ATTACHMENT TO LICENSE AMENDMENT NO. 85

TO FACILITY COMBINED LICENSE NO. NPF-91

DOCKET NO. 52-025

Replace the following pages of the Facility Combined License No. NPF-91 with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Facility Combined License No. NPF-91

REMOVE	INSERT
7	7

Appendix C to Facility Combined License No. NPF-91

REMOVE	INSERT
C-1	C-1
C-2	C-2
C-3	C-3
C-4	C-4
C-5	C-5
C-6	C-6
C-7 through C-30	---
C-46	C-46
C-60	C-60
C-61	C-61
C-62	C-62
---	C-62a
C-66	C-66
C-67	C-67
C-77	C-77
C-78	C-78
C-79	C-79
C-95	C-95
C-96	C-96
C-97	C-97

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C-253	C-253
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C-254	C-254
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C-265	C-265
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C-266	C-266
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C-450	C-450

(7) Reporting Requirements

(a) Within 30 days of a change to the initial test program described in FSAR Section 14, Initial Test Program, made in accordance with 10 CFR 50.59 or in accordance with 10 CFR Part 52, Appendix D, Section VIII, "Processes for Changes and Departures," SNC shall report the change to the Director of NRO, or the Director's designee, in accordance with 10 CFR 50.59(d).

(b) SNC shall report any violation of a requirement in Section 2.D.(3), Section 2.D.(4), Section 2.D.(5), and Section 2.D.(6) of this license within 24 hours. Initial notification shall be made to the NRC Operations Center in accordance with 10 CFR 50.72, with written follow up in accordance with 10 CFR 50.73.

(8) Incorporation

The Technical Specifications, Environmental Protection Plan, and ITAAC in Appendices A, B, and C, respectively of this license, as revised through Amendment No. 85, are hereby incorporated into this license.

(9) Technical Specifications

The technical specifications in Appendix A to this license become effective upon a Commission finding that the acceptance criteria in this license (ITAAC) are met in accordance with 10 CFR 52.103(g).

(10) Operational Program Implementation

SNC shall implement the programs or portions of programs identified below, on or before the date SNC achieves the following milestones:

(a) Environmental Qualification Program implemented before initial fuel load;

(b) Reactor Vessel Material Surveillance Program implemented before initial criticality;

(c) Preservice Testing Program implemented before initial fuel load;

(d) Containment Leakage Rate Testing Program implemented before initial fuel load;

(e) Fire Protection Program

1. The fire protection measures in accordance with Regulatory Guide (RG) 1.189 for designated storage building areas (including adjacent fire areas that could affect the storage area) implemented before initial receipt

APPENDIX C

VOGTLE ELECTRIC GENERATING PLANT UNIT 3

INSPECTIONS, TESTS, ANALYSES, AND ACCEPTANCE CRITERIA

Table of Contents

The content of Pages C-6 through C-30 was intentionally removed by VEGP Unit 3 COL Amendment No. 85.

Table 2.1.1-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
1	2.1.01.01	1. The functional arrangement of the FHS is as described in the Design Description of this Section 2.1.1.	Inspection of the as-built system will be performed.	The as-built FHS conforms with the functional arrangement as described in the Design Description of this Section 2.1.1.
2	2.1.01.02	2. The FHS has the refueling machine (RM), the fuel handling machine (FHM), and the new and spent fuel storage racks.	Inspection of the system will be performed.	The FHS has the RM, the FHM, and the new and spent fuel storage racks.
3	2.1.01.03	Not used per Amendment No. 85		
4	2.1.01.04	4. The RM and FHM/spent fuel handling tool (SFHT) gripper assemblies are designed to prevent opening while the weight of the fuel assembly is suspended from the grippers.	The RM and FHM/SFHT gripper assemblies will be tested by operating the open controls of the gripper while suspending a dummy fuel assembly.	The RM and FHM/SFHT gripper assemblies will not open while suspending a dummy test assembly.
5	2.1.01.05	5. The lift height of the RM mast and FHM hoist(s) is limited such that the minimum required depth of water shielding is maintained.	The RM and FHM will be tested by attempting to raise a dummy fuel assembly.	The bottom of the dummy fuel assembly cannot be raised to within 24 ft, 6 in. of the operating deck floor.
6	2.1.01.06.i	6. The RM and FHM are designed to maintain their load carrying and structural integrity functions during a safe shutdown earthquake.	i) Inspection will be performed to verify that the RM and FHM are located on the nuclear island.	i) The RM and FHM are located on the nuclear island.
7	2.1.01.06.ii	6. The RM and FHM are designed to maintain their load carrying and structural integrity functions during a safe shutdown earthquake.	ii) Type test, analysis, or a combination of type tests and analyses of the RM and FHM will be performed.	ii) A report exists and concludes that the RM and FHM can withstand seismic design basis dynamic loads without loss of load carrying or structural integrity functions.
8	2.1.01.07.i	7. The new and spent fuel storage racks maintain the effective neutron multiplication factor required by 10 CFR 50.68 limits during normal operation, design basis seismic events, and design basis dropped spent fuel assembly accidents over the spent fuel storage racks.	i) Analyses will be performed to calculate the effective neutron multiplication factor in the new and spent fuel storage racks during normal conditions.	i) The calculated effective neutron multiplication factor for the new and spent fuel storage racks meets the requirements of 10 CFR 50.68(1) limits under normal conditions.
9	2.1.01.07.ii	7. The new and spent fuel storage racks maintain the effective neutron multiplication factor required by 10 CFR 50.68 limits during normal operation,	ii) Inspection will be performed to verify that the new and spent fuel storage racks are located on the	ii) The new and spent fuel storage racks are located on the nuclear island.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
12	2.1.02.01	1. The functional arrangement of the RCS is as described in the Design Description of this Section 2.1.2.	Inspection of the as-built system will be performed.	The as-built RCS conforms with the functional arrangement described in the Design Description of this Section 2.1.2.
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.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	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.
		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.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		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 retain its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	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.
		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.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	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.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		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 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.	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.
14	2.1.02.02b	Not used per Amendment No. 85		
15	2.1.02.03a	Not used per Amendment No. 85		
16	2.1.02.03b	Not used per Amendment No. 85		
17	2.1.02.04a	Not used per Amendment No. 85		
18	2.1.02.04b	Not used per Amendment No. 85		
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.	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) 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.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		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) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	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.
20	2.1.02.05a.ii	Not used per Amendment No. 85		
21	2.1.02.05a.iii	Not used per Amendment No. 85		
22	2.1.02.05b	Not used per Amendment No. 85		
23	2.1.02.06	Not used per Amendment No. 85		
24	2.1.02.07a.i	Not used per Amendment No. 85		
25	2.1.02.07a.ii	Not used per Amendment No. 85		
26	2.1.02.07b	7.b) The Class 1E components identified in Table 2.1.2-1 are powered from their respective Class 1E division.	Testing will be performed on the RCS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.1.2-1 when the assigned Class 1E division is provided the test signal.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
27	2.1.02.07c	Not used per Amendment No. 85		
28	2.1.02.08a.i	8.a) The pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.	i) Inspections will be conducted to confirm that the value of the vendor code plate rating is greater than or equal to system relief requirements.	i) The sum of the rated capacities recorded on the valve ASME Code plates of the safety valves exceeds 1,500,000 lb/hr.
29	2.1.02.08a.ii	8.a) The pressurizer safety valves provide overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.	ii) Testing and analysis in accordance with ASME Code Section III will be performed to determine set pressure.	ii) A report exists and concludes that the safety valves set pressure is 2485 psig ± 25 psi.

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
49	2.1.02.11b.ii	11.b) The valves identified in Table 2.1.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	ii) Testing will be performed on the other remotely operated valves identified in Table 2.1.2-1 using real or simulated signals into the PMS.	ii) The other remotely operated valves identified in Table 2.1.2-1 as having PMS control perform the active function identified in the table after receiving a signal from PMS.
50	2.1.02.11b.iii	11.b) The valves identified in Table 2.1.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	iii) Testing will be performed to demonstrate that remotely operated RCS valves RCS-V001A/B, V002A/B, V003A/B, V011A/B, V012A/B, V013A/B open within the required response times.	iii) These valves open within the following times after receipt of an actuation signal: V001A/B $\leq$ 40 sec V002A/B, V003A/B $\leq$ 100 sec V011A/B $\leq$ 30 sec V012A/B, V013A/B $\leq$ 60 sec
51	2.1.02.11c.i	11.c) The valves identified in Table 2.1.2-1 as having DAS control perform an active safety function after receiving a signal from DAS.	i) Testing will be performed on the squib valves identified in Table 2.1.2-1 using real or simulated signals into the DAS without stroking the valve.	i) The squib valves receive a signal at the valve electrical leads that is capable of actuating the squib valve.
52	2.1.02.11c.ii	11.c) The valves identified in Table 2.1.2-1 as having DAS control perform an active safety function after receiving a signal from DAS.	ii) Testing will be performed on the other remotely operated valves identified in Table 2.1.2-1 using real or simulated signals into the DAS.	ii) The other remotely operated valves identified in Table 2.1.2-1 as having DAS control perform the active function identified in the table after receiving a signal from DAS.
53	2.1.02.12a.i	12.a) The automatic depressurization valves identified in Table 2.1.2-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the as-built motor-operated valves are bounded by the tests or type tests.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.1.2-1 under design conditions. ii) A report exists and concludes that the as-built motor-operated valves are bounded by the tests or type tests.
54	2.1.02.12a.ii	Not used per Amendment No. 85		

Table 2.1.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
55	2.1.02.12a.iii	12.a) The automatic depressurization valves identified in Table 2.1.2-1 perform an active safety-related function to change position as indicated in the table.	iii) Tests of the motor-operated valves will be performed under pre-operational flow, differential pressure and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.1.2-1 under pre-operational test conditions.
56	2.1.02.12a.iv	12.a) The automatic depressurization valves identified in Table 2.1.2-1 perform an active safety-related function to change position as indicated in the table.	iv) Tests or type tests of squib valves will be performed that demonstrate the capability of the valve to operate under its design conditions. v) Inspection will be performed for the existence of a report verifying that the as-built squib valves are bounded by the tests or type tests.	iv) A test report exists and concludes that each squib valve changes position as indicated in Table 2.1.2-1 under design conditions. v) A report exists and concludes that the as-built squib valves are bounded by the tests or type tests.
57	2.1.02.12a.v	Not used per Amendment No. 85		
58	2.1.02.12a.vi	Not used per Amendment No. 85		
59	2.1.02.12a.vii	Not used per Amendment No. 85		
60	2.1.02.12a.viii	12.a) The automatic depressurization valves identified in Table 2.1.2-1 perform an active safety-related function to change position as indicated in the table.	viii) See item 8.d.iii in this table.	viii) See item 8.d.iii in this table.
61	2.1.02.12a.ix	12.a) The automatic depressurization valves identified in Table 2.1.2-1 perform an active safety-related function to change position as indicated in the table.	ix) See item 8.d.iv in this table.	ix) See item 8.d.iv in this table.
62	2.1.02.12b	12.b) After loss of motive power, the remotely operated valves identified in Table 2.1.2-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valve identified in Table 2.1.2-1 assumes the indicated loss of motive power position.

Table 2.1.3-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
68	2.1.03.01	1. The functional arrangement of the RXS is as described in the Design Description of this Section 2.1.3.	Inspection of the as-built system will be performed.	The as-built RXS conforms with the functional arrangement as described in the Design Description of this Section 2.1.3.
69	2.1.03.02a	2.a) The reactor upper internals rod guide arrangement is as shown in Figure 2.1.3-1.	Inspection of the as-built system will be performed.	The as-built RXS will accommodate the fuel assembly and control rod drive mechanism pattern shown in Figure 2.1.3-1.
70	2.1.03.02b	2.b) The control assemblies (rod cluster and gray rod) and drive rod arrangement is as shown in Figure 2.1.3-2.	Inspection of the as-built system will be performed.	The as-built RXS will accommodate the control assemblies (rod cluster and gray rod) and drive rod arrangement shown in Figure 2.1.3-2.
71	2.1.03.02c	2.c) The reactor vessel arrangement is as shown in Figure 2.1.3-3.	Inspection of the as-built system will be performed.	The as-built RXS will accommodate the reactor vessel arrangement shown in Figure 2.1.3-3.
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.
73	2.1.03.04	Not used per Amendment No. 85		
74	2.1.03.05	Not used per Amendment No. 85		

Table 2.1.3-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**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.	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.	i) 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		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) Type tests, analysis, or a combination of type tests and analysis will be performed on Class 1E equipment located in a harsh environment.	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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	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.
76	2.1.03.06.ii	Not used per Amendment No. 85		

Table 2.1.3-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
77	2.1.03.06.iii	Not used per Amendment No. 85		
78	2.1.03.07.i	7. The reactor internals will withstand the effects of flow induced vibration.	i) A vibration type test will be conducted on the (first unit) reactor internals representative of AP1000.	i) A report exists and concludes that the (first unit) reactor internals have no observable damage or loose parts as a result of the vibration type test.
79	2.1.03.07.ii	7. The reactor internals will withstand the effects of flow induced vibration.	ii) A pre-test inspection, a flow test and a post-test inspection will be conducted on the as-built reactor internals.	ii) The as-built reactor internals have no observable damage or loose parts.
80	2.1.03.08	8. The reactor vessel direct vessel injection nozzle limits the blowdown of the RCS following the break of a direct vessel injection line.	An inspection will be conducted to verify the flow area of the flow limiting venturi within each direct vessel injection nozzle.	The throat area of the direct vessel injection line nozzle flow limiting venturi is less than or equal to 12.57 in^2.
81	2.1.03.09a.i	Not used per Amendment No. 85		
82	2.1.03.09a.ii	Not used per Amendment No. 85		
83	2.1.03.09b	9.b) The Class 1E components identified in Table 2.1.3-1 are powered from their respective Class 1E division.	Testing will be performed by providing simulated test signals in each Class 1E division.	A simulated test signal exists for Class 1E equipment identified in Table 2.1.3-1 when the assigned Class 1E division is provided the test signal.
84	2.1.03.09c	Not used per Amendment No. 85		
85	2.1.03.10	10. The reactor lower internals assembly is equipped with holders for at least eight capsules for storing material surveillance specimens.	Inspection of the reactor lower internals assembly for the presence of capsules will be performed.	At least eight capsules are in the reactor lower internals assembly.
86	2.1.03.11	11. The RPV beltline material has a Charpy upper-shelf energy of no less than 75 ft-lb.	Manufacturing tests of the Charpy V-Notch specimen of the RPV beltline material will be performed.	A report exists and concludes that the initial RPV beltline Charpy upper-shelf energy is no less than 75 ft-lb.

