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Docket Nos.: 52-025
52-026

ND-18-0059
10 CFR 52.99(c)(3)

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Southern Nuclear Operating Company
Vogtle Electric Generating Plant Unit 3 and Unit 4
Notice of Uncompleted ITAAC 225-days Prior to Initial Fuel Load
Item 2.2.01.05.i [Index Number 98]

Ladies and Gentlemen:

Pursuant to 10 CFR 52.99(c)(3), Southern Nuclear Operating Company hereby notifies the NRC that as of January 20, 2018, Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4 Uncompleted Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) Item 2.2.01.05.i [Index Number 98] has not been completed greater than 225-days prior to initial fuel load. The Enclosure describes the plan for completing this ITAAC. Southern Nuclear Operating Company will, at a later date, provide additional notifications for ITAAC that have not been completed 225-days prior to initial fuel load.

This notification is informed by the guidance described in 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. In accordance with NEI 08-01, this notification includes ITAAC for which required inspections, tests, or analyses have not been performed or have been only partially completed. All ITAAC will be fully completed and all Section 52.99(c)(1) ITAAC Closure Notifications will be submitted to NRC to support the Commission finding that all acceptance criteria are met prior to plant operation, as required by 10 CFR 52.103(g).

This letter contains no new NRC regulatory commitments.

If there are any questions, please contact Tom Petrak at 706-848-1575.

Respectfully submitted,

Michael J. Yox
Regulatory Affairs Director Vogtle 3 & 4

U.S. Nuclear Regulatory Commission

ND-18-0059

Page 2 of 4

Enclosure: Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
Completion Plan for Uncompleted ITAAC 2.2.01.05.i [Index Number 98]

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**Southern Nuclear Operating Company
ND-18-0059
Enclosure**

**Vogtle Electric Generating Plant (VEGP) Unit 3 and Unit 4
Completion Plan for Uncompleted ITAAC 2.2.01.05.i [Index Number 98]**

ITAAC Statement

Design Commitment:

5. The seismic Category I equipment identified in Table 2.2.1-1 can withstand seismic design basis loads without loss of structural integrity and safety function.

6.a) The Class 1E equipment identified in Table 2.2.1-1 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.

6.d) The non-Class 1E electrical penetrations identified in Table 2.2.1-1 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 containment pressure boundary integrity.

Inspections, Tests, Analyses:

i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.2.1-1 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) Type tests, analyses, or a combination of type tests and analyses will be performed on non-Class 1E electrical penetrations located in a harsh environment.

ii) Inspection will be performed of the as-built non-Class 1E electrical penetrations located in a harsh environment.

Acceptance Criteria:

i) The seismic Category I equipment identified in Table 2.2.1-1 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 structural integrity and safety function.

iii) 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 2.2.1-1 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 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

i) A report exists and concludes that the non-Class 1E electrical penetrations identified in Table 2.2.1-1 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 containment pressure boundary integrity.

ii) A report exists and concludes that the as-built non-Class 1E electrical penetrations identified in Table 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

ITAAC Completion Description

This ITAAC requires that inspections, tests, and analyses be performed and documented to ensure the Containment System (CNS) components identified as seismic Category I or Class 1E in the Combined License (COL) Appendix C, Table 2.2.1-1 (the Table) are designed and constructed in accordance with applicable requirements.

i) The seismic Category I equipment identified in Table 2.2.1-1 is located on the Nuclear Island

To assure that seismic Category I components can withstand seismic design basis loads without loss of safety function, all the components in the Table are designed to be located on the seismic Category I Nuclear Island. In accordance with Equipment Qualification (EQ) Walkdown ITAAC Guideline (Reference 1), an inspection is conducted of the CNS to confirm the satisfactory installation of the seismically qualified components. The inspection includes verification of equipment make/model/serial number and verification of equipment location (Building, Elevation, Room). The EQ As-Built Reconciliation Reports (EQRR) (Reference 2) identified in Attachment A document the results of the inspection and conclude that the seismic Category I components are 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 structural integrity and safety function.

Seismic Category I components in the Table require type tests and/or analyses to demonstrate structural integrity and operability. Structural integrity of the seismic Category I valves, as well as other passive seismic Category I mechanical equipment, is demonstrated by analysis in accordance with American Society of Mechanical Engineers (ASME) Code Section III (Reference 3). Functionality of the subset of active safety-related valves under seismic loads is determined using the guidance of ASME QME-1-2007 (Reference 4).

