3.5 Containment Isolation

Design Description

1.0 System Description

The Reactor Building (RB) consists of a Reactor Containment Building (RCB) and a Reactor Shield Building (RSB). The RCB provides the primary means of confining radioactivity that may be released following a postulated design basis accident. The RCB and RSB are penetrated by systems to provide various functions for systems housed inside containment. These penetrations are made for mechanical and electrical systems, and include facilities for the transport of personnel and equipment.

The function for containment isolation is to isolate fluid system piping that penetrates the RB to prevent the discharge of radioactivity from containment following a postulated design basis accident. Containment isolation barriers are components of the penetrating systems and are generally included with the system descriptions in Tier 1, Chapter 2. This section includes containment isolation barriers that are not included in Tier 1, Chapter 2.

2.0 Arrangement

2.1 The functional arrangement of the containment isolation equipment is as described in the Design Description of Section 3.5.1, Tables 3.5-1—Containment Isolation Equipment Mechanical Design, 3.5-2—Containment Isolation Equipment I&C and Electrical Design, 3.5-3—Containment Isolation Valves, and as shown on Figure 3.5-1—Representative Containment Isolation Valve Arrangement.

2.2 Deleted.

3.0 Mechanical Design Features

3.1 Valves listed in Table 3.5-1 will be functionally designed and qualified such that each valve is capable of performing its intended function for a full range of system differential pressure and flow, ambient temperatures, and available voltage (as applicable) under design basis accident conditions.

3.2 Check valves listed in Table 3.5-1 will function to change position as listed in Table 3.5-1 under normal operating conditions.

3.3 Deleted.

3.4 Equipment identified as Seismic Category I in Table 3.5-1 can withstand seismic design basis loads without a loss of the function listed in Table 3.5-1.

3.5 Deleted.

3.6 Deleted.

3.7 Deleted.

3.8 Deleted.

3.9 Deleted.

3.10 Deleted.

3.11 Deleted.

3.12 ASME Code Class 1, 2 and 3 piping systems are designed in accordance with ASME Code Section III requirements.

3.13 As-built ASME Code Class 1, 2 and 3 components are reconciled with the design requirements.

3.14 Pressure-boundary welds in ASME Code Class 1, 2 and 3 components meet ASME Code Section III non-destructive examination requirements.

3.15 ASME Code Class 1, 2 and 3 components retain their pressure-boundary integrity at their design pressure.

3.16 ASME Code Class 1, 2 and 3 components are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.

3.17 Containment isolation valves listed in Table 3.5-3 are located close to the containment penetrations as practical with consideration of the following:

- Access for inspection of welds.
- Containment leak testing.
- Replacement.
- Valve maintenance.

4.0 I&C Design Features, Displays, and Controls

4.1 Displays listed in Table 3.5-2 are indicated on the PICS operator workstations in the MCR and the RSS.

4.2 Controls on the PICS operator workstations in the MCR perform the function listed in Table 3.5-2.

4.3 Equipment listed as being controlled by a priority and actuator control system (PACS) module in Table 3.5-2 responds to the state requested and provides drive monitoring signals back to the PACS module. The PACS module will protect the equipment by terminating the output command upon the equipment reaching the requested state.

5.0 Electrical Power Design Features

5.1 Equipment designated as Class 1E in Table 3.5-2 are powered from the Class 1E division as listed in Table 3.5-2 in a normal or alternate feed condition.

5.2 Deleted.

5.3 Deleted.

5.4 Deleted.

5.5 Containment electrical penetrations are protected from fault currents that are greater than continuous current rating.

6.0 Environmental Qualifications

6.1 Equipment designated as harsh environment in Table 3.5-2 will perform the function listed in Table 3.5-1 under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions.

6.2 Containment electrical penetration assemblies designated as harsh environment in Table 3.5-2 can perform their function under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions.

7.0 Equipment and System Performance

7.1 Class 1E valves listed in Table 3.5-2 will function to change position as listed in Table 3.5-1 under normal operating conditions.

7.2 Containment isolation valves listed in Table 3.5-3 close within the valve closure time listed in Table 3.5-3 following receipt of a containment isolation signal.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 3.5-4 lists the containment isolation ITAAC.