Table 2.2.1-2		
Line Name	**Line Number**	**ASME Code Section III**
Instrument Air In	CAS-PL-L015	Yes
Service Air In	CAS-PL-L204	Yes
Component Cooling Water Supply to Containment	CCS-PL-L201	Yes
Component Cooling Water Outlet from Containment	CCS-PL-L207	Yes
Demineralized Water In	DWS-PL-L245, L230	Yes
Fire Protection Supply to Containment	FPS-PL-L107	Yes
Containment Atmosphere Return Line	PSS-PL-L038	Yes
Common Primary Sample Line A/B	PSS-PL-T005A/B	Yes
Containment Atmosphere Sample Line	PSS-PL-T031	Yes
Spent Fuel Pool Cooling Discharge	SFS-PL-L017	Yes
Spent Fuel Pool Cooling Suction from Containment	SFS-PL-L038	Yes
Containment Purge Inlet to Containment	VFS-PL-L104, L105, L106	Yes
Containment Purge Discharge from Containment	VFS-PL-L203, L204, L205, L800, L801A/B, L803, L804, L805A/B, L810A/B, L832	Yes
Fan Cooler Supply Line to Containment	VWS-PL-L032	Yes
Fan Cooler Return Line from Containment	VWS-PL-L055	Yes
RCDT Gas Out	WLS-PL-L022	Yes
Waste Sump Out	WLS-PL-L073	Yes

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
90	2.2.01.01	1. The functional arrangement of the CNS and associated systems is as described in the Design Description of this Section 2.2.1.	Inspection of the as-built system will be performed.	The as-built CNS conforms with the functional arrangement as described in the Design Description of this Section 2.2.1.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
91	2.2.01.02a	2.a) The components identified in Table 2.2.1-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.2.1-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.1-1 and 2.2.1-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.2.1-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.2.1-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4.a) The components identified in Table 2.2.1-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	i) A hydrostatic or pressure test will be performed on the components required by the ASME Code Section III to be tested.	i) A report exists and concludes that the results of the pressure test of the components identified in Table 2.2.1-1 as ASME Code Section III conform with the requirements of the ASME Code Section III.
		4.b) The piping identified in Table 2.2.1-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic or pressure test will be performed on the piping required by the ASME Code Section III to be pressure tested.	A report exists and concludes that the results of the pressure test of the piping identified in Table 2.2.1-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
92	2.2.01.02b	Not used per Amendment No. 85		
93	2.2.01.03a	Not used per Amendment No. 85		
94	2.2.01.03b	Not used per Amendment No. 85		
95	2.2.01.04a.i	Not used per Amendment No. 85		

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
96	2.2.01.04a.ii	4.a) The components identified in Table 2.2.1-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	ii) Impact testing will be performed on the containment and pressure-retaining penetration materials in accordance with the ASME Code Section III, Subsection NE, to confirm the fracture toughness of the materials.	ii) A report exists and concludes that the containment and pressure-retaining penetration materials conform with fracture toughness requirements of the ASME Code Section III.
97	2.2.01.04b	Not used per Amendment No. 85		
98	2.2.01.05.i	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.	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.	i) The seismic Category I equipment identified in Table 2.2.1-1 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.	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) 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.	iii) The as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		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.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	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.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
			ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	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.
		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.	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.	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) Inspection will be performed of the as-built non-Class 1E electrical penetrations located in a harsh environment.	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.
99	2.2.01.05.ii	Not used per Amendment No. 85		
100	2.2.01.05.iii	Not used per Amendment No. 85		
101	2.2.01.06a.i	Not used per Amendment No. 85		
102	2.2.01.06a.ii	Not used per Amendment No. 85		
103	2.2.01.06b	6.b) The Class 1E components identified in Table 2.2.1-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.1-1 when the assigned Class 1E division is provided the test signal.
104	2.2.01.06c	Not used per Amendment No. 85		

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
105	2.2.01.06d.i	Not used per Amendment No. 85		
106	2.2.01.06d.ii	Not used per Amendment No. 85		
107	2.2.01.07.i	7. The CNS provides the safety-related function of containment isolation for containment boundary integrity and provides a barrier against the release of fission products to the atmosphere.	i) A containment integrated leak rate test will be performed.	i) The leakage rate from containment for the integrated leak rate test is less than L_a.
108	2.2.01.07.ii	7. The CNS provides the safety-related function of containment isolation for containment boundary integrity and provides a barrier against the release of fission products to the atmosphere.	ii) Testing will be performed to demonstrate that remotely operated containment isolation valves close within the required response times.	ii) The containment purge isolation valves (VFS-PL-V003, -V004, -V009, and -V010) close within 10 seconds, containment vacuum relief isolation valves (VFS-PL-V800A and -V800B) close within 30 seconds, SGS valves SGS-PL-V040A/B and SGS-PL-V057A/B are covered in subsection 2.2.4, Table 2.2.4-4 (item 11.b.ii) and all other containment isolation valves close within 60 seconds upon receipt of an actuation signal.
109	2.2.01.08	8. Containment electrical penetration assemblies are protected against currents that are greater than the continuous ratings.	An analysis for the as-built containment electrical penetration assemblies will be performed to demonstrate (1) that the maximum current of the circuits does not exceed the continuous rating of the containment electrical penetration assembly, or (2) that the circuits have redundant protection devices in series and that the redundant current protection devices are coordinated with the containment electrical penetration assembly's rated short circuit thermal capacity data and prevent current from exceeding the continuous current rating of the containment electrical penetration assembly.	Analysis exists for the as-built containment electrical penetration assemblies and concludes that the penetrations are protected against currents which are greater than their continuous ratings.

Table 2.2.1-3
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
110	2.2.01.09	9. Safety-related displays identified in Table 2.2.1-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.1-1 can be retrieved in the MCR.
111	2.2.01.10a	10.a) Controls exist in the MCR to cause those remotely operated valves identified in Table 2.2.1-1 to perform active functions.	Stroke testing will be performed on remotely operated valves identified in Table 2.2.1-1 using the controls in the MCR.	Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.1-1 to perform active safety functions.
112	2.2.01.10b	10.b) The valves identified in Table 2.2.1-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	Testing will be performed on remotely operated valves listed in Table 2.2.1-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.2.1-1 as having PMS control perform the active function identified in the table after receiving a signal from PMS.
113	2.2.01.10c	10.c) The valves identified in Table 2.2.1-1 as having DAS control perform an active safety function after receiving a signal from DAS.	Testing will be performed on remotely operated valves listed in Table 2.2.1-1 using real or simulated signals into the DAS.	The remotely operated valves identified in Table 2.2.1-1 as having DAS control perform the active function identified in the table after receiving a signal from DAS.
114	2.2.01.11a.i	11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of each valve to operate under design conditions. ii) Inspection will be performed for the existence of a report verifying that the as-built motor-operated valves are bounded by the tests or type tests.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.1-1 under design conditions. ii) A report exists and concludes that the as-built motor-operated valves are bounded by the tests or type tests.

Table 2.2.1-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
115	2.2.01.11a.ii	Not used per Amendment No. 85		
116	2.2.01.11a.iii	11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table.	iii) Tests of the motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.2.1-1 under pre-operational test conditions.
117	2.2.01.11a.iv	11.a) The motor-operated and check valves identified in Table 2.2.1-1 perform an active safety-related function to change position as indicated in the table.	iv) Exercise testing of the check valves with active safety functions identified in Table 2.2.1-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.2.1-1.
118	2.2.01.11b	11.b) After loss of motive power, the remotely operated valves identified in Table 2.2.1-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.1-1 assumes the indicated loss of motive power position.

Table 2.2.1-4		
Component Name	**Tag No.**	**Component Location**
Containment Vessel	CNS-MV-01	Shield Building

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
120	2.2.02.02a	2.a) The components identified in Table 2.2.2-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The pipelines identified in Table 2.2.2-2 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.2.2-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in the pipelines identified in Table 2.2.2-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for nondestructive examination of pressure boundary welds.
		4.a) The components identified in Table 2.2.2-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The pipelines identified in Table 2.2.2-2 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.2-1 and 2.2.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
		5.b) Each of the pipelines identified in Table 2.2.2-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report concluding that the as-built pipelines meet the requirements for functional capability.	A report exists and concludes that each of the as-built pipelines identified in Table 2.2.2-2 for which functional capability is required meets the requirements for functional capability.
121	2.2.02.02b	Not used per Amendment No. 85		
122	2.2.02.03a	Not used per Amendment No. 85		

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
123	2.2.02.03b	Not used per Amendment No. 85		
124	2.2.02.04a	Not used per Amendment No. 85		
125	2.2.02.04b	Not used per Amendment No. 85		
126	2.2.02.05a.i	5.a) The seismic Category I components identified in Table 2.2.2-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I components and valves identified in Table 2.2.2-1 are located on the Nuclear Island.	i) The seismic Category I components identified in Table 2.2.2-1 are located on the Nuclear Island.
			ii) Type tests, analyses, or a combination of type tests and analyses of seismic Category I components will be performed.	ii) A report exists and concludes that the seismic Category I components can withstand seismic design basis loads without loss of safety function.
			iii) Inspection will be performed for the existence of a report verifying that the as-built components including anchorage are seismically bounded by the tested or analyzed conditions.	iii) The report exists and concludes that the as-built components including anchorage are seismically bounded by the tested or analyzed conditions.
		6.a) The Class 1E components identified in Table 2.2.2-1 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) Type tests or a combination of type tests and analyses will be performed on Class 1E components located in a harsh environment.	i) A report exists and concludes that the Class 1E components identified in Table 2.2.2-1 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) Inspection will be performed of the as-built Class 1E components and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E components and the associated wiring, cables, and terminations identified in Table 2.2.2-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
127	2.2.02.05a.ii	Not used per Amendment No. 85		
128	2.2.02.05a.iii	Not used per Amendment No. 85		
129	2.2.02.05b	Not used per Amendment No. 85		
130	2.2.02.05c	5.c) The PCCAWST can withstand a seismic event.	Inspection will be performed for the existence of a report verifying that the as-built PCCAWST and its anchorage are designed using seismic Category II methods and criteria.	A report exists and concludes that the as-built PCCAWST and its anchorage are designed using seismic Category II methods and criteria.
131	2.2.02.06a.i	Not used per Amendment No. 85		
132	2.2.02.06a.ii	Not used per Amendment No. 85		

Table 2.2.2-3
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
133	2.2.02.06b	6.b) The Class 1E components identified in Table 2.2.2-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E components identified in Table 2.2.2-1 when the assigned Class 1E division is provided the test signal.
134	2.2.02.06c	Not used per Amendment No. 85		
135	2.2.02.07a.i	7.a) The PCS delivers water from the PCCWST to the outside, top of the containment vessel.	i) Testing will be performed to measure the PCCWST delivery rate from each one of the three parallel flow paths.	i) When tested, each one of the three flow paths delivers water at greater than or equal to: – 469.1 gpm at a PCCWST water level of 27.4 ft + 0.2, - 0.0 ft above the tank floor – 226.6 gpm when the PCCWST water level uncovers the first (i.e. tallest) standpipe – 176.3 gpm when the PCCWST water level uncovers the second tallest standpipe – 144.2 gpm when the PCCWST water level uncovers the third tallest standpipe
136	2.2.02.07a.ii	7.a) The PCS delivers water from the PCCWST to the outside, top of the containment vessel.	ii) Testing and or analysis will be performed to demonstrate the PCCWST inventory provides 72 hours of adequate water flow.	ii) When tested and/or analyzed with all flow paths delivering and an initial water level at 27.4 + 0.2, - 0.00 ft, the PCCWST water inventory provides greater than or equal to 72 hours of flow, and the flow rate at 72 hours is greater than or equal to 100.7 gpm.
137	2.2.02.07a.iii	7.a) The PCS delivers water from the PCCWST to the outside, top of the containment vessel.	iii) Inspection will be performed to determine the PCCWST standpipes elevations.	iii) The elevations of the standpipes above the tank floor are: – 16.8 ft ± 0.2 ft – 20.3 ft ± 0.2 ft – 24.1 ft ± 0.2 ft

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
143	2.2.02.07e.i	Not used per Amendment No. 85		
144	2.2.02.07e.ii	7.e) The PCS provides a flow path for long-term water makeup to the PCCWST.	ii) Testing will be performed to measure the delivery rate from the long-term makeup connection to the PCCWST.	ii) With a water supply connected to the PCS long-term makeup connection, each PCS recirculation pump delivers greater than or equal to 100 gpm when tested separately.
145	2.2.02.07f.i	7.f) The PCS provides a flow path for long-term water makeup from the PCCWST to the spent fuel pool.	i) Testing will be performed to measure the delivery rate from the PCCWST to the spent fuel pool.	i) With the PCCWST water level at 27.4 ft + 0.2, - 0.0 ft above the bottom of the tank, the flow path from the PCCWST to the spent fuel pool delivers greater than or equal to 118 gpm.
146	2.2.02.07f.ii	7.f) The PCS provides a flow path for long-term water makeup from the PCCWST to the spent fuel pool.	ii) Inspection of the PCCWST will be performed.	ii) The volume of the PCCWST is greater than 756,700 gallons.
147	2.2.02.08a	8.a) The PCCAWST contains an inventory of cooling water sufficient for PCS containment cooling from hour 72 through day 7.	Inspection of the PCCAWST will be performed.	The volume of the PCCAWST is greater than 780,000 gallons.
148	2.2.02.08b	8.b) The PCS delivers water from the PCCAWST to the PCCWST and spent fuel pool simultaneously.	Testing will be performed to measure the delivery rate from the PCCAWST to the PCCWST and spent fuel pool simultaneously.	With PCCAWST aligned to the suction of the recirculation pumps, each pump delivers greater than or equal to 100 gpm to the PCCWST and 35 gpm to the spent fuel pool simultaneously when each pump is tested separately.
149	2.2.02.08c	Not used per Amendment No. 85		
150	2.2.02.09	9. Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.2-1 can be retrieved in the MCR.
151	2.2.02.10a	10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.2-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.2.2-1 using the controls in the MCR.	Controls in the MCR operate to cause remotely operated valves identified in Table 2.2.2-1 to perform active functions.

Table 2.2.2-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
152	2.2.02.10b	10.b) The valves identified in Table 2.2.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	Testing will be performed on the remotely operated valves in Table 2.2.2-1 using real or simulated signals into the PMS.	The remotely operated valves identified in Table 2.2.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.
153	2.2.02.10c	10.c) The valves identified in Table 2.2.2-1 as having DAS control perform an active safety function after receiving a signal from the DAS.	Testing will be performed on the remotely operated valves listed in Table 2.2.2-1 using real or simulated signals into the DAS.	The remotely operated valves identified in Table 2.2.2-1 as having DAS control perform the active function identified in the table after receiving a signal from the DAS.
154	2.2.02.11a.i	11.a) The motor-operated valves identified in Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the capability of the as-built motor-operated valves bound the tested conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.2-1 under design conditions. ii) A report exists and concludes that the capability of the as-built motor-operated valves bound the tested conditions.
155	2.2.02.11a.ii	Not used per Amendment No. 85		
156	2.2.02.11a.iii	11.a) The motor-operated valves identified in Table 2.2.2-1 perform an active safety-related function to change position as indicated in the table.	iii) Tests of the motor-operated valves will be performed under preoperational flow, differential pressure, and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.2.2-1 under preoperational test conditions.
157	2.2.02.11b	11.b) After loss of motive power, the remotely operated valves identified in Table 2.2.2-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.2-1 assumes the indicated loss of motive power position.

Table 2.2.2-4		
Component Name	**Tag No.**	**Component Location**
PCCWST	PCS-MT-01	Shield Building
PCCAWST	PCS-MT-05	Yard
Recirculation Pump A	PCS-MP-01A	Auxiliary Building
Recirculation Pump B	PCS-MP-01B	Auxiliary Building

Table 2.2.3-3 (cont.)			
Equipment	**Tag No.**	**Display**	**Control Function**
IRWST Injection B Isolation Squib (Position)	PXS-PL-V123B	Yes (Position)	-
IRWST Injection A Isolation Squib (Position)	PXS-PL-V125A	Yes (Position)	-
IRWST Injection B Isolation Squib (Position)	PXS-PL-V125B	Yes (Position)	-
IRWST Gutter Bypass Isolation Valve (Position)	PXS-PL-V130A	Yes (Position)	-
IRWST Gutter Bypass Isolation Valve (Position)	PXS-PL-V130B	Yes (Position)	-
Accumulator A Level Sensor	PXS-JE-L021	Yes	-
Accumulator B Level Sensor	PXS-JE-L022	Yes	-
Accumulator A Level Sensor	PXS-JE-L023	Yes	-
Accumulator B Level Sensor	PXS-JE-L024	Yes	-
PRHR HX Inlet Temperature Sensor	PXS-JE-T064	Yes	-
IRWST Surface Temperature Sensor	PXS-JE-T041	Yes	-
IRWST Surface Temperature Sensor	PXS-JE-T042	Yes	-
IRWST Bottom Temperature Sensor	PXS-JE-T043	Yes	-
IRWST Bottom Temperature Sensor	PXS-JE-T044	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
158	2.2.03.01	1. The functional arrangement of the PXS is as described in the Design Description of this Section 2.2.3.	Inspection of the as-built system will be performed.	The as-built PXS conforms with the functional arrangement as described in the Design Description of this Section 2.2.3.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**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.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.3-1 and 2.2.3-2 as ASME Code Section III.
		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.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		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.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.3-1 and 2.2.3-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
		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.	Inspection will be performed verifying that the as-built piping meets the requirements for functional capability.	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.
		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 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.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built PXS 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.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
160	2.2.03.02b	Not used per Amendment No. 85		
161	2.2.03.03a	Not used per Amendment No. 85		
162	2.2.03.03b	Not used per Amendment No. 85		
163	2.2.03.04a	Not used per Amendment No. 85		
164	2.2.03.04b	Not used per Amendment No. 85		
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.	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) 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.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		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) 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) 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.
166	2.2.03.05a.ii	Not used per Amendment No. 85		
167	2.2.03.05a.iii	Not used per Amendment No. 85		
168	2.2.03.05b	Not used per Amendment No. 85		
169	2.2.03.06	Not used per Amendment No. 85		
170	2.2.03.07a.i	Not used per Amendment No. 85		
171	2.2.03.07a.ii	Not used per Amendment No. 85		
172	2.2.03.07b	7.b) The Class 1E components identified in Table 2.2.3-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.3-1 when the assigned Class 1E division is provided the test signal.
173	2.2.03.07c	Not used per Amendment No. 85		

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
174	2.2.03.08a	Not used per Amendment No. 85		
175	2.2.03.08b.01	8.b) The PXS provides core decay heat removal during design basis events.	1. A heat removal performance test and analysis of the PRHR HX will be performed to determine the heat transfer from the HX. For the test, the reactor coolant hot leg temperature will be initially at ≥ 540°F with the reactor coolant pumps stopped. The IRWST water level for the test will be above the top of the HX. The IRWST water temperature is not specified for the test. The test will continue until the hot leg temperature decreases below 420°F.	1. A report exists and concludes that the PRHR HX heat transfer rate with the design basis number of PRHR HX tubes plugged is: $\geq 1.78 \times 10^8$ Btu/hr with 520°F HL Temp and 80°F IRWST temperatures. $\geq 1.11 \times 10^8$ Btu/hr with 420°F HL Temp and 80°F IRWST temperatures.
176	2.2.03.08b.02	8.b) The PXS provides core decay heat removal during design basis events.	2. Inspection of the elevation of the PRHR HX will be conducted.	2. The elevation of the centerline of the HX's upper channel head is greater than the HL centerline by at least 26.3 ft.
177	2.2.03.08c.i.01	8.c) The PXS provides RCS makeup, boration, and safety injection during design basis events.	i) A low-pressure injection test and analysis for each CMT, each accumulator, each IRWST injection line, and each containment recirculation line will be conducted. Each test is initiated by opening isolation valve(s) in the line being tested. Test fixtures may be used to simulate squib valves. 1. CMTs: Each CMT will be initially filled with water. All valves in these lines will be open during the test.	i) The injection line flow resistance from each source is as follows: 1. CMTs: The calculated flow resistance between each CMT and the reactor vessel is $\geq 1.81 \times 10^{-5}$ ft/gpm^2 and $\leq 2.25 \times 10^{-5}$ ft/gpm^2.