Safety-related (Class 1E) electrical equipment in the Table is seismically qualified by type testing combined with analysis in accordance with Institute of Electrical and Electronics Engineers (IEEE) Standard 344-1987 (Reference 5). This equipment includes safety-related

(Class 1E) field sensors and the safety-related active valve accessories such as electric actuators, position switches, pilot solenoid valves and electrical connector assemblies. The specific qualification method (i.e., type testing, analysis, or combination) used for each component in the Table is identified in Attachment A. Additional information about the methods used to qualify AP1000 safety-related equipment is provided in the Updated Final Safety Analysis Report (UFSAR) Appendix 3D (Reference 6). The EQ Reports (Reference 7) identified in Attachment A contain applicable test reports and associated documentation and conclude that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of structural integrity and safety function.

iii) The as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.

An inspection (Reference 1) is conducted to confirm the satisfactory installation of the seismically qualified components in the Table. The inspection verifies the equipment make/model/serial number, as-designed equipment mounting orientation, anchorage and clearances, and electrical and other interfaces. The documentation of installed configuration of seismically qualified components includes photographs and/or sketches/drawings of equipment/mounting/interfaces.

As part of the seismic qualification program, consideration is given to the definition of the clearances needed around the equipment mounted in the plant to permit the equipment to move during a postulated seismic event without causing impact between adjacent pieces of safety-related equipment. This is done as part of seismic testing by measuring the maximum dynamic relative displacement of the top and bottom of the equipment. EQ Reports (Reference 7) identify the equipment mounting employed for qualification and establish interface requirements for assuring that subsequent in-plant installation does not degrade the established qualification. Interface requirements are defined based on the test configuration and other design requirements.

Attachment A identifies the EQRR (Reference 2) completed to verify that the as-built seismic Category I equipment listed in the Table, including anchorage, is seismically bounded by the tested or analyzed conditions, IEEE Standard 344-1987 (Reference 5), and NRC Regulatory Guide (RG) 1.100 (Reference 8).

i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.1-1 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.

The harsh environment Class 1E components in the Table are qualified by type testing and/or analyses. Class 1E electrical component type testing is performed in accordance with IEEE Standard 323-1974 (Reference 9) and RG 1.89 (Reference 10) to meet the requirements of 10 CFR 50.49. Type testing of safety-related equipment meets the requirements of 10 CFR Part 50, Appendix A, General Design Criterion 4. Attachment A identifies the EQ program and specific qualification method for each safety-related mechanical or Class 1E electrical component located in a harsh environment. Additional information about the methods used to qualify AP1000 safety-related equipment is provided in the UFSAR Appendix 3D (Reference 6). EQ Reports (Reference 7) identified in Attachment A contain applicable test reports and associated documentation and conclude that the equipment 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 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

An inspection (Reference 1) is conducted of the CNS to confirm the satisfactory installation of the Class 1E components in the Table. The inspection verifies the equipment location, make/model/serial number, as-designed equipment mounting, wiring, cables, and terminations, and confirms that the environmental conditions for the zone (Attachment A) in which the component is mounted are bounded by the tested and/or analyzed conditions. It also documents the installed configuration with photographs or sketches/drawings of equipment mounting and connections. The EQRR (Reference 2) identified in Attachment A document this inspection and conclude that the as-built harsh environment Class 1E equipment and the associated wiring, cables, and terminations are bounded by the qualified configuration and IEEE Standard 323-1974 (Reference 9).

i) A report exists and concludes that the non-Class 1E electrical penetrations identified in Table 2.2.1-1 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 containment pressure boundary integrity.

The harsh environment non-Class 1E electrical penetrations in the Table are qualified by type testing and/or analyses. Non-Class 1E electrical penetration type testing is performed in accordance with IEEE Standard 317-1983 (Reference 11) and RG 1.89 (Reference 10) to meet the requirements of 10 CFR 50.49. Attachment A identifies the EQ program and specific qualification method for each non-Class 1E electrical penetration located in a harsh environment. EQ reports (Reference 7) identified in Attachment A contain applicable test reports and associated documentation and conclude that the electrical penetrations can withstand the environmental conditions that would exist before, during, and following a design basis accident without loss of containment pressure boundary integrity.