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 1 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Fuel Pool Purification System – CIV	30FAL40AA001	Fuel Building	Yes	Close	I
Fuel Pool Purification System – CIV	30FAL40AA002	Reactor Building	Yes	Close	I
Demineralized Water Distribution System - CIV	30GHC74AA001	Fuel Building	Yes	Close(a)	I
Demineralized Water Distribution System - CIV	30GHC74AA002	Reactor Building	Yes	Close(a)	I
Leak Off System - Inflating/Deflating Subsystem - CIV	30JMM10AA006	Reactor Building	Yes	Close(a)	I
Leak Off System - Inflating/Deflating Subsystem - CIV	30JMM10AA007	Fuel Building	Yes	Close(a)	I
Leak Off System - Leakage Exhaust Subsystem - CIV	30JMM23AA001	Reactor Building	Yes	Open/Close	I
Leak Off System - Leakage Exhaust Subsystem - CIV	30JMM23AA002	Reactor Building Annulus	Yes	Open/Close	I
Leak Off System - Leaktightness Test Subsystem - CIV	30JMM30AA001	Reactor Building	Yes	Close	I
Leak Off System - Leaktightness Test Subsystem - CIV	30JMM30AA003	Safeguard Building	Yes	Close	I
Severe Accident Heat Removal System - CIV	30JMQ40AA001	Safeguard Building 4	Yes	Open-Close	I
Severe Accident Heat Removal System - CIV	30JMQ41AA001	Safeguard Building 4	Yes	Open-Close	I
Severe Accident Heat Removal System - CIV	30JMQ41AA002	Reactor Building	Yes	Open-Close	I
Severe Accident Heat Removal System - CIV	30JMQ42AA001	Safeguard Building 4	Yes	Open-Close	I
Severe Accident Heat Removal System - CIV	30JMQ42AA002	Reactor Building	Yes	Open-Close	I
Severe Accident Heat Removal System - CIV	30JMQ43AA001	Safeguard Building 4	Yes	Close	I
Severe Accident Heat Removal System - CIV	30JMQ43AA002	Reactor Building	Yes	Close	I

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 2 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA075	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA076	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA077	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA078	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA079	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA080	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA081	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA082	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 Return to Containment - CIV	30JMU50AA083	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 1 Return to Containment - CIV	30JMU50AA084	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA085	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA086	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA087	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA088	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA089	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA090	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA091	Reactor Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA092	Safeguard Building	Yes	Open/ Close(a)	I

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 3 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Hydrogen Monitoring System - Analyzer 2 Return to containment - CIV	30JMU51AA093	Safeguard Building	Yes	Open/ Close(a)	I
Hydrogen Monitoring System - Analyzer 2 Return to Containment –CIV	30JMU51AA094	Reactor Building	Yes	Open/ Close(a)	I
Containment Equip Compartment pressure - CIV	30KLA60AA701	Safeguard Building	Yes	Open	I
Containment Equip Compartment pressure - CIV	30KLA60AA702	Fuel Building	Yes	Open	I
Containment Equip Compartment pressure - CIV	30KLA60AA703	Safeguard Building	Yes	Open	I
Containment Equip Compartment pressure - CIV	30KLA60AA704	Fuel Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA701	Safeguard Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA702	Safeguard Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA703	Fuel Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA704	Fuel Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA706	Safeguard Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA707	Safeguard Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA708	Fuel Building	Yes	Open	I
Containment Service Compartment pressure – CIV	30KLA70AA709	Fuel Building	Yes	Open	I
Gaseous Waste Processing System - CIV	30KPL84AA002	Fuel Building	Yes	Close	I