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
209	2.2.03.11b.i	11.b) The valves identified in Table 2.2.3-1 as having PMS control perform their active function after receiving a signal from the PMS.	i) Testing will be performed on the squib valves identified in Table 2.2.3-1 using real or simulated signals into the PMS without stroking the valve.	i) Squib valves receive an electrical signal at the valve electrical leads that is capable of actuating the valve after a signal is input to the PMS.
210	2.2.03.11b.ii	11.b) The valves identified in Table 2.2.3-1 as having PMS control perform their active function after receiving a signal from the PMS.	ii) Testing will be performed on the remotely operated valves other than squib valves identified in Table 2.2.3-1 using real or simulated signals into the PMS.	ii) Remotely operated valves other than squib valves perform the active function identified in the table after a signal is input to the PMS.
211	2.2.03.11b.iii	11.b) The valves identified in Table 2.2.3-1 as having PMS control perform their active function after receiving a signal from the PMS.	iii) Testing will be performed to demonstrate that remotely operated PXS isolation valves PXS-V014A/B, V015A/B, V108A/B open within the required response times.	iii) These valves open within 20 seconds after receipt of an actuation signal.
212	2.2.03.11c.i	11.c) The valves identified in Table 2.2.3-1 as having DAS control perform their active function after receiving a signal from the DAS.	i) Testing will be performed on the squib valves identified in Table 2.2.3-1 using real or simulated signals into the DAS without stroking the valve.	i) Squib valves receive an electrical signal at the valve electrical leads that is capable of actuating the valve after a signal is input to the DAS.
213	2.2.03.11c.ii	11.c) The valves identified in Table 2.2.3-1 as having DAS control perform their active function after receiving a signal from the DAS.	ii) Testing will be performed on the remotely operated valves other than squib valves identified in Table 2.2.3-1 using real or simulated signals into the DAS.	ii) Remotely operated valves other than squib valves perform the active function identified in Table 2.2.3-1 after a signal is input to the DAS.
214	2.2.03.12a.i	12.a) The squib valves and check valves identified in Table 2.2.3-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of squib valves will be performed that demonstrate the capability of the valve to operate under its design condition. ii) Inspection will be performed for the existence of a report verifying that the as-built squib valves are bounded by the tests or type tests.	i) A test report exists and concludes that each squib valve changes position as indicated in Table 2.2.3-1 under design conditions. ii) A report exists and concludes that the as-built squib valves are bounded by the tests or type tests.
215	2.2.03.12a.ii	Not used per Amendment No. 85		

Table 2.2.3-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
216	2.2.03.12a.iv	12.a) The squib valves and check valves identified in Table 2.2.3-1 perform an active safety-related function to change position as indicated in the table.	iv) Exercise testing of the check valves with active safety functions identified in Table 2.2.3-1 will be performed under preoperational test pressure, temperature, and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.2.3-1
217	2.2.03.12b	12.b) After loss of motive power, the remotely operated valves identified in Table 2.2.3-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.3-1 assumes the indicated loss of motive power position.
218	2.2.03.13	13. Displays of the parameters identified in Table 2.2.3-3 can be retrieved in the MCR.	Inspection will be performed for retrievability of the displays identified in Table 2.2.3-3 in the MCR.	Displays identified in Table 2.2.3-3 can be retrieved in the MCR.

Table 2.2.3-5		
Component Name	**Tag No.**	**Component Location**
Passive Residual Heat Removal Heat Exchanger (PRHR HX)	PXS-ME-01	Containment Building
Accumulator Tank A	PXS-MT-01A	Containment Building
Accumulator Tank B	PXS-MT-01B	Containment Building
Core Makeup Tank (CMT) A	PXS-MT-02A	Containment Building
CMT B	PXS-MT-02B	Containment Building
IRWST	PXS-MT-03	Containment Building
IRWST Screen A	PXS-MY-Y01A	Containment Building
IRWST Screen B	PXS-MY-Y01B	Containment Building
IRWST Screen C	PXS-MY-Y01C	Containment Building
Containment Recirculation Screen A	PXS-MY-Y02A	Containment Building
Containment Recirculation Screen B	PXS-MY-Y02B	Containment Building
pH Adjustment Basket 3A	PXS-MY-Y03A	Containment Building
pH Adjustment Basket 3B	PXS-MY-Y03B	Containment Building
pH Adjustment Basket 4A	PXS-MY-Y04A	Containment Building
pH Adjustment Basket 4B	PXS-MY-Y04B	Containment Building

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
219	2.2.04.01	1. The functional arrangement of the SGS and portions of the FWS, MSS, and MTS are as described in the Design Description of this Section 2.2.4.	Inspection of the as-built system will be performed.	The as-built SGS and portions of the FWS, MSS, and MTS conform with the functional arrangement as defined in the Design Description of this Section 2.2.4.
220	2.2.04.02a	2.a) The components identified in Table 2.2.4-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.2.4-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.4-1 and 2.2.4-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.2.4-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.2.4-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4.a) The components identified in Table 2.2.4-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.2.4-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.4-1 and 2.2.4-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
		5.b) Each of the lines identified in Table 2.2.4-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report concluding that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.4-2 for which functional capability is required meets the requirements for functional capability.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		6. Each of the as-built lines identified in Table 2.2.4-2 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 performed for the existence of an LBB evaluation report or an evaluation report on the protection from 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.	An LBB evaluation report exists and concludes that the LBB acceptance criteria are met by the as-built SGS 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.
221	2.2.04.02b	Not used per Amendment No. 85		
222	2.2.04.03a	Not used per Amendment No. 85		
223	2.2.04.03b	Not used per Amendment No. 85		
224	2.2.04.04a	Not used per Amendment No. 85		
225	2.2.04.04b	Not used per Amendment No. 85		

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
226	2.2.04.05a.i	5.a) The seismic Category I equipment identified in Table 2.2.4-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.2.4-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.2.4-1 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		7.a) The Class 1E equipment identified in Table 2.2.4-1 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) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.2.4-1 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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.2.4-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
227	2.2.04.05a.ii	Not used per Amendment No. 85		
228	2.2.04.05a.iii	Not used per Amendment No. 85		
229	2.2.04.05b	Not used per Amendment No. 85		
230	2.2.04.06	Not used per Amendment No. 85		

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
231	2.2.04.07a.i	Not used per Amendment No. 85		
232	2.2.04.07a.ii	Not used per Amendment No. 85		
233	2.2.04.07b	7.b) The Class 1E components identified in Table 2.2.4-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.4-1 when the assigned Class 1E division is provided the test signal.
234	2.2.04.07c	Not used per Amendment No. 85		
235	2.2.04.08a.i	8.a) The SGS provides a heat sink for the RCS and provides overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.	i) Inspections will be conducted to confirm that the value of the vendor code plate rating of the steam generator safety valves is greater than or equal to system relief requirements.	i) The sum of the rated capacities recorded on the valve vendor code plates of the steam generator safety valves exceeds 8,240,000 lb/hr per steam generator.
236	2.2.04.08a.ii	8.a) The SGS provides a heat sink for the RCS and provides overpressure protection in accordance with Section III of the ASME Boiler and Pressure Vessel Code.	ii) Testing and analyses in accordance with ASME Code Section III will be performed to determine set pressure.	ii) A report exists to indicate the set pressure of the valves is less than 1305 psig.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
237	2.2.04.08b.i	Not used per Amendment No. 85		
238	2.2.04.08b.ii	8.b) During design basis events, the SGS limits steam generator blowdown and feedwater flow to the steam generator.	ii) Inspection will be performed for the existence of a report confirming that the area of the flow limiting orifice within the SG main steam outlet nozzle will limit releases to the containment.	ii) A report exists to indicate the installed flow limiting orifice within the SG main steam line discharge nozzle does not exceed 1.4 sq. ft.
239	2.2.04.08c	Not used per Amendment No. 85		
240	2.2.04.09a.i	9.a) Components within the main steam system, main and startup feedwater system, and the main turbine system identified in Table 2.2.4-3 provide backup isolation of the SGS to limit steam generator blowdown and feedwater flow to the steam generator.	i) Testing will be performed to confirm closure of the valves identified in Table 2.2.4-3.	i) The valves identified in Table 2.2.4-3 close after a signal is generated by the PMS.
241	2.2.04.09a.ii	9.a) Components within the main steam system, main and startup feedwater system, and the main turbine system identified in Table 2.2.4-3 provide backup isolation of the SGS to limit steam generator blowdown and feedwater flow to the steam generator.	ii) Testing will be performed to confirm the trip of the pumps identified in Table 2.2.4-3.	ii) The pumps identified in Table 2.2.4-3 trip after a signal is generated by the PMS.
242	2.2.04.09b.i	Not used per Amendment No. 85		
243	2.2.04.09b.ii	9.b) During shutdown operations, the SGS removes decay heat by delivery of startup feedwater to the steam generator and venting of steam from the steam generators to the atmosphere.	ii) Type tests and/or analyses will be performed to demonstrate the ability of the power-operated relief valves to discharge steam from the steam generators to the atmosphere.	ii) A report exists and concludes that each power-operated relief valve will relieve greater than 300,000 lb/hr at 1106 psia ±10 psi.
244	2.2.04.10	10. Safety-related displays identified in Table 2.2.4-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.2.4-1 can be retrieved in the MCR.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
245	2.2.04.11a	11.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.2.4-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves listed in Table 2.2.4-1 using controls in the MCR.	Controls in the MCR operate to cause the remotely operated valves to perform active safety functions.
246	2.2.04.11b.i	11.b) The valves identified in Table 2.2.4-1 as having PMS control perform an active safety function after receiving a signal from PMS.	i) Testing will be performed on the remotely operated valves listed in Table 2.2.4-1 using real or simulated signals into the PMS.	i) The remotely-operated valves identified in Table 2.2.4-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.
247	2.2.04.11b.ii	11.b) The valves identified in Table 2.2.4-1 as having PMS control perform an active safety function after receiving a signal from PMS.	ii) Testing will be performed to demonstrate that remotely operated SGS isolation valves SGS-V027A/B, V040A/B, V057A/B, V250A/B close within the required response times.	ii) These valves close within the following times after receipt of an actuation signal: V027A/B < 44 sec V040A/B, V057A/B < 5 sec V250A/B < 5 sec
248	2.2.04.12a.i	12.a) The motor-operated valves identified in Table 2.2.4-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed to demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the as-built motor-operated valves are bounded by the tests or type tests.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.2.4-1 under design conditions. ii) A report exists and concludes that the as-built motor-operated valves are bounded by the tests or type tests.
249	2.2.04.12a.ii	Not used per Amendment No. 85		
250	2.2.04.12a.iii	12.a) The motor-operated valves identified in Table 2.2.4-1 perform an active safety-related function to change position as indicated in the table.	iii) Tests of the motor-operated valves will be performed under pre-operational flow, differential pressure, and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.2.4-1 under pre-operational test conditions.

Table 2.2.4-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
251	2.2.04.12b	12.b) After loss of motive power, the remotely operated valves identified in Table 2.2.4-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	After loss of motive power, each remotely operated valve identified in Table 2.2.4-1 assumes the indicated loss of motive power position. Motive power to SGS-PL-V040A/B and SGS-PL-V057A/B is electric power to the actuator from plant services.

Table 2.2.4-5		
Component Name	**Tag No.**	**Component Location**
Main Steam Line Isolation Valve	SGS-PL-V040A	Auxiliary Building
Main Steam Line Isolation Valve	SGS-PL-V040B	Auxiliary Building
Main Feedwater Isolation Valve	SGS-PL-V057A	Auxiliary Building
Main Feedwater Isolation Valve	SGS-PL-V057B	Auxiliary Building
Main Feedwater Control Valve	SGS-PL-V250A	Auxiliary Building
Main Feedwater Control Valve	SGS-PL-V250B	Auxiliary Building
Turbine Stop Valves	MTS-PL-V001A MTS-PL-V001B MTS-PL-V003A MTS-PL-V003B	Turbine Building
Turbine Control Valves	MTS-PL-V002A MTS-PL-V002B MTS-PL-V004A MTS-PL-V004B	Turbine Building
Main Feedwater Pumps	FWS-MP-02A FWS-MP-02B FWS-MP-02C	Turbine Building
Feedwater Booster Pumps	FWS-MP-01A FWS-MP-01B FWS-MP-01C	Turbine Building

Table 2.2.5-2			
Line Name	**Line Number**	**ASME Code Section III**	**Functional Capability Required**
MCR Relief Line	VES-PL-022A	Yes	Yes
MCR Relief Line	VES-PL-022B	Yes	Yes

Table 2.2.5-3		
Equipment	**Tag No.**	**Display**
Air Storage Tank Pressure	VES-001A	Yes
Air Storage Tank Pressure	VES-001B	Yes

Table 2.2.5-4			
Room Name	**Room Numbers**	**Heat Load 0 to 24 Hours (Btu/s)**	**Heat Load 24 to 72 Hours (Btu/s)**
MCR Envelope	12401	12.8 (hour 0 through 3) 5.1 (hour 4 through 24)	3.9
I&C Rooms	12301, 12305	8.8	0
I&C Rooms	12302, 12304	13.0	4.2
dc Equipment Rooms	12201, 12205	3.7 (hour 0 through 1) 2.4 (hour 2 through 24)	0
dc Equipment Rooms	12203, 12207	5.8 (hour 0 through 1) 4.5 (hour 2 through 24)	2.0

Table 2.2.5-5 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
252	2.2.05.01	1. The functional arrangement of the VES is as described in the Design Description of this Section 2.2.5.	Inspection of the as-built system will be performed.	The as-built VES conforms with the functional arrangement described in the Design Description of this Section 2.2.5.