ii) A report exists and concludes that the as-built non-Class 1E electrical penetrations identified in Table 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

An inspection (Reference 1) is conducted of the CNS to confirm the satisfactory installation of the non-Class 1E electrical penetrations in the Table. The inspection verifies the penetration location, make/model/serial number, and as-designed penetration mounting, and confirms that the environmental conditions for the zone (Attachment A) in which the penetration is mounted are bounded by the tested and/or analyzed conditions. It also documents the installed configuration with photographs or sketches/drawings of penetration mounting. The EQRR (Reference 2) identified in Attachment A document this inspection and conclude that the as-built harsh environment non-Class 1E electrical penetrations are bounded by the qualified configuration and IEEE Standard 317-1983 (Reference 11).

Together, these reports (References 2 and 7) provide evidence that the ITAAC Acceptance Criteria requirements are met:

- The seismic Category I equipment identified in Table 2.2.1-1 is located on the Nuclear Island;
- A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of structural integrity and safety function;
- The as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions;
- A report exists and concludes that the Class 1E equipment identified in Table 2.2.1-1 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;
- A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses;
- A report exists and concludes that the non-Class 1E electrical penetrations identified in Table 2.2.1-1 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 containment pressure boundary integrity; and
- A report exists and concludes that the as-built non-Class 1E electrical penetrations identified in Table 2.2.1-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

References 2 and 7 are available for NRC inspection as part of the Unit 3 and Unit 4 ITAAC 2.2.01.05.i Completion Packages (References 12 and 13, respectively).

List of ITAAC Findings

In accordance with plant procedures for ITAAC completion, Southern Nuclear Operating Company (SNC) performed a review of all ITAAC findings pertaining to the subject ITAAC and associated corrective actions. This finding review, which included now-consolidated ITAAC Indexes 99, 100, 101, 102, 105 and 106, found four closed Notices of Nonconformance (NON) associated with this ITAAC:

- 1) 99900404/2012-201-01 (closed)
- 2) 99900404/2012-201-02 (closed)
- 3) 99900404/2012-201-03 (closed)
- 4) 99901412/2012-201-02 (closed)

Before submission of the ITAAC Closure Notification (ICN), corrective actions will be completed for relevant ITAAC findings.

References (available for NRC inspection)

1. ND-xx-xx-001, "EQ Walkdown ITAAC Guideline"
2. EQ As-Built Reconciliation Reports (EQRR) as identified in Attachment A for Units 3 and 4
3. American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code, Section III, "Rules for Construction of Nuclear Power Plant Components," 1998 Edition with 2000 Addenda
4. ASME QME-1-2007, "Qualification of Active Mechanical Equipment Used in Nuclear Power Plants," The American Society of Mechanical Engineers, June 2007
5. IEEE Standard 344-1987, "IEEE Recommended Practices for Seismic Qualification of Class 1E Equipment for Nuclear Power Generating Stations"
6. Vogtle 3&4 Updated Final Safety Analysis Report Appendix 3D, "Methodology for Qualifying AP1000 Safety-Related Electrical and Mechanical Equipment"
7. Equipment Qualification (EQ) Reports as identified in Attachment A
8. Regulatory Guide 1.100, Rev. 2, "Seismic Qualification of Electric and Mechanical Equipment for Nuclear Power Plants"
9. IEEE Standard 323-1974, "IEEE Standard for Qualifying Class 1E Equipment for Nuclear Power Generating Stations"
10. Regulatory Guide 1.89, Rev 1, "Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants"
11. IEEE Standard 317-1983, "IEEE Standard for Electric Penetration Assemblies in Containment Structures for Nuclear Power Generating Stations"
12. 2.2.01.05.i-U3-CP-Rev X, "Completion Package for Unit 3 ITAAC 2.2.01.05.i [Index Number 98]"
13. 2.2.01.05.i-U4-CP-Rev X, "Completion Package for Unit 4 ITAAC 2.2.01.05.i [Index Number 98]"
14. NEI 08-01, "Industry Guideline for the ITAAC Closure Process Under 10 CFR Part 52"

