SV4-RCS-MUR-001
ADS First-Stage Valve Inlet Line	RCS-PL-L010A/B, L011A/B	Yes	No	Yes	SV4-RCS-S3R-001	N/A	SV4-RCS-MUR-001

Attachment B

SYSTEM: Reactor Coolant System (RCS)

Line Name*	Line No.*+	ASME Code Section III*	Leak Before Break*	Functional Capability Required*	ASME III As-Built Design Report	LBB evaluation / pipe break evaluation	N-5 Report
ADS Second-Stage Valve Inlet Piping	RCS-PL-L021A/B, L022A/B,	Yes	Yes No	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0102	SV4-RCS-MUR-001
ADS Third-Stage Valve Inlet Piping	RCS-PL-L131, L031A/B, L032A/B	Yes	Yes Yes No	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0102	SV4-RCS-MUR-001
ADS Outlet Piping	RCS-PL-L012A/B, L023A/B, L033A/B, L061A/B, L063A/B, L200, L069A/B+ PXS-L130A/B	Yes	No	Yes	SV4-RCS-S3R-001	N/A	SV4-RCS-MUR-001
	RCS-L240A/B	Yes	No	No	SV4-RCS-S3R-001		
ADS Fourth-stage Inlet Piping	RCS-PL-L133A/B, L135A/B, L136A/B, L137A/B	Yes	Yes	Yes	SV4-RCS-S3R-001	SV4-RCS-P0R-0302 SV4-PXS-P0R-0302	SV4-RCS-MUR-001
Pressurizer Spray Piping	RCS-PL-L106, L110A/B, L212A/B, L213, L215	Yes	No	No	SV4-RCS-S3R-001	N/A	SV4-RCS-MUR-001
RNS Suction Piping	RCS-PL-L139, L140	Yes	Yes	No	SV4-RCS-S3R-001	SV4-RNS-P0R-0102	SV4-RCS-MUR-001

Attachment B

SYSTEM: Reactor Coolant System (RCS)

Line Name*	Line No.*+	ASME Code Section III*	Leak Before Break*	Functional Capability Required*	ASME III As-Built Design Report	LBB evaluation / pipe break evaluation	N-5 Report
CVS Purification Piping	RCS-PL-L111, L112	Yes	No	No	SV4-RCS-S3R-001	N/A	SV4-RCS-MUR-001

*Excerpts from COL Appendix C, Table 2.1.2-2

+RCS-L069A/B requires that dynamic loads in its pipe stress analysis satisfy the requirements of ASME Code Section III (1989 Edition, 1989 Addenda) for girth fillet welds between piping and socket welded fittings, valves and flanges per VEGP UFSAR Section 5.2.1.1 (Reference 3)