Table 2.2.5-5
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
253	2.2.05.02a	2.a) The components identified in Table 2.2.5-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.2.5-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.2.5-1 and 2.2.5-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.2.5-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.2.5-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4.a) The components identified in Table 2.2.5-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.2.5-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.2.5-1 and 2.2.5-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
		5.b) Each of the lines identified in Table 2.2.5-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.2.5-2 for which functional capability is required meets the requirements for functional capability.
254	2.2.05.02b	Not used per Amendment No. 85		
255	2.2.05.03a	Not used per Amendment No. 85		
256	2.2.05.03b	Not used per Amendment No. 85		
257	2.2.05.04a	Not used per Amendment No. 85		
258	2.2.05.04b	Not used per Amendment No. 85		

Table 2.2.5-5
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
259	2.2.05.05a.i	5.a) The seismic Category I equipment identified in Table 2.2.5-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.2.5-1 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) The seismic Category I equipment identified in Table 2.2.5-1 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.
260	2.2.05.05a.ii	Not used per Amendment No. 85		
261	2.2.05.05a.iii	Not used per Amendment No. 85		
262	2.2.05.05b	Not used per Amendment No. 85		
263	2.2.05.06a	6.a) The Class 1E components identified in Table 2.2.5-1 are powered from their respective Class 1E division.	Testing will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.2.5-1 when the assigned Class 1E division is provided the test signal.
264	2.2.05.06b	Not used per Amendment No. 85		
265	2.2.05.07a.i	7.a) The VES provides a 72-hour supply of breathable quality air for the occupants of the MCR.	i) Testing will be performed to confirm that the required amount of air flow is delivered to the MCR.	i) The air flow rate from the VES is at least 60 scfm and not more than 70 scfm.
266	2.2.05.07a.ii	7.a) The VES provides a 72-hour supply of breathable quality air for the occupants of the MCR.	ii) Analysis of storage capacity will be performed based on manufacturers data.	ii) The calculated storage capacity is greater than or equal to 327,574 scf.
267	2.2.05.07a.iii	7.a) The VES provides a 72-hour supply of breathable quality air for the occupants of the MCR.	iii) MCR air samples will be taken during VES testing and analyzed for quality.	iii) The MCR air is of breathable quality.

Table 2.2.5-5
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
268	2.2.05.07b.i	7.b) The VES maintains the MCR pressure boundary at a positive pressure with respect to the surrounding areas.	i) Testing will be performed with VES flow rate between 60 and 70 scfm to confirm that the MCR is capable of maintaining the required pressurization of the pressure boundary.	i) The MCR pressure boundary is pressurized to greater than or equal to 1/8-in. water gauge with respect to the surrounding area.
269	2.2.05.07b.ii	7.b) The VES maintains the MCR pressure boundary at a positive pressure with respect to the surrounding areas.	ii) Air leakage into the MCR will be measured during VES testing using a tracer gas.	ii) Air leakage into the MCR is less than or equal to 10 cfm.

Table 2.3.1-1			
Equipment Name	**Tag No.**	**Display**	**Control Function**
CCS Heat Exchanger Inlet Temperature Sensor	CCS-121	Yes	-
CCS Heat Exchanger Outlet Temperature Sensor	CCS-122	Yes	-
CCS Flow to Reactor Coolant Pump (RCP) 1A Valve (Position Indicator)	CCS-PL-V256A	Yes	-
CCS Flow to RCP 1B Valve (Position Indicator)	CCS-PL-V256B	Yes	-
CCS Flow to RCP 2A Valve (Position Indicator)	CCS-PL-V256C	Yes	-
CCS Flow to RCP 2B Valve (Position Indicator)	CCS-PL-V256D	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.1-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
278	2.3.01.01	1. The functional arrangement of the CCS is as described in the Design Description of this Section 2.3.1.	Inspection of the as-built system will be performed.	The as-built CCS conforms with the functional arrangement described in the Design Description of this Section 2.3.1.
279	2.3.01.02	Not used per Amendment No. 85		
280	2.3.01.03.i	3. The CCS provides the nonsafety-related functions of transferring heat from the RNS during shutdown and the spent fuel pool cooling system during all modes of operation to the SWS.	i) Inspection will be performed for the existence of a report that determines the heat transfer capability of the CCS heat exchangers.	i) A report exists and concludes that the UA of each CCS heat exchanger is greater than or equal to 14.0 million Btu/hr-°F.
281	2.3.01.03.ii	3. The CCS provides the nonsafety-related functions of transferring heat from the RNS during shutdown and the spent fuel pool cooling system during all modes of operation to the SWS.	ii) Testing will be performed to confirm that the CCS can provide cooling water to the RNS HXs while providing cooling water to the SFS HXs.	ii) Each pump of the CCS can provide at least 2685 gpm of cooling water to one RNS HX and at least 1200 gpm of cooling water to one SFS HX while providing at least 4415 gpm to other users of cooling water.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
284	2.3.02.01	1. The functional arrangement of the CVS is as described in the Design Description of this Section 2.3.2.	Inspection of the as-built system will be performed.	The as-built CVS conforms with the functional arrangement as described in the Design Description of this Section 2.3.2.
285	2.3.02.02a	2.a) The components identified in Table 2.3.2-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.3.2-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.3.2-1 and 2.3.2-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.3.2-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.3.2-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4.a) The components identified in Table 2.3.2-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.3.2-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.3.2-1 and 2.3.2-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
286	2.3.02.02b	Not used per Amendment No. 85		
287	2.3.02.03a	Not used per Amendment No. 85		
288	2.3.02.03b	Not used per Amendment No. 85		
289	2.3.02.04a	Not used per Amendment No. 85		
290	2.3.02.04b	Not used per Amendment No. 85		

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
291	2.3.02.05.i	5. The seismic Category I equipment identified in Table 2.3.2-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.2-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.2-1 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis dynamic loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		6.a) The Class 1E equipment identified in Table 2.3.2-1 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) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.2-1 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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.2-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
292	2.3.02.05.ii	Not used per Amendment No. 85		
293	2.3.02.05.iii	Not used per Amendment No. 85		
294	2.3.02.06a.i	Not used per Amendment No. 85		
295	2.3.02.06a.ii	Not used per Amendment No. 85		

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
296	2.3.02.06b	6.b) The Class 1E components identified in Table 2.3.2-1 are powered from their respective Class 1E division.	Testing will be performed on the CVS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.2-1 when the assigned Class 1E division is provided the test signal.
297	2.3.02.06c	Not used per Amendment No. 85		
298	2.3.02.07a	Not used per Amendment No. 85		
299	2.3.02.07b	Not used per Amendment No. 85		
300	2.3.02.07c	Not used per Amendment No. 85		
301	2.3.02.08a.i	8.a) The CVS provides makeup water to the RCS.	i) Testing will be performed by aligning a flow path from each CVS makeup pump, actuating makeup flow to the RCS at pressure greater than or equal to 2000 psia, and measuring the flow rate in the makeup pump discharge line with each pump suction aligned to the boric acid storage tank.	i) Each CVS makeup pump provides a flow rate of greater than or equal to 100 gpm.
302	2.3.02.08a.ii	8.a) The CVS provides makeup water to the RCS.	ii) Inspection of the boric acid storage tank volume will be performed.	ii) The volume in the boric acid storage tank is at least 70,000 gallons between the tank suction point and the tank overflow.
303	2.3.02.08a.iii	8.a) The CVS provides makeup water to the RCS.	iii) Testing will be performed to measure the delivery rate from the DWS to the RCS. Both CVS makeup pumps will be operating and the RCS pressure will be below 6 psig.	iii) The total CVS makeup flow to the RCS is less than or equal to 175 gpm.

Table 2.3.2-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
304	2.3.02.08b	8.b) The CVS provides the pressurizer auxiliary spray.	Testing will be performed by aligning a flow path from each CVS makeup pump to the pressurizer auxiliary spray and measuring the flow rate in the makeup pump discharge line with each pump suction aligned to the boric acid storage tank and with RCS pressure greater than or equal to 2000 psia.	Each CVS makeup pump provides spray flow to the pressurizer.
305	2.3.02.09	9. Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.3.2-1 can be retrieved in the MCR.
306	2.3.02.10a	10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.3.2-1 using the controls in the MCR.	Controls in the MCR operate to cause the remotely operated valves identified in Table 2.3.2-1 to perform active functions.
307	2.3.02.10b.i	10.b) The valves identified in Table 2.3.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	i) Testing will be performed using real or simulated signals into the PMS.	i) The valves identified in Table 2.3.2-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.
308	2.3.02.10b.ii	10.b) The valves identified in Table 2.3.2-1 as having PMS control perform an active safety function after receiving a signal from the PMS.	ii) Testing will be performed to demonstrate that the remotely operated CVS isolation valves CVS-V090, V091, V136A/B close within the required response time.	ii) These valves close within the following times after receipt of an actuation signal: V090, V091 < 30 sec V136A/B < 20 sec
309	2.3.02.11a.i	11.a) The motor-operated and check valves identified in Table 2.3.2-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the as-built motor-operated valves are bounded by the tested conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.3.2-1 under design conditions. ii) A report exists and concludes that the as-built motor-operated valves are bounded by the tests or type tests.
310	2.3.02.11a.ii	Not used per Amendment No. 85		

Table 2.3.4-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
326	2.3.04.01	1. The functional arrangement of the FPS is as described in the Design Description of this Section 2.3.4.	Inspection of the as-built system will be performed.	The as-built FPS conforms with the functional arrangement described in the Design Description of this Section 2.3.4.
327	2.3.04.02.i	2. The FPS piping identified in Table 2.3.4-4 remains functional following a safe shutdown earthquake.	i) Inspection will be performed to verify that the piping identified in Table 2.3.4-4 is located on the Nuclear Island.	i) The piping identified in Table 2.3.4-4 is located on the Nuclear Island.
328	2.3.04.02.ii	2. The FPS piping identified in Table 2.3.4-4 remains functional following a safe shutdown earthquake.	ii) A reconciliation analysis using the as-designed and as-built piping information will be performed, or an analysis of the as-built piping will be performed.	ii) The as-built piping stress report exists and concludes that the piping remains functional following a safe shutdown earthquake.
329	2.3.04.03	Not used per Amendment No. 85		
330	2.3.04.04.i	4. The FPS provides for manual fire fighting capability in plant areas containing safety-related equipment.	i) Inspection of the passive containment cooling system (PCS) storage tank will be performed.	i) The volume of the PCS tank above the standpipe feeding the FPS and below the overflow is at least 18,000 gal.
331	2.3.04.04.ii	4. The FPS provides for manual fire fighting capability in plant areas containing safety-related equipment.	ii) Testing will be performed by measuring the water flow rate as it is simultaneously discharged from the two highest fire-hose stations and when the water for the fire is supplied from the PCS storage tank.	ii) Water is simultaneously discharged from each of the two highest fire-hose stations in plant areas containing safety-related equipment at not less than 75 gpm.
332	2.3.04.05	5. Displays of the parameters identified in Table 2.3.4-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.3.4-1 can be retrieved in the MCR.
333	2.3.04.06	6. The FPS provides nonsafety-related containment spray for severe accident management.	Inspection of the containment spray headers will be performed.	The FPS has spray headers and nozzles as follows: At least 44 nozzles at plant elevation of at least 260 feet, and 24 nozzles at plant elevation of at least 275 feet.
334	2.3.04.07	7. The FPS provides two fire water storage tanks, each capable of holding at least 300,000 gallons of water.	Inspection of each fire water storage tank will be performed.	The volume of each fire water storage tank supplying the FPS is at least 300,000 gallons.

Table 2.3.5-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
339	2.3.05.01	1. The functional arrangement of the MHS is as described in the Design Description of this Section 2.3.5.	Inspection of the as-built system will be performed.	The as-built MHS conforms with the functional arrangement as described in the Design Description of this Section 2.3.5.
340	2.3.05.02.i	2. The seismic Category I equipment identified in Table 2.3.5-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.5-1 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) The seismic Category I equipment identified in Table 2.3.5-1 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.
341	2.3.05.02.ii	Not used per Amendment No. 85		
342	2.3.05.02.iii	Not used per Amendment No. 85		
343	2.3.05.03a.i	3.a) The polar crane is single failure proof.	i) Validation of double design factors is provided for hooks where used as load bearing components. Validation of redundant factors is provided for load bearing components such as: • Hoisting ropes • Sheaves • Equalizer assembly • Holding brakes	i) A report exists and concludes that the polar crane is single failure proof. A certificate of conformance from the vendor exists and concludes that the polar crane is single failure proof.
344	2.3.05.03a.ii	3.a) The polar crane is single failure proof.	ii) Testing of the polar crane is performed.	ii) The polar crane shall be static-load tested to 125% of the rated load.
345	2.3.05.03a.iii	3.a) The polar crane is single failure proof.	iii) Testing of the polar crane is performed.	iii) The polar crane shall lift a test load that is 100% of the rated load. Then it shall lower, stop, and hold the test load.

Table 2.3.6-3			
Equipment Name	**Tag No.**	**Display**	**Control Function**
RNS Pump 1A (Motor)	RNS-MP-01A	Yes (Run Status)	Start
RNS Pump 1B (Motor)	RNS-MP-01B	Yes (Run Status)	Start
RNS Flow Sensor	RNS-01A	Yes	-
RNS Flow Sensor	RNS-01B	Yes	-
RNS Suction from Cask Loading Pit Isolation Valve (Position Indicator)	RNS-PL-V055	Yes	-
RNS Pump Miniflow Isolation Valve (Position Indicator)	RNS-PL-V057A	Yes	-
RNS Pump Miniflow Isolation Valve (Position Indicator)	RNS-PL-V057B	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
354	2.3.06.01	1. The functional arrangement of the RNS is as described in the Design Description of this Section 2.3.6.	Inspection of the as-built system will be performed.	The as-built RNS conforms with the functional arrangement described in the Design Description of this Section 2.3.6.
355	2.3.06.02a	2.a) The components identified in Table 2.3.6-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.3.6-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.3.6-1 and 2.3.6-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.3.6-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.3.6-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		4.a) The components identified in Table 2.3.6-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.3.6-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure. 5.b) Each of the lines identified in Table 2.3.6-2 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 2.3.6-2 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.	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.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.3.6-1 and 2.3.6-2 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 2.3.6-2 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 RNS 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.
356	2.3.06.02b	Not used per Amendment No. 85		
357	2.3.06.03a	Not used per Amendment No. 85		
358	2.3.06.03b	Not used per Amendment No. 85		
359	2.3.06.04a	Not used per Amendment No. 85		
360	2.3.06.04b	Not used per Amendment No. 85		

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
361	2.3.06.05a.i	5.a) The seismic Category I equipment identified in Table 2.3.6-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.6-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.6-1 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		7.a) The Class 1E equipment identified in Tables 2.3.6-1 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) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.6-1 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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.6-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
362	2.3.06.05a.ii	Not used per Amendment No. 85		
363	2.3.06.05a.iii	Not used per Amendment No. 85		
364	2.3.06.05b	Not used per Amendment No. 85		
365	2.3.06.06	Not used per Amendment No. 85		

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
366	2.3.06.07a.i	Not used per Amendment No. 85		
367	2.3.06.07a.ii	Not used per Amendment No. 85		
368	2.3.06.07b	7.b) The Class 1E components identified in Table 2.3.6-1 are powered from their respective Class 1E division.	Testing will be performed on the RNS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.6-1 when the assigned Class 1E division is provided the test signal.
369	2.3.06.07c	Not used per Amendment No. 85		
370	2.3.06.08a	Not used per Amendment No. 85		
371	2.3.06.08b	Not used per Amendment No. 85		
372	2.3.06.09a.i	9.a) The RNS provides LTOP for the RCS during shutdown operations.	i) Inspections will be conducted on the low temperature overpressure protection relief valve to confirm that the capacity of the vendor code plate rating is greater than or equal to system relief requirements.	i) The rated capacity recorded on the valve vendor code plate is not less than the flow required to provide low-temperature overpressure protection for the RCS, as determined by the LTOPS evaluation based on the pressure-temperature curves developed for the as-procured reactor vessel material.
373	2.3.06.09a.ii	9.a) The RNS provides LTOP for the RCS during shutdown operations.	ii) Testing and analysis in accordance with the ASME Code Section III will be performed to determine set pressure.	ii) A report exists and concludes that the relief valve opens at a pressure not greater than the set pressure required to provide low-temperature overpressure protection for the RCS, as determined by the LTOPS evaluation based on the pressure-temperature curves developed for the as-procured reactor vessel material.
374	2.3.06.09b.i	9.b) The RNS provides heat removal from the reactor coolant during shutdown operations.	i) Inspection will be performed for the existence of a report that determines the heat removal capability of the RNS heat exchangers.	i) A report exists and concludes that the product of the overall heat transfer coefficient and the effective heat transfer area, UA, of each RNS heat exchanger is greater than or equal to 2.2 million Btu/hr-°F.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
382	2.3.06.11a	11.a) Controls exist in the MCR to cause those remotely operated valves identified in Table 2.3.6-1 to perform active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.3.6-1 using the controls in the MCR.	Controls in the MCR operate to cause those remotely operated valves identified in Table 2.3.6-1 to perform active functions.
383	2.3.06.11b	11.b) The valves identified in Table 2.3.6-1 as having PMS control perform active safety functions after receiving a signal from the PMS.	Testing will be performed using real or simulated signals into the PMS.	The valves identified in Table 2.3.6-1 as having PMS control perform the active function identified in the table after receiving a signal from the PMS.
384	2.3.06.12a.i	12.a) The motor-operated and check valves identified in Table 2.3.6-1 perform an active safety-related function to change position as indicated in the table.	i) Tests or type tests of motor-operated valves will be performed that demonstrate the capability of the valve to operate under its design conditions. ii) Inspection will be performed for the existence of a report verifying that the as-built motor-operated valves are bounded by the tested conditions.	i) A test report exists and concludes that each motor-operated valve changes position as indicated in Table 2.3.6-1 under design conditions. ii) A report exists and concludes that the as-built motor-operated valves are bounded by the tested conditions.
385	2.3.06.12a.ii	Not used per Amendment No. 85		
386	2.3.06.12a.iii	12.a) The motor-operated and check valves identified in Table 2.3.6-1 perform an active safety-related function to change position as indicated in the table.	iii) Tests of the motor-operated valves will be performed under preoperational flow, differential pressure and temperature conditions.	iii) Each motor-operated valve changes position as indicated in Table 2.3.6-1 under preoperational test conditions.
387	2.3.06.12a.iv	12.a) The motor-operated and check valves identified in Table 2.3.6-1 perform an active safety-related function to change position as indicated in the table.	iv) Exercise testing of the check valves active safety functions identified in Table 2.3.6-1 will be performed under preoperational test pressure, temperature and fluid flow conditions.	iv) Each check valve changes position as indicated in Table 2.3.6-1.
388	2.3.06.12b	12.b) After loss of motive power, the remotely operated valves identified in Table 2.3.6-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valve identified in Table 2.3.6-1 assumes the indicated loss of motive power position.