Attachment A

System: Containment System

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Service Air Supply Outside Containment Isolation Valve	CAS-PL-V204	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV10-VBR-008 / APP-PV10-VBR-007	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Service Air Supply Inside Containment Isolation Check Valve	CAS-PL-V205	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV03-VBR-002 / APP-PV03-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Instrument Air Supply Outside Containment Isolation Valve	CAS-PL-V014	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV10-VBR-004 / APP-PV10-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Instrument Air Supply Inside Containment Isolation Check Valve	CAS-PL-V015	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV02-VBR-016 / APP-PV02-VBR-015	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Component Cooling Water System (CCS) Containment Isolation Motor-operated Valve (MOV) – Inlet Line Outside Reactor Containment (ORC)	CCS-PL-V200	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
CCS Containment Isolation Check Valve – Inlet Line Inside Reactor Containment (IRC)	CCS-PL-V201	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV03-VBR-014 / APP-PV03-VBR-013	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
CCS Containment Isolation MOV – Outlet Line IRC	CCS-PL-V207	Yes	Yes/Yes	1	M * E	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
CCS Containment Isolation MOV – Outlet Line ORC	CCS-PL-V208	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
CCS Containment Isolation Relief Valve – Outlet Line IRC	CCS-PL-V220	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV16-VBR-002 / APP-PV16-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Demineralized Water Supply Containment Isolation Valve ORC	DWS-PL-V244	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-002 / APP-PV11-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Demineralized Water Supply Containment Isolation Check Valve IRC	DWS-PL-V245	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV02-VBR-016 / APP-PV02-VBR-015	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fuel Transfer Tube	FHS-FT-01	Yes	-/-	N/A	N/A	Analysis	APP-FT01-S3R-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fuel Transfer Tube Isolation Valve	FHS-PL-V001	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-FH06-VBR-002 / APP-FH06-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fire Water Containment Supply Isolation Valve – Outside	FPS-PL-V050	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-002 / APP-PV11-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fire Water Containment Isolation Supply Check Valve – Inside	FPS-PL-V052	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV03-VBR-014 / APP-PV03-VBR-013	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Spent Fuel Pool Cooling System (SFS) Discharge Line Containment Isolation Check Valve – IRC	SFS-PL-V037	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV03-VBR-002 / APP-PV03-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
SFS Discharge Line Containment Isolation MOV – ORC	SFS-PL-V038	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
SFS Suction Line Containment Isolation MOV – IRC	SFS-PL-V034	Yes	Yes/Yes	1	M * E	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
SFS Suction Line Containment Isolation MOV – ORC	SFS-PL-V035	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
SFS Suction Line Containment Isolation Relief Valve – IRC	SFS-PL-V067	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV16-VBR-002 / APP-PV16-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Containment Purge Inlet Containment Isolation Valve – ORC	VFS-PL-V003	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Containment Purge Inlet Containment Isolation Valve – IRC	VFS-PL-V004	Yes	Yes/Yes	1	M * E	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Integrated Leak Rate Testing Vent Discharge Containment Isolation Valve – ORC	VFS-PL-V008	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV02-VBR-010 / APP-PV02-VBR-009	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Containment Purge Discharge Containment Isolation Valve – IRC	VFS-PL-V009	Yes	Yes/Yes	1	M * E S	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Containment Purge Discharge Containment Isolation Valve – ORC	VFS-PL-V010	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Vacuum Relief Containment Isolation A MOV– ORC	VFS-PL-V800A	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Vacuum Relief Containment Isolation B MOV– ORC	VFS-PL-V800B	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-006 / APP-PV11-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Vacuum Relief Containment Isolation Check Valve A – IRC	VFS-PL-V803A	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV18-VBR-002 / APP-PV18-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Vacuum Relief Containment Isolation Check Valve B – IRC	VFS-PL-V803B	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV18-VBR-002 / APP-PV18-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fan Coolers Return Containment Isolation Valve – IRC	VWS-PL-V082	Yes	Yes/Yes	1	M * E S	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fan Coolers Return Containment Isolation Valve – ORC	VWS-PL-V086	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fan Coolers Return Containment Isolation Relief Valve – IRC	VWS-PL-V080	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV16-VBR-002 / APP-PV16-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fan Coolers Supply Containment Isolation Valve – ORC	VWS-PL-V058	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV11-VBR-004 / APP-PV11-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Fan Coolers Supply Containment Isolation Check Valve – IRC	VWS-PL-V062	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV03-VBR-002 / APP-PV03-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Reactor Coolant Drain Tank (RCDT) Gas Outlet Containment Isolation Valve – IRC	WLS-PL-V067	Yes	Yes/Yes	1	M * E S	Type Testing & Analysis	APP-PV14-VBR-002 / APP-PV14-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