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 4 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Gaseous Waste Processing System - CIV	30KPL84AA003	Reactor Building	Yes	Close	I
Gaseous Waste Processing System - CIV	30KPL85AA003	Reactor Building	Yes	Close	I
Gaseous Waste Processing System - CIV	30KPL85AA004	Fuel Building	Yes	Close	I
Nuclear Island Drain & Vent System - CIV	30KTA10AA017	Reactor Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System - CIV	30KTA10AA018	Fuel Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System - CIV	30KTC10AA005	Reactor Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System - CIV	30KTC10AA006	Fuel Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System – CIV	30KTC10AA010	Reactor Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System – CIV	30KTC10AA029	Fuel Building	Yes	Close	I
Nuclear Island Drain & Vent System - Annulus – CIV	30KTD10AA008	Reactor Building Annulus	Yes	Close	I
Nuclear Island Drain & Vent System - CIV	30KTD10AA015	Fuel Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System - CIV	30KTD10AA024	Reactor Building	Yes	Close(a)	I
Nuclear Island Drain & Vent System - Annulus – CIV	30KTD10AA025	Fuel Building	Yes	Close(a)	I
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA10AA003	Reactor Building	Yes	Close(a)	I
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA10AA004	Fuel Building	Yes	Close(a)	I
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA20AA002	Reactor Building	Yes	Close(a)	I
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA20AA003	Fuel Building	Yes	Close(a)	I

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 5 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA30AA003	Reactor Building	Yes	Close(a)	I
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA30AA004	Fuel Building	Yes	Close(a)	I
Nuclear Sampling System – Slightly Active Liquid Samples – CIV	30KUB10AA001	Reactor Building	Yes	Close(a)	I
Nuclear Sampling System – Slightly Active Liquid Samples – CIV	30KUB10AA002	Fuel Building	Yes	Close(a)	I
Severe Accident Sampling System - CIV	30KUL51AA002	Safeguard Building	Yes	Close(a)	I
Severe Accident Sampling System - CIV	30KUL51AA003	Safeguard Building	Yes	Close(a)	I
Severe Accident Sampling System - CIV	30KUL52AA002	Safeguard Building	Yes	Close(a)	I
Severe Accident Sampling System - CIV	30KUL52AA003	Safeguard Building	Yes	Close(a)	I
Condensate System - Condensate to Blowdown Clrs – CIV	30LCA90AA003	Main Steam Valve Room	Yes	Close(a)	I
Condensate System - Condensate to Blowdown Clrs – CIV	30LCA90AA004	Reactor Building	Yes	Close	I
Condensate System - Condensate to Blowdown Clrs – CIV	30LCA90AA005	Reactor Building	Yes	Close(a)	I
Condensate System - Condensate to Blowdown Clrs – CIV	30LCA90AA006	Main Steam Valve Room	Yes	Close(a)	I
Central Gas Distribution System - CIV	30QJB40AA001	Fuel Building	Yes	Close(a)	I
Central Gas Distribution System - CIV	30QJB40AA002	Reactor Building	Yes	Close(a)	I
Central Gas Distribution System - CIV	30QJB40AA003	Fuel Building	Yes	Close(a)	I

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 6 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Central Gas Distribution System - CIV	30QJB40AA004	Reactor Building	Yes	Close(a)	I
Operational Chilled Water Supply to Containment cooling coils - CIV	30QNJ41AA002	Fuel Building	Yes	Close(a)	I
Operational Chilled Water Supply to Containment cooling coils – CIV	30QNJ41AA003	Reactor Building	Yes	Close	I
Operational Chilled Water Return from Containment cooling coils - CIV	30QNJ41AA027	Reactor Building	Yes	Close(a)	I
Operational Chilled Water Return from Containment cooling coils - CIV	30QNJ41AA028	Fuel Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC11AA001	Fuel Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC11AA011	Reactor Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC12AA001	Fuel Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC12AA011	Reactor Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC13AA001	Fuel Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC13AA011	Reactor Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC14AA001	Fuel Building	Yes	Close(a)	I
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC14AA011	Reactor Building	Yes	Close(a)	I

Table 3.5-1—Containment Isolation Equipment Mechanical Design
Sheet 7 of 7

Description	Tag Number(1)	Location	ASME Code Section III	Function(2)	Seismic Category
Compressed Air System - Instrument Air - CIV	30SCB01AA001	Fuel Building	Yes	Close(a)	I
Compressed Air System - Instrument Air - CIV	30SCB01AA002	Reactor Building	Yes	Close(a)	I
Compressed Air System - Service Air - CIV	30SCB02AA001	Fuel Building	Yes	Close	I
Compressed Air System - Service Air - CIV	30SCB02AA002	Reactor Building	Yes	Close	I
Fire Water Distribution System - CIV	30SGB30AA031	Fuel Building	Yes	Close	I
Fire Water Distribution System - CIV	30SGB30AA032	Reactor Building	Yes	Close	I