Table 2.3.6-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
389	2.3.06.13	13. Controls exist in the MCR to cause the pumps identified in Table 2.3.6-3 to perform the listed function.	Testing will be performed to actuate the pumps identified in Table 2.3.6-3 using controls in the MCR.	Controls in the MCR cause pumps identified in Table 2.3.6-3 to perform the listed action.
390	2.3.06.14	14. Displays of the RNS parameters identified in Table 2.3.6-3 can be retrieved in the MCR.	Inspection will be performed for retrievability in the MCR of the displays identified in Table 2.3.6-3.	Displays of the RNS parameters identified in Table 2.3.6-3 are retrieved in the MCR.

Table 2.3.7-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
391	2.3.07.01	1. The functional arrangement of the SFS is as described in the Design Description of this Section 2.3.7.	Inspection of the as-built system will be performed.	The as-built SFS conforms with the functional arrangement as described in the Design Description of this Section 2.3.7.
392	2.3.07.02a	2.a) The components identified in Table 2.3.7-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping lines identified in Table 2.3.7-2 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the ASME as-built components and piping lines as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping lines identified in Tables 2.3.7-1 and 2.3.7-2 as ASME Code Section III.
		3. Pressure boundary welds in piping lines identified in Table 2.3.7-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4. The piping lines identified in Table 2.3.7-2 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the piping lines required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the piping lines identified in Table 2.3.7-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
393	2.3.07.02b	Not used per Amendment No. 85		
394	2.3.07.03	Not used per Amendment No. 85		
395	2.3.07.04	Not used per Amendment No. 85		
396	2.3.07.05.i	5. The seismic Category I components identified in Table 2.3.7-1 can withstand seismic design basis loads without loss of safety functions.	i) Inspection will be performed to verify that the seismic Category I components identified in Table 2.3.7-1 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.	i) The seismic Category I components identified in Table 2.3.7-1 are 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.

Table 2.3.7-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
397	2.3.07.05.ii	Not used per Amendment No. 85		
398	2.3.07.05.iii	Not used per Amendment No. 85		
399	2.3.07.06a	6.a) The Class 1E components identified in Table 2.3.7-1 are powered from their respective Class 1E division.	Testing will be performed on the SFS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E components identified in Table 2.3.7-1 when the assigned Class 1E division is provided the test signal.
400	2.3.07.06b	Not used per Amendment No. 85		
401	2.3.07.07a	Not used per Amendment No. 85		
402	2.3.07.07b.i	7.b) The SFS provides spent fuel cooling for 7 days by boiling the spent fuel pool water and makeup water from on-site storage tanks.	i) Inspection will be performed to verify that the spent fuel pool includes a sufficient volume of water.	i) The volume of the spent fuel pool and fuel transfer canal above the fuel and to the elevation 6 feet below the operating deck is greater than or equal to 129,500 gallons.
403	2.3.07.07b.ii	7.b) The SFS provides spent fuel cooling for 7 days by boiling the spent fuel pool water and makeup water from on-site storage tanks.	ii) Inspection will be performed to verify the cask washdown pit includes sufficient volume of water.	ii) The water volume of the cask washdown pit is greater than or equal to 30,900 gallons.
404	2.3.07.07b.iii	Not used per Amendment No. 85		
405	2.3.07.07b.iv	Not used per Amendment No. 85		

Table 2.3.7-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
406	2.3.07.07b.v	Not used per Amendment No. 85		
407	2.3.07.07b.vi	Not used per Amendment No. 85		
408	2.3.07.07c	7c) The SFS provides check valves in the drain line from the refueling cavity to prevent flooding of the refueling cavity during containment flooding.	Exercise testing of the check valves with active safety-functions identified in Table 2.3.7-1 will be performed under pre-operational test pressure, temperature and flow conditions.	Each check valve changes position as indicated on Table 2.3.7-1.
409	2.3.07.08.i	8. The SFS provides the nonsafety-related function of removing spent fuel decay heat using pumped flow through a heat exchanger.	i) Inspection will be performed for the existence of a report that determines the heat removal capability of the SFS heat exchangers.	i) A report exists and concludes that the heat transfer characteristic, UA, of each SFS heat exchanger is greater than or equal to 2.2 million Btu/hr-°F.
410	2.3.07.08.ii	8. The SFS provides the nonsafety-related function of removing spent fuel decay heat using pumped flow through a heat exchanger.	ii) Testing will be performed to confirm that each SFS pump provides flow through its heat exchanger when taking suction from the SFP and returning flow to the SFP.	ii) Each SFS pump produces at least 900 gpm through its heat exchanger.
411	2.3.07.09	9. Safety-related displays identified in Table 2.3.7-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.3.7-1 can be retrieved in the MCR.
412	2.3.07.10	10. Controls exist in the MCR to cause the pumps identified in Table 2.3.7-3 to perform their listed functions.	Testing will be performed to actuate the pumps identified in Table 2.3.7-3 using controls in the MCR.	Controls in the MCR cause pumps identified in Table 2.3.7-3 to perform the listed functions.
413	2.3.07.11	11. Displays of the SFS parameters identified in Table 2.3.7-3 can be retrieved in the MCR.	Inspection will be performed for retrievability in the MCR of the displays identified in Table 2.3.7-3.	Displays of the SFS parameters identified in Table 2.3.7-3 are retrieved in the MCR.

Table 2.3.10-2			
Line Name	**Line No.**	**ASME Section III**	**Functional Capability Required**
WLS Drain from PXS Compartment A	WLS-PL-L062	Yes	Yes
WLS Drain from PXS Compartment B	WLS-PL-L063	Yes	Yes
WLS Drain from CVS Compartment	WLS-PL-L061	Yes	Yes

Table 2.3.10-3			
Equipment Name	**Tag No.**	**Display**	**Active Function**
WLS Effluent Discharge Isolation Valve	WLS-PL-V223	-	Close
Reactor Coolant Drain Tank Level	WLS-JE-LT002	Yes	-
Letdown Flow from CVS to WLS	WLS-JE-FT020	Yes	-

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
430	2.3.10.01	1. The functional arrangement of the WLS is as described in the Design Description of this Section 2.3.10.	Inspection of the as-built system will be performed.	The as-built WLS conforms with the functional arrangement as described in the Design Description of this Section 2.3.10.
431	2.3.10.02a	2.a) The components identified in Table 2.3.10-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.3.10-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design report exists for the as built components and piping identified in Tables 2.3.10-1 and 2.3.10-2 as ASME Code Section III.

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		3.a) Pressure boundary welds in components identified in Table 2.3.10-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.3.10-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4.a) The components identified in Table 2.3.10-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.3.10-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A hydrostatic test will be performed on the components and piping required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components and piping identified in Tables 2.3.10-1 and 2.3.10-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
		5.b) Each of the lines identified in Table 2.3.10-2 for which functional capability is required is designed to withstand combined normal and seismic design basis loads without a loss of its functional capability.	Inspection will be performed for the existence of a report verifying that the as-built piping meets the requirements for functional capability.	A report exists and concludes that each of the as-built lines identified in Table 2.3.10-2 for which functional capability is required meets the requirements for functional capability.
432	2.3.10.02b	Not used per Amendment No. 85		
433	2.3.10.03a	Not used per Amendment No. 85		

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
434	2.3.10.03b	Not used per Amendment No. 85		
435	2.3.10.04a	Not used per Amendment No. 85		
436	2.3.10.04b	Not used per Amendment No. 85		
437	2.3.10.05a.i	5.a) The seismic Category I equipment identified in Table 2.3.10-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.3.10-1 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) The seismic Category I equipment identified in Table 2.3.10-1 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.
438	2.3.10.05a.ii	Not used per Amendment No. 85		
439	2.3.10.05a.iii	Not used per Amendment No. 85		

Table 2.3.10-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
440	2.3.10.05b	Not used per Amendment No. 85		
441	2.3.10.06a	Not used per Amendment No. 85		
442	2.3.10.06b	Not used per Amendment No. 85		
443	2.3.10.07a.i	7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.	i) Inspection will be performed for retrievability of the displays of containment sump level channels WLS-034, WLS-035, and WLS-036 in the MCR.	i) Nonsafety-related displays of WLS containment sump level channels WLS-034, WLS-035, and WLS-036 can be retrieved in the MCR.
444	2.3.10.07a.ii	7.a) The WLS provides the nonsafety-related function of detecting leaks within containment to the containment sump.	ii) Testing will be performed by adding water to the sump and observing display of sump level.	ii) A report exists and concludes that sump level channels WLS-034, WLS-035, and WLS-036 can detect a change of 1.75 ± 0.1 inches.
445	2.3.10.07b	7.b) The WLS provides the nonsafety-related function of controlling releases of radioactive materials in liquid effluents.	Tests will be performed to confirm that a simulated high radiation signal from the discharge radiation monitor, WLS-RE-229, causes the discharge isolation valve WLS-PL-V223 to close.	A simulated high radiation signal causes the discharge control isolation valve WLS-PL-V223 to close.
446	2.3.10.08	8. Controls exist in the MCR to cause the remotely operated valve identified in Table 2.3.10-3 to perform its active function.	Stroke testing will be performed on the remotely operated valve listed in Table 2.3.10-3 using controls in the MCR.	Controls in the MCR operate to cause the remotely operated valve to perform its active function.
447	2.3.10.09	9. The check valves identified in Table 2.3.10-1 perform an active safety-related function to change position as indicated in the table.	Exercise testing of the check valves with active safety functions identified in Table 2.3.10-1 will be performed under pre-operational test pressure, temperature and flow conditions.	Each check valve changes position as indicated on Table 2.3.10-1.

Table 2.3.11-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
450	2.3.11.02.i	2. The equipment identified as having seismic design requirements in Table 2.3.11-1 can withstand seismic design basis loads without loss of its structural integrity function.	i) Inspection will be performed to verify that the equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.	i) The equipment identified as having seismic design requirements in Table 2.3.11-1 is located on the Nuclear Island.
			ii) Type tests, analyses, or a combination of type tests and analyses of seismically designed equipment will be performed.	ii) A report exists and concludes that the seismically designed equipment can withstand appropriate seismic design basis loads without loss of its structural integrity function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
451	2.3.11.02.ii	Not used per Amendment No. 85		
452	2.3.11.02.iii	Not used per Amendment No. 85		
453	2.3.11.03a	3.a) The WGS provides the nonsafety-related function of processing radioactive gases prior to discharge.	Inspection will be performed to verify the contained volume of each of the activated carbon delay beds, WGS-MV02A and WGS-MV02B.	A report exists and concludes that the contained volume in each of the activated carbon delay beds, WGS-MV02A and WGS-MV02B, is at least 80 ft^3.
454	2.3.11.03b	3.b) The WGS provides the nonsafety-related function of controlling the releases of radioactive materials in gaseous effluents.	Tests will be performed to confirm that the presence of a simulated high radiation signal from the discharge radiation monitor, WGS-017, causes the discharge control isolation valve WGS-PL-V051 to close.	A simulated high radiation signal causes the discharge control isolation valve WGS-PL-V051 to close.
455	2.3.11.03c	3.c) The WGS is purged with nitrogen on indication of high oxygen levels in the system.	Tests will be performed to confirm that the presence of a simulated high oxygen level signal from the oxygen monitors (WGS-025A, -025B) causes the nitrogen purge valve (WGS-PL-V002) to open and the WLS degasifier vacuum pumps (WLS-MP-03A, -03B) to stop.	A simulated high oxygen level signal causes the nitrogen purge valve (WGS-PL-V002) to open and the WLS degasifier vacuum pumps (WLS-MP-03A, -03B) to stop.

Table 2.3.13-2		
Equipment Name	**Tag No.**	**Control Function**
Hot Leg 1 Sample Isolation Valve	PSS-PL-V001A	Transfer Open/Transfer Closed
Hot Leg 2 Sample Isolation Valve	PSS-PL-V001B	Transfer Open/Transfer Closed

Table 2.3.13-3
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
458	2.3.13.01	1. The functional arrangement of the PSS is as described in the Design Description of this Section 2.3.13.	Inspection of the as-built system will be performed.	The as-built PSS conforms with the functional arrangement as described in the Design Description of this Section 2.3.13.
459	2.3.13.02	2. The components identified in Table 2.3.13-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components identified in Table 2.3.13-1 as ASME Code Section III.
		3. Pressure boundary welds in components identified in Table 2.3.13-1 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the 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.
		4. The components identified in Table 2.3.13-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure.	A hydrostatic test will be performed on the components required by the ASME Code Section III to be hydrostatically tested.	A report exists and concludes that the results of the hydrostatic test of the components identified in Table 2.3.13-1 as ASME Code Section III conform with the requirements of the ASME Code Section III.
460	2.3.13.03	Not used per Amendment No. 85		
461	2.3.13.04	Not used per Amendment No. 85		

Table 2.3.13-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
462	2.3.13.05.i	5. The seismic Category I equipment identified in Table 2.3.13-1 can withstand seismic design basis loads without loss of its safety function.	i) Inspection will be performed to verify that the seismic Category I equipment and valves identified in Table 2.3.13-1 are located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.3.13-1 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		6.a) The Class 1E equipment identified in Tables 2.3.13-1 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 their safety function, for the time required to perform the safety function.	i) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.3.13-1 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 its safety function for the time required to perform the safety function.
			ii) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.3.13-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
463	2.3.13.05.ii	Not used per Amendment No. 85		

Table 2.3.13-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
464	2.3.13.05.iii	Not used per Amendment No. 85		
465	2.3.13.06a.i	Not used per Amendment No. 85		
466	2.3.13.06a.ii	Not used per Amendment No. 85		
467	2.3.13.06b	6.b) The Class 1E components identified in Table 2.3.13-1 are powered from their respective Class 1E division.	Testing will be performed on the PSS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.3.13-1 when the assigned Class 1E division is provided the test signal.
468	2.3.13.06c	Not used per Amendment No. 85		
469	2.3.13.07	Not used per Amendment No. 85		

2.3.14 Demineralized Water Transfer and Storage System

Design Description

The demineralized water transfer and storage system (DWS) receives water from the demineralized water treatment system (DTS), and provides a reservoir of demineralized water to supply the condensate storage tank and for distribution throughout the plant. Demineralized water is processed in the DWS to remove dissolved oxygen. In addition to supplying water for makeup of systems which require pure water, the demineralized water is used to sluice spent radioactive resins from the ion exchange vessels in the chemical and volume control system (CVS), the spent fuel pool cooling system (SFS), and the liquid radwaste system (WLS) to the solid radwaste system (WSS).