RCDT Gas Outlet Containment Isolation Valve – ORC	WLS-PL-V068	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV14-VBR-002 / APP-PV14-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Sump Discharge Containment Isolation Valve – IRC	WLS-PL-V055	Yes	Yes/Yes	1	M * E S	Type Testing & Analysis	APP-PV10-VBR-006 / APP-PV10-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Sump Discharge Containment Isolation Valve – ORC	WLS-PL-V057	Yes	Yes/No	N/A	N/A	Type Testing & Analysis	APP-PV10-VBR-006 / APP-PV10-VBR-005	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Sump Discharge Containment Isolation Relief Valve – IRC	WLS-PL-V058	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-PV16-VBR-002 / APP-PV16-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Spare Penetration	CNS-PY-C01	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Spare Penetration	CNS-PY-C02	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Spare Penetration	CNS-PY-C03	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Main Equipment Hatch	CNS-MY-Y01	Yes	-/-	N/A	N/A	Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Maintenance Hatch	CNS-MY-Y02	Yes	-/-	N/A	N/A	Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Personnel Hatch	CNS-MY-Y03	Yes	-/-	N/A	N/A	Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Personnel Hatch	CNS-MY-Y04	Yes	-/-	N/A	N/A	Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Containment Vessel	CNS-MV-01	Yes	-/-	N/A	N/A	Analysis	APP-MV01-Z0R-101	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Electrical Penetration P03	DAS-EY-P03Z	Yes	No/Yes	7	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P01	ECS-EY-P01X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P02	ECS-EY-P02X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P06	ECS-EY-P06Y	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P07	ECS-PY-P07X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P09	ECS-EY-P09W	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-002 / APP-EY01-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P10	ECS-EY-P10W	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-002 / APP-EY01-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P11	IDSA-EY-P11Z	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P12	IDSA-EY-P12Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P13	IDSA-EY-P13Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Electrical Penetration P14	IDSD-EY-P14Z	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P15	IDSD-EY-P15Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P16	IDSD-EY-P16Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P17	ECS-EY-P17X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P18	ECS-EY-P18X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P19	ECS-EY-P19Z	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P20	ECS-EY-P20Z	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P21	EDS-EY-P21Z	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P22	ECS-EY-P22X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P23	ECS-EY-P23X	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Electrical Penetration P24	ECS-EY-P24	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P25	ECS-EY-P25W	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-002 / APP-EY01-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P26	ECS-EY-P26W	Yes	No/Yes	4	E * S	Type Testing & Analysis	APP-EY01-VBR-002 / APP-EY01-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P27	IDSC-EY-P27Z	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P28	IDSC-EY-P28Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P29	IDSC-EY-P29Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P30	IDSB-EY-P30Z	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P31	IDSB-EY-P31Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Electrical Penetration P32	IDSB-EY-P32Y	Yes	Yes/Yes	2	E * S	Type Testing & Analysis	APP-EY01-VBR-004 / APP-EY01-VBR-003	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Instrument Penetration P46	PCS-PY-C01	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Equipment Name ⁺	Tag No. ⁺	Seismic Cat. I ⁺	Class 1E/Qual. For Harsh Envir. ⁺³	Envir. Zone ¹	Envir Qual Program ²	Type of Qual.	EQ Reports (Reference 7)	As-Built EQRR (Reference 2) ⁴
Instrument Penetration P47	PCS-PY-C02	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Instrument Penetration P48	PCS-PY-C03	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0
Instrument Penetration P49	PCS-PY-C04	Yes	-/-	N/A	N/A	Type Testing & Analysis	APP-MV50-VBR-002 / APP-MV50-GEF-316 / APP-MV50-VBR-001	2.2.01.05.i-U3-EQRR-PCDXXX-Rev 0

Notes:

⁺ Excerpt from COL Appendix C Table 2.2.1-1

1. See Table 3D.5-1 of UFSAR
2. E = Electrical Equipment Program (limit switch and the motor operator, squib operator, solenoid operator)
M = Mechanical Equipment Program (valve)
S = Qualified for submergence or operation with spray
* = Harsh Environment
3. Dash (-) indicates not applicable
4. The Unit 4 As-Built EQRR are numbered "2.2.01.05.i-U4-EQRR-PCDXXX-Rev 0"