1. Equipment tag numbers are provided for information only and are not part of the certified design.

2. Closes on Stage 1 (a) or Stage 2 (b) containment isolation signal.

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 1 of 8

Description	Tag Number(1)	IEEE Class 1E(2)	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Demineralized Water Distribution System - CIV	30GHC74AA001	1(N) 2(A)	No	Yes	Position	Open / Close
Demineralized Water Distribution System - CIV	30GHC74AA002	4(N) 3(A)	Yes	Yes	Position	Open / Close
Leak Off System - Inflating/Deflating Subsystem – CIV	30JMM10AA006	4(N) 3(A)	Yes	Yes	Position	Open / Close
Leak Off System - Inflating/Deflating Subsystem – CIV	30JMM10AA007	1(N) 2(A)	No	Yes	Position	Open / Close
Leak Off System - Leakage Exhaust Subsystem – CIV	30JMM23AA001	1(N) 2(A)	Yes	Yes	Position	Open / Close
Leak Off System - Leakage Exhaust Subsystem – CIV	30JMM23AA002	4(N) 3(A)	No	Yes	Position	Open / Close
IRWST - Sump Suction SAHRS - CIV	30JMQ40AA001	1(N) 2(A)	No	Yes	Position	Open / Close
Severe Accident Heat Removal System - CIV	30JMQ40AA001	1N 2A	Yes	Yes	Position	Open-Close
Severe Accident Heat Removal System - CIV	30JMQ41AA001	4N 3A	Yes	Yes	Position	Open-Close
Severe Accident Heat Removal System - CIV	30JMQ42AA001	4N 3A	Yes	Yes	Position	Open-Close
Severe Accident Heat Removal System - CIV	30JMQ43AA001	4N 3A	Yes	Yes	Position	Open-Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 2 of 8

Description	Tag Number[1]	IEEE Class 1E[2]	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA075	3(N) 4(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA076	4(N) 3(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA077	3(N) 4(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA078	4(N) 3(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA079	3(N) 4(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA080	4(N) 3(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA081	3(N) 4(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 - CIV	30JMU50AA082	4(N) 3(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 Return to containment - CIV	30JMU50AA083	4(N) 3(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 1 return to containment - CIV	30JMU50AA084	3(N) 4(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA085	2(N) 1(A)	Yes	Yes	Position	Open / Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 3 of 8

Description	Tag Number[1]	IEEE Class 1E[2]	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA086	1(N) 2(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA087	2(N) 1(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA088	1(N) 2(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA089	2(N) 1(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA090	1(N) 2(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA091	2(N) 1(A)	Yes	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 - CIV	30JMU51AA092	1(N) 2(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 Return to containment - CIV	30JMU51AA093	1(N) 2(A)	No	Yes	Position	Open / Close
Hydrogen Monitoring System - Analyzer 2 Return to containment - CIV	30JMU51AA094	2(N) 1(A)	Yes	Yes	Position	Open / Close
Gaseous Waste Processing System – CIV	30KPL84AA002	4N 3A	No	Yes	Position	Open / Close
Gaseous Waste Processing System – CIV	30KPL84AA003	1N 2A	Yes	Yes	Position	Open / Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 4 of 8

Description	Tag Number(1)	IEEE Class 1E(2)	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Gaseous Waste Processing System – CIV	30KPL85AA003	1N 2A	Yes	Yes	Position	Open / Close
Gaseous Waste Processing System – CIV	30KPL85AA004	4N 3A	No	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTA10AA017	4(N) 3(A)	Yes	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTA10AA018	1(N) 2(A)	No	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTC10AA005	1(N) 2(A)	Yes	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTC10AA006	4(N) 3(A)	No	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTC10AA010	4(N) 3(A)	No	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTD10AA015	4(N) 3(A)	No	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – CIV	30KTD10AA024	1(N) 2(A)	Yes	Yes	Position	Open / Close
Nuclear Island Drain & Vent System – Annulus – CIV	30KTD10AA025	4(N) 3(A)	No	Yes	Position	Open / Close
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA10AA003	1(N) 2(A)	Yes	Yes	Position	Open / Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 5 of 8