The component locations of the DWS are as shown in Table 2.3.14-3.

1. The functional arrangement of the DWS is as described in the Design Description of this Section 2.3.14.
2. The DWS provides the safety-related function of preserving containment integrity by isolation of the DWS lines penetrating the containment.
3. The DWS condensate storage tank (CST) provides the nonsafety-related function of water supply to the FWS startup feedwater pumps.
4. Displays of the parameters identified in Table 2.3.14-1 can be retrieved in the main control room (MCR).

Table 2.3.14-1

Equipment Name	Tag No.	Display	Control Function
Condensate Storage Tank Water Level	DWS-006	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.14-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
477	2.3.14.01	1. The functional arrangement of the DWS is as described in the Design Description of this Section 2.3.14.	Inspection of the as-built system will be performed.	The as-built DWS conforms with the functional arrangement as described in the Design Description of this Section 2.3.14.
478	2.3.14.02	Not used per Amendment No. 85		

3. Displays of the parameters identified in Table 2.3.15-1 can be retrieved in the main control room (MCR).

Table 2.3.15-1			
Equipment Name	**Tag No.**	**Display**	**Control Function**
Instrument Air Pressure	CAS-011	Yes	-

Note: Dash (-) indicates not applicable.

Table 2.3.15-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
481	2.3.15.01	1. The functional arrangement of the CAS is as described in the Design Description of this Section 2.3.15.	Inspection of the as-built system will be performed.	The as-built CAS conforms with the functional arrangement as described in the Design Description of this Section 2.3.15.
482	2.3.15.02	Not used per Amendment No. 85		
483	2.3.15.03	3. Displays of the parameters identified in Table 2.3.15-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of parameters in the MCR.	The displays identified in Table 2.3.15-1 can be retrieved in the MCR.

Table 2.3.15-3		
Component Name	**Tag No.**	**Component Location**
Instrument Air Compressor Package A	CAS-MS-01A	Turbine Building
Instrument Air Compressor Package B	CAS-MS-01B	Turbine Building
Instrument Air Dryer Package A	CAS-MS-02A	Turbine Building
Instrument Air Dryer Package B	CAS-MS-02B	Turbine Building
Service Air Compressor Package A	CAS-MS-03A	Turbine Building
Service Air Compressor Package B	CAS-MS-03B	Turbine Building
Service Air Dryer Package A	CAS-MS-04A	Turbine Building
Service Air Dryer Package B	CAS-MS-04B	Turbine Building
High Pressure Air Compressor and Filter Package	CAS-MS-05	Turbine Building

Table 2.5.1-3 **DAS Sensors and Displays**	
Equipment Name	**Tag Number**
Containment Temperature	VCS-053A
Containment Temperature	VCS-053B
Core Exit Temperature	IIS-009
Core Exit Temperature	IIS-013
Core Exit Temperature	IIS-030
Core Exit Temperature	IIS-034
Rod Control Motor Generator Voltage	PLS-001
Rod Control Motor Generator Voltage	PLS-002

Table 2.5.1-4
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
505	2.5.01.01	Not used per Amendment No. 85		
506	2.5.01.02a	2.a) The DAS provides an automatic reactor trip on low wide-range steam generator water level, or on low pressurizer water level, or on high hot leg temperature, separate from the PMS.	Electrical power to the PMS equipment will be disconnected and an operational test of the as-built DAS will be performed using real or simulated test signals.	The generator field control relays (contained in the control cabinets for the rod drive motor-generator sets) open after the test signal reaches the specified limit.
507	2.5.01.02b	2.b) The DAS provides automatic actuation of selected functions, as identified in Table 2.5.1-1, separate from the PMS.	Electrical power to the PMS equipment will be disconnected and an operational test of the as-built DAS will be performed using real or simulated test signals.	Appropriate DAS output signals are generated after the test signal reaches the specified limit.
508	2.5.01.02c.i	2.c) The DAS provides manual initiation of reactor trip, and selected functions, as identified in Table 2.5.1-2, separate from the PMS. These manual initiation functions are implemented in a manner that bypasses the control room multiplexers, if any; the PMS cabinets; and the signal processing equipment of the DAS.	Electrical power to the control room multiplexers, if any, and PMS equipment will be disconnected and the outputs from the DAS signal processing equipment will be disabled. While in this configuration, an operational test of the as-built system will be performed using the DAS manual actuation controls.	i) The generator field control relays (contained in the control cabinets for the rod drive motor-generator sets) open after reactor and turbine trip manual initiation controls are actuated.

Table 2.5.1-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
520	2.5.01.05	Not used per Amendment No. 85		

Table 2.5.1-5		
Component Name	**Tag No.**	**Component Location**
DAS Processor Cabinet 1	DAS-JD-001	Auxiliary Building
DAS Processor Cabinet 2	DAS-JD-002	Auxiliary Building
DAS Squib Valve Control Cabinet	DAS-JD-003	Auxiliary Building

2.5.2 Protection and Safety Monitoring System

Design Description

The protection and safety monitoring system (PMS) initiates reactor trip and actuation of engineered safety features in response to plant conditions monitored by process instrumentation and provides safety-related displays. The PMS has the equipment identified in Table 2.5.2-1. The PMS has four divisions of Reactor Trip and Engineered Safety Features Actuation, and four divisions of safety-related post-accident parameter displays. The functional arrangement of the PMS is depicted in Figure 2.5.2-1 and the component locations of the PMS are as shown in Table 2.5.2-9.

1. The functional arrangement of the PMS is as described in the Design Description of this Section 2.5.2.
2. The seismic Category I equipment, identified in Table 2.5.2-1, can withstand seismic design basis loads without loss of safety function.
3. The Class 1E equipment, identified in Table 2.5.2-1, has electrical surge withstand capability (SWC), and can withstand the electromagnetic interference (EMI), radio frequency interference (RFI), and electrostatic discharge (ESD) 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.
4. The Class 1E equipment, identified in Table 2.5.2-1, can withstand the room ambient temperature, humidity, pressure, and mechanical vibration 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.

Table 2.5.2-6 **PMS Blocks**
Reactor Trip Functions: Source Range High Neutron Flux Reactor Trip Intermediate Range High Neutron Flux Reactor Trip Power Range High Neutron Flux (Low Setpoint) Trip Pressurizer Low Pressure Trip Pressurizer High Water Level Trip Low Reactor Coolant Flow Trip Low Reactor Coolant Pump Speed Trip High Steam Generator Water Level Trip Engineered Safety Features: Automatic Safeguards Containment Isolation Main Feedwater Isolation Reactor Coolant Pump Trip Core Makeup Tank Injection Steam Line Isolation Startup Feedwater Isolation Block of Boron Dilution Chemical and Volume Control System Isolation Chemical and Volume Control System Letdown Isolation Steam Dump Block Auxiliary Spray and Letdown Purification Line Isolation Passive Residual Heat Removal Heat Exchanger Alignment Normal Residual Heat Removal System Isolation

Table 2.5.2-7 **PMS Interlocks**
RNS Suction Valves PRHR Heat Exchanger Inlet Isolation Valve CMT Cold Leg Balance Line Isolation Valves Containment Vacuum Relief Isolation Valves

Table 2.5.2-8

Inspections, Tests, Analyses, and Acceptance Criteria

No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
521	2.5.02.01	Not used per Amendment No. 85		

Table 2.5.2-8
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
522	2.5.02.02.i	2. The seismic Category I equipment, identified in Table 2.5.2-1, can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.5.2-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 2.5.2-1 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		3. The Class 1E equipment, identified in Table 2.5.2-1, has electrical surge withstand capability (SWC), and can withstand the electromagnetic interference (EMI), radio frequency interference (RFI), and electrostatic discharge (ESD) 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.	Type tests, analyses, or a combination of type tests and analyses will be performed on the equipment.	A report exists and concludes that the Class 1E equipment identified in Table 2.5.2-1 can withstand the SWC, EMI, RFI, and ESD 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.
		4. The Class 1E equipment, identified in Table 2.5.2-1, can withstand the room ambient temperature, humidity, pressure, and mechanical vibration 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.	Type tests, analyses, or a combination of type tests and analyses will be performed on the Class 1E equipment identified in Table 2.5.2-1.	A report exists and concludes that the Class 1E equipment identified in Table 2.5.2-1 can withstand the room ambient temperature, humidity, pressure, and mechanical vibration 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.
523	2.5.02.02.ii	Not used per Amendment No. 85		
524	2.5.02.02.iii	Not used per Amendment No. 85		
525	2.5.02.03	Not used per Amendment No. 85		
526	2.5.02.04	Not used per Amendment No. 85		

Table 2.5.2-8 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
527	2.5.02.05a	5.a) The Class 1E equipment, identified in Table 2.5.2-1, is powered from its respective Class 1E division.	Tests will be performed by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.5.2-1 when the assigned Class 1E division is provided the test signal.
528	2.5.02.05b	Not used per Amendment No. 85		
529	2.5.02.06a.i	6.a) The PMS initiates an automatic reactor trip, as identified in Table 2.5.2-2, when plant process signals reach specified limits.	An operational test of the as-built PMS will be performed using real or simulated test signals.	i) The reactor trip switchgear opens after the test signal reaches the specified limit. This only needs to be verified for one automatic reactor trip function.
530	2.5.02.06a.ii	6.a) The PMS initiates an automatic reactor trip, as identified in Table 2.5.2-2, when plant process signals reach specified limits.	An operational test of the as-built PMS will be performed using real or simulated test signals.	ii) PMS output signals to the reactor trip switchgear are generated after the test signal reaches the specified limit. This needs to be verified for each automatic reactor trip function.
531	2.5.02.06b	6.b) The PMS initiates automatic actuation of engineered safety features, as identified in Table 2.5.2-3, when plant process signals reach specified limits.	An operational test of the as-built PMS will be performed using real or simulated test signals.	Appropriate PMS output signals are generated after the test signal reaches the specified limit. These output signals remain following removal of the test signal. Tests from the actuation signal to the actuated device(s) are performed as part of the system-related inspection, test, analysis, and acceptance criteria.
532	2.5.02.06c.i	6.c) The PMS provides manual initiation of reactor trip and selected engineered safety features as identified in Table 2.5.2-4.	An operational test of the as-built PMS will be performed using the PMS manual actuation controls.	i) The reactor trip switchgear opens after manual reactor trip controls are actuated.

2.5.3 Plant Control System

Design Description

The plant control system (PLS) provides for automatic and manual control of nonsafety-related plant components during normal and emergency plant operations. The PLS has distributed controllers and operator controls interconnected by computer data links or data highways.

1. The functional arrangement of the PLS is as described in the Design Description of this Section 2.5.3.
2. The PLS provides control interfaces for the control functions listed in Table 2.5.3-1.

Table 2.5.3-1
Control Functions Supported by the PLS

1. Reactor Power	5. Steam Generator Feedwater
2. Reactor Rod Position	6. Steam Dump
3. Pressurizer Pressure	7. Rapid Power Reduction
4. Pressurizer Water Level	

Table 2.5.3-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
554	2.5.03.01	Not used per Amendment No. 85		
555	2.5.03.02	2. The PLS provides control interfaces for the control functions listed in Table 2.5.3-1.	An operational test of the system will be performed using simulated input signals. System outputs or component operations will be monitored to determine the operability of the control functions.	The PLS provides control interfaces for the control functions listed in Table 2.5.3-1.

2.5.4 Data Display and Processing System

Design Description

The data display and processing system (DDS) provides nonsafety-related alarms and displays, analysis of plant data, plant data logging and historical storage and retrieval, and operational support for plant personnel. The DDS has distributed computer processors and video display units to support the data processing and display functions.

b) The Class 1E cables between the Incore Thermocouple elements and the connector boxes located on the integrated head package have sheaths.

c) For cables other than those covered by 3.b, separation is provided between IIS Class 1E divisions, and between Class 1E divisions and non-Class 1E cable.

4. Safety-related displays of the parameters identified in Table 2.5.5-1 can be retrieved in the main control room (MCR).

Table 2.5.5-1					
Equipment Name	**Seismic Cat. I**	**ASME Code Classification**	**Class 1E**	**Qual. for Harsh Envir.**	**Safety-Related Display**
Incore Thimble Assemblies (at least three assemblies in each core quadrant)	Yes	–	Yes(1)	Yes(1)	Core Exit Temperature(1)

Note: Dash (-) indicates not applicable.

1. Only applies to the safety-related assemblies. There are at least two safety-related assemblies in each core quadrant.

Table 2.5.5-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
564	2.5.05.01	1. The functional arrangement of the IIS is as described in the Design Description of this Section 2.5.5.	Inspection of the as-built system will be performed.	The as-built IIS conforms with the functional arrangement as described in the Design Description of this Section 2.5.5.
565	2.5.05.02.i	2. The seismic Category I equipment identified in Table 2.5.5-1 can withstand seismic design basis dynamic loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.5.5-1 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.	i) The seismic Category I equipment identified in Table 2.5.5-1 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.

Table 2.5.5-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		3.a) The Class 1E equipment identified in Table 2.5.5-1 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) Type tests, analysis, or a combination of type tests and analysis will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that the Class 1E equipment identified in Table 2.5.5-1 as being qualified for a harsh environment. This 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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 2.5.5-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
566	2.5.05.02.ii	Not used per Amendment No. 85		
567	2.5.05.02.iii	Not used per Amendment No. 85		
568	2.5.05.03a.i	Not used per Amendment No. 85		
569	2.5.05.03a.ii	Not used per Amendment No. 85		
570	2.5.05.03b	3.b) The Class 1E cables between the Incore Thermocouple elements and the connector boxes located on the integrated head package have sheaths.	Inspection of the as-built system will be performed.	The as-built Class 1E cables between the Incore Thermocouple elements and the connector boxes located on the integrated head package have sheaths.

Table 2.5.5-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
571	2.5.05.03c	Not used per Amendment No. 85		
572	2.5.05.04	4. Safety-related displays of the parameters identified in Table 2.5.5-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.5.5-1 can be retrieved in the MCR.

Table 2.6.1-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
578	2.6.01.01	1. The functional arrangement of the ECS is as described in the Design Description of this Section 2.6.1.	Inspection of the as-built system will be performed.	The as-built ECS conforms with the functional arrangement as described in the Design Description of this Section 2.6.1.
579	2.6.01.02.i	2. The seismic Category I equipment identified in Table 2.6.1-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.6.1-1 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) The seismic Category I equipment identified in Table 2.6.1-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis 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.
580	2.6.01.02.ii	Not used per Amendment No. 85		
581	2.6.01.02.iii	Not used per Amendment No. 85		
582	2.6.01.03a	3.a) The Class 1E breaker control power for the equipment identified in Table 2.6.1-1 are powered from their respective Class 1E division.	Testing will be performed on the ECS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.6.1-1 when the assigned Class 1E division is provided the test signal.
583	2.6.01.03b	Not used per Amendment No. 85		
584	2.6.01.04a	4.a) The ECS provides the capability for distributing non-Class 1E ac power from onsite sources (ZOS) to nonsafety-related loads listed in Table 2.6.1-2.	Tests will be performed using a test signal to confirm that an electrical path exists for each selected load listed in Table 2.6.1-2 from an ECS-ES-1 or ECS-ES-2 bus. Each test may be a single test or a series of over-lapping tests.	A test signal exists at the terminals of each selected load.
585	2.6.01.04b	Not used per Amendment No. 85		

2.6.2 Non-Class 1E dc and Uninterruptible Power Supply System

Design Description

The non-Class 1E dc and uninterruptible power supply system (EDS) provides dc and uninterruptible ac electrical power to nonsafety-related loads during normal and off-normal conditions.

The EDS is as shown in Figure 2.6.2-1 and the component locations of the EDS are as shown in Table 2.6.2-2.

1. The functional arrangement of the EDS is as described in the Design Description of this Section 2.6.2.
2. The EDS provides the following nonsafety-related functions:
   a) Each EDS load group 1, 2, 3, and 4 battery charger supplies the corresponding dc switchboard bus load while maintaining the corresponding battery charged.
   b) Each EDS load group 1, 2, 3, and 4 battery supplies the corresponding dc switchboard bus load for a period of 2 hours without recharging.
   c) Each EDS load group 1, 2, 3, and 4 inverter supplies the corresponding ac load.

Table 2.6.2-1
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
592	2.6.02.01	Not used per Amendment No. 85		
593	2.6.02.02a	2.a) Each EDS load group 1, 2, 3, and 4 battery charger supplies the corresponding dc switchboard bus load while maintaining the corresponding battery charged.	Testing of each as-built battery charger will be performed by applying a simulated or real load, or a combination of simulated or real loads.	Each battery charger provides an output current of at least 900 amps with an output voltage in the range 105 to 140 V.
594	2.6.02.02b	2.b) Each EDS load group 1, 2, 3, and 4 battery supplies the corresponding dc switchboard bus load for a period of 2 hours without recharging.	Testing of each as-built battery will be performed by applying a simulated or real load, or a combination of simulated or real loads. The test will be conducted on a battery that has been fully charged and has been connected to a battery charger maintained at 135 ± 1 V for a period of no less than 24 hours prior to the test.	The battery terminal voltage is greater than or equal to 105 V after a period of no less than 2 hours, with an equivalent load greater than 850 amps.

Table 2.6.3-2		
Equipment	**Tag No.**	**Display/Status Indication**
Division B 24-Hour Battery Charger	IDSB-DC-1	Yes (Charger Output Current, Charger Trouble(1))
Division B 72-Hour Battery Charger	IDSB-DC-2	Yes (Charger Output Current, Charger Trouble(1))
Division C 24-Hour Battery Charger	IDSC-DC-1	Yes (Charger Output Current, Charger Trouble(1))
Division C 72-Hour Battery Charger	IDSC-DC-2	Yes (Charger Output Current, Charger Trouble(1))
Division D Battery Charger	IDSD-DC-1	Yes (Charger Output Current, Charger Trouble(1))

Note: (1) Battery charger trouble includes charger dc output under/over voltage

Table 2.6.3-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
596	2.6.03.01	Not used per Amendment No. 85		
597	2.6.03.02.i	2. The seismic Category I equipment identified in Table 2.6.3-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.6.3-1 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) The seismic Category I equipment identified in Table 2.6.3-1 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.
598	2.6.03.02.ii	Not used per Amendment No. 85		

Table 2.6.3-3 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
599	2.6.03.02.iii	Not used per Amendment No. 85		
600	2.6.03.03	Not used per Amendment No. 85		
601	2.6.03.04a	4.a) The IDS provides electrical independence between the Class 1E divisions.	Testing will be performed on the IDS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.6.3-1 when the assigned Class 1E division is provided the test signal.
602	2.6.03.04b	4.b) The IDS provides electrical isolation between the non-Class 1E ac power system and the non-Class 1E lighting in the MCR.	Type tests, analyses, or a combination of type tests and analyses of the isolation devices will be performed.	A report exists and concludes that the battery chargers, regulating transformers, and isolation fuses prevent credible faults from propagating into the IDS.
603	2.6.03.04c	4.c) Each IDS 24-hour battery bank supplies a dc switchboard bus load for a period of 24 hours without recharging.	Testing of each 24-hour as-built battery bank will be performed by applying a simulated or real load, or a combination of simulated or real loads which envelope the battery bank design duty cycle. The test will be conducted on a battery bank that has been fully charged and has been connected to a battery charger maintained at 270±2 V for a period of no less than 24 hours prior to the test.	The battery terminal voltage is greater than or equal to 210 V after a period of no less than 24 hours with an equivalent load that equals or exceeds the battery bank design duty cycle capacity.

2.6.5 Lighting System

Design Description

The lighting system (ELS) provides the normal and emergency lighting in the main control room (MCR) and at the remote shutdown workstation (RSW).

1. The functional arrangement of the ELS is as described in the Design Description of this Section 2.6.5.
2. The ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. Each group is powered by one of the Class 1E inverters. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR. Each group is powered by one of the Class 1E inverters in Divisions B and C (one 24-hour and one 72-hour inverter in each Division).
3. The lighting fixtures located in the MCR utilize seismic supports.
4. The panel lighting circuits are classified as associated and treated as Class 1E. These lighting circuits are routed with the Divisions B and C Class 1E circuits. Separation is provided between ELS associated divisions and between associated divisions and non-Class 1E cable.
5. The normal lighting can provide 50 foot candles at the safety panel and at the workstations in the MCR and at the RSW.
6. The emergency lighting can provide 10 foot candles at the safety panel and at the workstations in the MCR and at the RSW.

Table 2.6.5-1
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
627	2.6.05.01	Not used per Amendment No. 85		
628	2.6.05.02.i	2. The ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. Each group is powered by one of the Class 1E inverters. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR. Each group is powered by one of the Class 1E inverters in Divisions B and C (one 24-hour and one 72-hour inverter in each Division).	i) Inspection of the as-built system will be performed.	i) The as-built ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR.

Table 2.6.5-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
629	2.6.05.02.ii	2. The ELS has six groups of emergency lighting fixtures located in the MCR and at the RSW. Each group is powered by one of the Class 1E inverters. The ELS has four groups of panel lighting fixtures located on or near safety panels in the MCR. Each group is powered by one of the Class 1E inverters in Divisions B and C (one 24-hour and one 72-hour inverter in each Division).	ii) Testing of the as-built system will be performed using one Class 1E inverter at a time.	ii) Each of the six as-built emergency lighting groups is supplied power from its respective Class 1E inverter and each of the four as-built panel lighting groups is supplied power from its respective Class 1E inverter.
630	2.6.05.03.i	3. The lighting fixtures located in the MCR utilize seismic supports.	i) Inspection will be performed to verify that the lighting fixtures located in the MCR are located on the Nuclear Island. ii) Analysis of seismic supports will be performed.	i) The lighting fixtures located in the MCR are located on the Nuclear Island. ii) A report exists and concludes that the seismic supports can withstand seismic design basis loads.
631	2.6.05.03.ii	Not used per Amendment No. 85		
632	2.6.05.04	Not used per Amendment No. 85		
633	2.6.05.05.i	5. The normal lighting can provide 50 foot candles at the safety panel and at the workstations in the MCR and at the RSW.	i) Testing of the as-built normal lighting in the MCR will be performed.	i) When adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the MCR provides at least 50 foot candles at the safety panel and at the workstations.
634	2.6.05.05.ii	5. The normal lighting can provide 50 foot candles at the safety panel and at the workstations in the MCR and at the RSW.	ii) Testing of the as-built normal lighting at the RSW will be performed.	ii) When adjusted for maximum illumination and powered by the main ac power system, the normal lighting in the RSW provides at least 50 foot candles at the safety panel and at the workstations.

11. Not used.

12. Not used.

13. a) The central and secondary alarm stations have conventional (landline) telephone service with the main control room and local law enforcement authorities.

    b) The central and secondary alarm stations are capable of continuous communications with security personnel.

    c) Non-portable communication equipment in the central and secondary alarm stations remains operable from an independent power source in the event of loss of normal power.

14. Not used.

15. a) Security alarm devices including transmission lines to annunciators are tamper indicating and self-checking (e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when on standby power). Alarm annunciation shall indicate the type of alarm (e.g., intrusion alarms and emergency exit alarm) and location.

    b) Intrusion detection and assessment systems concurrently provide visual displays and audible annunciation of alarms in the central and secondary alarm station.

16. Equipment exists to record onsite security alarm annunciation, including the location of the alarm, false alarm, alarm check, and tamper indication; and the type of alarm, location, alarm circuit, date, and time.

Table 2.6.9-1
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
641	2.6.09.01	Not used per Amendment No. 85		
		2. Not used		
642	2.6.09.03	Not used per Amendment No. 85		

Table 2.6.9-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
643	2.6.09.04	Not used per Amendment No. 85		
644	2.6.09.05a	5.a) Security alarm annunciation and video assessment information is displayed concurrently in the central alarm station and the secondary alarm station, and the video image recording with real time playback capability can provide assessment of activities before and after each alarm annunciation within the perimeter area barrier.	Test, inspection, or a combination of test and inspections of the installed systems will be performed.	Security alarm annunciation and video assessment information is displayed concurrently in the central alarm station and the secondary alarm station, and the video image recording with real time playback capability provides assessment of activities before and after alarm annunciation within the perimeter barrier.
645	2.6.09.05b	5.b) The central and secondary alarm stations are located inside the protected area and the interior of each alarm station is not visible from the perimeter of the protected area.	Inspections of the central and secondary alarm stations will be performed.	The central and secondary alarm stations are located inside the protected area and the interior of each alarm station is not visible from the perimeter of the protected area.
646	2.6.09.05c	5.c) The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, the design enables the survivability of equipment needed to maintain the functional capability of either alarm station to detect and assess alarms and communicate with onsite and offsite response personnel.	Inspections and/or analysis of the central and secondary alarm station will be performed.	The central and secondary alarm stations are designed and equipped such that, in the event of a single act, in accordance with the design basis threat of radiological sabotage, equipment needed to maintain the functional capability of either alarm station to detect and assess alarms and communicate with onsite and offsite response personnel exists.
647	2.6.09.06	6. The vehicle barrier system is installed and located at the necessary stand-off distance to protect against the DBT vehicle bombs.	Inspections and analysis will be performed for the vehicle barrier system.	The vehicle barrier system will protect against the DBT vehicle bombs based upon the stand-off distance of the system.
648	2.6.09.07a	7.a) Vital equipment is located only within a vital area.	Inspection will be performed to confirm that vital equipment is located within a vital area.	All vital equipment is located only within a vital area.

Table 2.7.1-3			
Equipment	**Tag No.**	**Display**	**Control Function**
Division "B" and "D" Class 1E Electrical Room AHU D Fans	VBS-MA-05D VBS-MA-06D	Yes (Run Status)	Start
Division "A" and "C" Class 1E Battery Room Exhaust Fans	VBS-MA-07A VBS-MA-07C	Yes (Run Status)	Start
Division "B" and "D" Class 1E Battery Room Exhaust Fans	VBS-MA-07B VBS-MA-07D	Yes (Run Status)	Start
MCR Ancillary Fans	VBS-MA-10A VBS-MA-10B	No	Run
Division B Room Ancillary Fan	VBS-MA-11	No	Run
Division C Room Ancillary Fan	VBS-MA-12	No	Run

Table 2.7.1-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
677	2.7.01.01	1. The functional arrangement of the VBS is as described in the Design Description of this subsection 2.7.1	Inspection of the as-built system will be performed.	The as-built VBS conforms with the functional arrangement described in the Design Description of this subsection 2.7.1.
678	2.7.01.02a	2.a) The components identified in Table 2.7.1-1 as ASME Code Section III are designed and constructed in accordance with ASME Code Section III requirements. 2.b) The piping identified in Table 2.7.1-2 as ASME Code Section III is designed and constructed in accordance with ASME Code Section III requirements.	Inspection will be conducted of the as-built components and piping as documented in the ASME design reports.	The ASME Code Section III design reports exist for the as-built components and piping identified in Tables 2.7.1-1 and 2.7.1-2 as ASME Code Section III.
		3.a) Pressure boundary welds in components identified in Table 2.7.1-1 as ASME Code Section III meet ASME Code Section III requirements. 3.b) Pressure boundary welds in piping identified in Table 2.7.1-2 as ASME Code Section III meet ASME Code Section III requirements.	Inspection of the as-built pressure boundary welds will be performed in accordance with the ASME Code Section III.	A report exists and concludes that the ASME Code Section III requirements are met for nondestructive examination of pressure boundary welds.

Table 2.7.1-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
		4.a) The components identified in Table 2.7.1-1 as ASME Code Section III retain their pressure boundary integrity at their design pressure. 4.b) The piping identified in Table 2.7.1-2 as ASME Code Section III retains its pressure boundary integrity at its design pressure.	A pressure test will be performed on the components and piping required by the ASME Code Section III to be pressure tested.	A report exists and concludes that the results of the pressure test of the components and piping identified in Tables 2.7.1-1 and 2.7.1-2 as ASME Code Section III conform with the requirements of the ASME Code Section III.
679	2.7.01.02b	Not used per Amendment No. 85		
680	2.7.01.03a	Not used per Amendment No. 85		
681	2.7.01.03b	Not used per Amendment No. 85		
682	2.7.01.04a	Not used per Amendment No. 85		
683	2.7.01.04b	Not used per Amendment No. 85		
684	2.7.01.05.i	5. The seismic Category I equipment identified in Table 2.7.1-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 2.7.1-1 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) The seismic Category I equipment identified in Table 2.7.1-1 is located on the Nuclear Island. ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis 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.
685	2.7.01.05.ii	Not used per Amendment No. 85		
686	2.7.01.05.iii	Not used per Amendment No. 85		
687	2.7.01.06a	6.a) The Class 1E components identified in Table 2.7.1-1 are powered from their respective Class 1E division.	Testing will be performed on the VBS by providing a simulated test signal in each Class 1E division.	A simulated test signal exists at the Class 1E equipment identified in Table 2.7.1-1 when the assigned Class 1E division is provided the test signal.

Table 2.7.1-4 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
688	2.7.01.06b	Not used per Amendment No. 85		
689	2.7.01.07	Not used per Amendment No. 85		
690	2.7.01.08a	Not used per Amendment No. 85		
691	2.7.01.08b	Not used per Amendment No. 85		
692	2.7.01.08c	Not used per Amendment No. 85		
693	2.7.01.08d	8.d) The VBS provides ventilation cooling via the ancillary equipment in Table 2.7.1-3 to the MCR and the division B&C Class 1E I&C rooms.	Testing will be performed on the components in Table 2.7.1-3.	The fans start and run.
694	2.7.01.09	9. Safety-related displays identified in Table 2.7.1-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the safety-related displays in the MCR.	Safety-related displays identified in Table 2.7.1-1 can be retrieved in the MCR.
695	2.7.01.10a	10.a) Controls exist in the MCR to cause the remotely operated valves identified in Table 2.7.1-1 to perform their active functions.	Stroke testing will be performed on the remotely operated valves identified in Table 2.7.1-1 using the controls in the MCR.	Controls in the MCR operate to cause the remotely operated valves identified in Table 2.7.1-1 to perform their active functions.
696	2.7.01.10b	10.b) The valves identified in Table 2.7.1-1 as having PMS control perform their active safety function after receiving a signal from the PMS.	Testing will be performed using real or simulated signals into the PMS.	The valves identified in Table 2.7.1-1 as having PMS control perform their active safety function after receiving a signal from PMS.
697	2.7.01.11	11. After loss of motive power, the remotely operated valves identified in Table 2.7.1-1 assume the indicated loss of motive power position.	Testing of the remotely operated valves will be performed under the conditions of loss of motive power.	Upon loss of motive power, each remotely operated valves identified in Table 2.7.1-1 assumes the indicated loss of motive power position.

Table 2.7.2-1			
Equipment Name	**Tag No.**	**Display**	**Control Function**
CVS Pump Room Unit Cooler Fan B	VAS-MA-07B	Yes (Run Status)	Start
RNS Pump Room Unit Cooler Fan A	VAS-MA-08A	Yes (Run Status)	Start
RNS Pump Room Unit Cooler Fan B	VAS-MA-08B	Yes (Run Status)	Start
Air-cooled Chiller Water Valve	VWS-PL-V210	Yes (Position Status)	Open
Air-cooled Chiller Water Valve	VWS-PL-V253	Yes (Position Status)	Open

Table 2.7.2-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
701	2.7.02.01	1. The functional arrangement of the VWS is as described in the Design Description of this Section 2.7.2.	Inspection of the as-built system will be performed.	The as-built VWS conforms with the functional arrangement as described in the Design Description of this Section 2.7.2.
702	2.7.02.02	Not used per Amendment No. 85		
703	2.7.02.03a	3.a) The VWS provides chilled water to the supply air handling units serving the MCR, the Class 1E electrical rooms, and the unit coolers serving the RNS and CVS pump rooms.	Testing will be performed by measuring the flow rates to the chilled water cooling coils.	The water flow to each cooling coil equals or exceeds the following: <u>Coil</u> <u>Flow (gpm)</u> VBS MY C01A/B 138 VBS MY C02A/C 108 VBS MY C02B/D 84 VAS MY C07A/B 24 VAS MY C12A/B 15 VAS MY C06A/B 15
704	2.7.02.03b	3.b) The VWS air-cooled chillers transfer heat from the VWS to the surrounding atmosphere.	Inspection will be performed for the existence of a report that determines the heat transfer capability of each air-cooled chiller.	A report exists and concludes that the heat transfer rate of each air-cooled chiller is greater than or equal to 230 tons.

Table 2.7.3-2 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
707	2.7.03.01	1. The functional arrangement of the VXS is as described in the Design Description of this Section 2.7.3.	Inspection of the as-built system will be performed.	The as-built VXS conforms with the functional arrangement described in the Design Description of this Section 2.7.3.
708	2.7.03.02a	Not used per Amendment No. 85		
709	2.7.03.02b	Not used per Amendment No. 85		
710	2.7.03.03	3. Controls exist in the MCR to cause the components identified in Table 2.7.3-1 to perform the listed function.	Testing will be performed on the components in Table 2.7.3-1 using controls in the MCR.	Controls in the MCR operate to cause the components listed in Table 2.7.3-1 to perform the listed functions.
711	2.7.03.04	4. Displays of the parameters identified in Table 2.7.3-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.7.3-1 can be retrieved in the MCR.

Table 2.7.3-3		
Component Name	**Tag No.**	**Component Location**
Annex Building General Area AHU A	VXS-MS-01A	Annex Building
Annex Building General Area AHU B	VXS-MS-01B	Annex Building
Annex Building Equipment Room AHU A	VXS-MS-02A	Annex Building
Annex Building Equipment Room AHU B	VXS-MS-02B	Annex Building
MSIV Compartment A AHU-A	VXS-MS-04A	Auxiliary Building
MSIV Compartment B AHU-B	VXS-MS-04B	Auxiliary Building
MSIV Compartment B AHU-C	VXS-MS-04C	Auxiliary Building
MSIV Compartment A AHU-D	VXS-MS-04D	Auxiliary Building
Switchgear Room AHU A	VXS-MS-05A	Annex Building

Table 2.7.4-1			
Equipment Name	**Tag No.**	**Display**	**Control Function**
Diesel Oil Transfer Module Enclosure A Exhaust Fan	VZS-MY-V03A	Yes (Run Status)	Start
Diesel Oil Transfer Module Enclosure A Electric Unit Heater	VZS-MY-U03A	Yes (Run Status)	Energize
Diesel Oil Transfer Module Enclosure B Exhaust Fan	VZS-MY-V03B	Yes (Run Status)	Start
Diesel Oil Transfer Module Enclosure B Electric Unit Heater	VZS-MY-U03B	Yes (Run Status)	Energize

Table 2.7.4-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
712	2.7.04.01	1. The functional arrangement of the VZS is as described in the Design Description of this Section 2.7.4.	Inspection of the as-built system will be performed.	The as-built VZS conforms with the functional arrangement described in the Design Description of this Section 2.7.4.
713	2.7.04.02a	Not used per Amendment No. 85		
714	2.7.04.02b	Not used per Amendment No. 85		
715	2.7.04.02c	Not used per Amendment No. 85		
716	2.7.04.03	3. Controls exist in the MCR to cause the components identified in Table 2.7.4-1 to perform the listed function.	Testing will be performed on the components in Table 2.7.4-1 using controls in the MCR.	Controls in the MCR operate to cause the components listed in Table 2.7.4-1 to perform the listed functions.
717	2.7.04.04	4. Displays of the parameters identified in Table 2.7.4-1 can be retrieved in the MCR.	Inspection will be performed for retrievability of the parameters in the MCR.	The displays identified in Table 2.7.4-1 can be retrieved in the MCR.

Table 2.7.6-1			
Equipment	**Tag No.**	**Display**	**Control Function**
Containment Exhaust Fan A	VFS-MA-02A	Yes (Run Status)	Start
Containment Exhaust Fan B	VFS-MA-02B	Yes (Run Status)	Start
Containment Exhaust Fan A Flow Sensor	VFS-011A	Yes	-
Containment Exhaust Fan B Flow Sensor	VFS-011B	Yes	-

Table 2.7.6-2
Inspections, Tests, Analyses, and Acceptance Criteria

No.	ITAAC No.	Design Commitment	Inspections, Tests, Analyses	Acceptance Criteria
723	2.7.06.01	1. The functional arrangement of the VFS is as described in the Design Description of this Section 2.7.6.	Inspection of the as-built system will be performed.	The as-built VFS conforms with the functional arrangement described in the Design Description of this Section 2.7.6.
724	2.7.06.02.i	Not used per Amendment No. 85		
725	2.7.06.02.ii	2. The VFS provides the safety-related functions of preserving containment integrity by isolation of the VFS lines penetrating containment and providing vacuum relief for the containment vessel.	ii) Testing will be performed to demonstrate that remotely operated containment vacuum relief isolation valves open within the required response time.	ii) The containment vacuum relief isolation valves (VFS-PL-V800A and VFS-PL-V800B) open within 30 seconds.
726	2.7.06.03.i	3. The VFS provides the intermittent flow of outdoor air to purge the containment atmosphere during normal plant operation, and continuous flow during hot or cold plant shutdown conditions.	i) Testing will be performed to confirm that containment supply AHU fan A when operated with containment exhaust fan A provides a flow of outdoor air.	i) The flow rate measured at each fan is greater than or equal to 3,600 scfm.
727	2.7.06.03.ii	3. The VFS provides the intermittent flow of outdoor air to purge the containment atmosphere during normal plant operation, and continuous flow during hot or cold plant shutdown conditions.	ii) Testing will be performed to confirm that containment supply AHU fan B when operated with containment exhaust fan B provides a flow of outdoor air.	ii) The flow rate measured at each fan is greater than or equal to 3,600 scfm.

Table 3.1-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
733	3.1.00.01	1. The TSC has floor space of at least 75 ft^2 per person for a minimum of 25 persons.	An inspection will be performed of the TSC floor space.	The TSC has at least 1875 ft^2 of floor space.
734	3.1.00.02	2. The TSC has voice communication equipment for communication with the MCR, emergency operations facility, OSC, and the NRC.	An inspection and test will be performed of the TSC voice communication equipment.	Communications equipment is installed, and voice transmission and reception are accomplished.
735	3.1.00.03	3. The plant parameters listed in Table 2.5.4-1, minimum inventory table, in subsection 2.5.4, DDS, with a "Yes" in the "Display" column, can be retrieved in the TSC.	An inspection will be performed for retrievability of the plant parameters in the TSC.	The plant parameters listed in Table 2.5.4-1, minimum inventory table, in subsection 2.5.4, DDS, with a "Yes" in the "Display" column, can be retrieved in the TSC.
736	3.1.00.04	4. The OSC has voice communication equipment for communication with the MCR and TSC.	Inspection will be performed of the OSC voice communication equipment.	Communications equipment is installed, and voice transmission and reception are accomplished.
737	3.1.00.05	5. The TSC and OSC are in different locations.	An inspection will be performed of the location of the TSC and OSC.	The TSC and OSC are in different locations.
738	3.1.00.06	Not used per Amendment No. 85		

3.2 Human Factors Engineering

Design Description

The AP1000 human-system interface (HSI) will be developed and implemented based upon a human factors engineering (HFE) program. Figure 3.2-1 illustrates the HFE program elements. The HSI scope includes the design of the operation and control centers system (OCS) and each of the HSI resources. For the purposes of the HFE program, the OCS includes the main control room (MCR), the remote shutdown workstation (RSW), the local control stations, and the associated workstations for each of these centers. The HSI resources include the wall panel information system, alarm system, plant information system (nonsafety-related displays), qualified safety-related displays, and soft and dedicated controls. Minimum inventories of controls, displays, and visual alerts are specified as part of the HSI for the MCR and the RSW.

Table 3.2.-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
744	3.2.00.01e	1. The HFE verification and validation program is performed in accordance with the HFE verification and validation implementation plan and includes the following activities: e) Plant HFE/HSI (as designed at the time of plant startup) verification	e) An evaluation of the implementation of the plant HFE/HSI (as designed at the time of plant startup) verification will be performed.	e) A report exists and concludes that: The plant HFE/HSI, as designed at the time of plant startup, is consistent with the HFE/HSI verified in 1.a) through 1.d).
745	3.2.00.02	2. The MCR includes reactor operator workstations, supervisor workstation(s), safety-related displays, and safety-related controls.	An inspection of the MCR workstations and control panels will be performed.	The MCR includes reactor operator workstations, supervisor workstation(s), safety-related displays, and safety-related controls.
746	3.2.00.03.i	Not used per Amendment No. 85		
747	3.2.00.03.ii	Not used per Amendment No. 85		
748	3.2.00.03.iii	Not used per Amendment No. 85		
749	3.2.00.03.iv	Not used per Amendment No. 85		
750	3.2.00.03.v	Not used per Amendment No. 85		
751	3.2.00.04	4. The HSI resources available to the MCR operators include the alarm system, plant information system (nonsafety-related displays), wall panel information system, nonsafety-related controls (soft and dedicated), and computerized procedure system.	An inspection of the HSI resources available in the MCR for the MCR operators will be performed.	The HSI (at the time of plant startup) includes an alarm system, plant information system (nonsafety-related displays), wall panel information system, nonsafety-related controls (soft and dedicated), and computerized procedure system.
752	3.2.00.05	5. The RSW includes reactor operator workstation(s) from which licensed operators perform remote shutdown operations.	An inspection of the RSW will be performed.	The RSW includes reactor operator workstation(s).

Table 3.2.-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
753	3.2.00.06.i	Not used per Amendment No. 85		
754	3.2.00.06.ii	Not used per Amendment No. 85		
755	3.2.00.06.iii	Not used per Amendment No. 85		
756	3.2.00.07	7. The HSI resources available at the RSW include the alarm system displays, the plant information system, and the controls.	An inspection of the HSI resources available at the RSW will be performed.	The as-built HSI at the RSW includes the alarm system displays, the plant information system, and the controls.
757	3.2.00.08	8. The RSW and the available HSI permit execution of tasks by licensed operators to establish and maintain safe shutdown.	Test and analysis, using a workstation that physically represents the RSW and dynamically represents the RSW HSI and the operating characteristics and responses of the AP1000, will be performed.	A report exists and concludes that the test and analysis results demonstrate that licensed operators can achieve and maintain safe shutdown conditions from the RSW.
758	3.2.00.09	9. The capability to access displays and controls is provided (controls as assigned by the MCR operators) for local control and monitoring from selected locations throughout the plant.	An inspection of the local control and monitoring capability is provided.	The capability for local control and monitoring from selected locations throughout the plant exists.

Table 3.3-6 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
766	3.3.00.02a.ii.c	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.c) A report exists that concludes that as-built concrete thicknesses of the non-radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1.
767	3.3.00.02a.ii.d	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.d) A report exists that concludes that the as-built concrete thicknesses of the radiologically controlled area of the auxiliary building sections conform to the building sections defined in Table 3.3-1.
768	3.3.00.02a.ii.e	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.e) A report exists that concludes that the as-built concrete thicknesses of the annex building sections conform with the building sections defined in Table 3.3-1.
769	3.3.00.02a.ii.f	2.a) The nuclear island structures, including the critical sections listed in Table 3.3-7, are seismic Category I and are designed and constructed to withstand design basis loads as specified in the Design Description, without loss of structural integrity and the safety-related functions.	ii) An inspection of the as-built concrete thickness will be performed.	ii.f) A report exists that concludes that the as-built concrete thicknesses of the turbine building sections conform to the building sections defined in Table 3.3-1.
770	3.3.00.02b	2.b) Site grade level is located relative to floor elevation 100'-0" per Table 3.3-5.	Inspection of the as-built site grade will be conducted.	Site grade is consistent with design plant grade within the dimension defined on Table 3.3-5.
771	3.3.00.02c	Not used per Amendment No. 85		

Table 3.3-6 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
772	3.3.00.02d	Not used per Amendment No. 85		
773	3.3.00.02e	Not used per Amendment No. 85		
774	3.3.00.02f	2.f) The key dimensions of nuclear island structures are defined on Table 3.3-5.	An inspection will be performed of the as-built configuration of the nuclear island structures.	A report exists and concludes that the key dimensions of the as-built nuclear island structures are consistent with the dimensions defined on Table 3.3-5.
775	3.3.00.02g	2.g) The containment vessel greater than 7 feet above the operating deck provides a heat transfer surface. A free volume exists inside the containment shell above the operating deck.	The maximum containment vessel inside height from the operating deck is measured and the inner radius below the spring line is measured at two orthogonal radial directions at one elevation.	The containment vessel maximum inside height from the operating deck is 146'-7" (with tolerance of +12", -6"), and the inside diameter is 130 feet nominal (with tolerance of +12", -6").
776	3.3.00.02h	2.h) The free volume in the containment allows for floodup to support long-term core cooling for postulated loss-of-coolant accidents.	An inspection will be performed of the as-built containment structures and equipment. The portions of the containment included in this inspection are the volumes that flood with a loss-of-coolant accident in passive core cooling system valve/equipment room B (11207). The in-containment refueling water storage tank volume is excluded from this inspection.	A report exists and concludes that the floodup volume of this portion of the containment is less than 73,500 ft^3 to an elevation of 108'.

Table 3.5-6 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
823	3.5.00.01.i	1. The seismic Category I equipment identified in Table 3.5-1 can withstand seismic design basis loads without loss of safety function.	i) Inspection will be performed to verify that the seismic Category I equipment identified in Table 3.5-1 is located on the Nuclear Island.	i) The seismic Category I equipment identified in Table 3.5-1 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.	ii) A report exists and concludes that the seismic Category I equipment can withstand seismic design basis loads without loss of safety function.
			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.	iii) A report exists and concludes that the as-built equipment including anchorage is seismically bounded by the tested or analyzed conditions.
		2. The Class 1E equipment identified in Table 3.5-1 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) Type tests, analyses, or a combination of type tests and analyses will be performed on Class 1E equipment located in a harsh environment.	i) A report exists and concludes that Class 1E equipment identified in Table 3.5-1 as being located in 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) Inspection will be performed of the as-built Class 1E equipment and the associated wiring, cables, and terminations located in a harsh environment.	ii) A report exists and concludes that the as-built Class 1E equipment and the associated wiring, cables, and terminations identified in Table 3.5-1 as being qualified for a harsh environment are bounded by type tests, analyses, or a combination of type tests and analyses.
824	3.5.00.01.ii	Not used per Amendment No. 85		
825	3.5.00.01.iii	Not used per Amendment No. 85		
826	3.5.00.02.i	Not used per Amendment No. 85		
827	3.5.00.02.ii	Not used per Amendment No. 85		
828	3.5.00.03	Not used per Amendment No. 85		

Table 3.5-7		
Component Name	**Tag No.**	**Component Location**
Hot Machine Shop	RMS-RE018	Annex Building
Annex Staging and Storage Area	RMS-RE019	Annex Building
Fuel Handling Area 2	RMS-RE020	Auxiliary Building
Containment Area – Personnel Hatch – Maintenance Level	RMS-RE021	Auxiliary Building

3.6 Reactor Coolant Pressure Boundary Leak Detection

Design Description

The reactor coolant pressure boundary leakage detection monitoring provides a means of detecting and quantifying the reactor coolant leakage. To detect unidentified leakage inside containment, the following diverse methods are provided to quantify and assist in locating the leakage:

- Containment Sump Level
- Reactor Coolant System Inventory Balance
- Containment Atmosphere Radiation

Leakage detection monitoring is accomplished using instrumentation and other components of several systems.

1. The diverse leak detection methods provide the nonsafety-related function of detecting small leaks when RCS leakage indicates possible reactor coolant pressure boundary degradation.

Table 3.6-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
834	3.6.00.01.i	Not used per Amendment No. 85		
835	3.6.00.01.ii	Not used per Amendment No. 85		

Table 3.6-1 Inspections, Tests, Analyses, and Acceptance Criteria				
No.	**ITAAC No.**	**Design Commitment**	**Inspections, Tests, Analyses**	**Acceptance Criteria**
836	3.6.00.01.iii	Not used per Amendment No. 85		
837	3.6.00.01.iv	Not used per Amendment No. 85		
838	3.6.00.01.v	Not used per Amendment No. 85		
839	3.6.00.01.vi	Not used per Amendment No. 85		
840	3.6.00.01.vii	Not used per Amendment No. 85		

3.7 Design Reliability Assurance Program

The Design Reliability Assurance Program (D-RAP) is a program that will be performed during the detailed design and equipment specification phase prior to initial fuel load. The D-RAP evaluates and sets priorities for the structures, systems, and components (SSCs) in the design,