Description	Tag Number[1]	IEEE Class 1E[2]	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA10AA004	4(N) 3(A)	No	Yes	Position	Open / Close
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA20AA002	1(N) 2(A)	Yes	Yes	Position	Open / Close
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA20AA003	4(N) 3(A)	No	Yes	Position	Open / Close
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA30AA003	4(N) 3(A)	Yes	Yes	Position	Open / Close
Nuclear Sampling System – Active Liquid Samples – CIV	30KUA30AA004	1(N) 2(A)	No	Yes	Position	Open / Close
Nuclear Sampling System – Slightly Active Liquid Samples – CIV	30KUB10AA001	1(N) 2(A)	Yes	Yes	Position	Open / Close
Nuclear Sampling System – Slightly Active Liquid Samples – CIV	30KUB10AA002	4(N) 3(A)	No	Yes	Position	Open / Close
Severe Accident Sampling System – CIV	30KUL51AA002	1(N) 2(A)	No	Yes	Position	Open / Close
Severe Accident Sampling System – CIV	30KUL51AA003	4(N) 3(A)	No	Yes	Position	Open / Close
Severe Accident Sampling System – CIV	30KUL52AA002	1(N) 2(A)	No	Yes	Position	Open / Close
Severe Accident Sampling System – CIV	30KUL52AA003	4(N) 3(A)	No	Yes	Position	Open / Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 6 of 8

Description	Tag Number(1)	IEEE Class 1E(2)	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Condensate System – Condensate to Blowdown Clrs – CIV	30LCA90AA003	2(N) 1(A)	No	Yes	Position	Open / Close
Condensate System – Condensate to Blowdown Clrs – CIV	30LCA90AA005	3(N) 4(A)	Yes	Yes	Position	Open / Close
Condensate System – Condensate to Blowdown Clrs – CIV	30LCA90AA006	2(N) 1(A)	No	Yes	Position	Open / Close
Central Gas Distribution System – CIV	30QJB40AA001	1(N) 2(A)	No	Yes	Position	Open / Close
Central Gas Distribution System – CIV	30QJB40AA002	4(N) 3(A)	Yes	Yes	Position	Open / Close
Central Gas Distribution System – CIV	30QJB40AA003	1(N) 2(A)	No	Yes	Position	Open / Close
Central Gas Distribution System – CIV	30QJB40AA004	4(N) 3(A)	Yes	Yes	Position	Open / Close
Operational Chilled Water Supply to Containment cooling coils – CIV	30QNJ41AA002	4(N) 3(A)	No	Yes	Position	Open / Close
Operational Chilled Water Return to Containment cooling coils – CIV	30QNJ41AA027	1(N) 2(A)	Yes	Yes	Position	Open / Close
Operational Chilled Water Return to Containment cooling coils – CIV	30QNJ41AA028	4(N) 3(A)	No	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC11AA001	1(N) 2(A)	No	Yes	Position	Open / Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 7 of 8

Description	Tag Number[1]	IEEE Class 1E[2]	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC11AA011	4(N) 3(A)	Yes	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC12AA001	1(N) 2(A)	No	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC12AA011	4(N) 3(A)	Yes	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC13AA001	4(N) 3(A)	No	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC13AA011	1(N) 2(A)	Yes	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC14AA001	4(N) 3(A)	No	Yes	Position	Open / Close
Secondary Sampling System for Steam Generator Blowdown System – CIV	30QUC14AA011	1(N) 2(A)	Yes	Yes	Position	Open / Close
Compressed Air System – Instrument Air – CIV	30SCB01AA001	4(N) 3(A)	No	Yes	Position	Open / Close
Compressed Air System – Instrument Air – CIV	30SCB01AA002	1(N) 2(A)	Yes	Yes	Position	Open / Close
Fire Water Distribution System – CIV	30SGB30AA031	4N 3A	No	Yes	Position	Open-Close

Table 3.5-2—Containment Isolation Equipment I&C and Electrical Design
Sheet 8 of 8

Description	Tag Number(1)	IEEE Class 1E(2)	EQ - Harsh Environment	PACS	MCR Displays	MCR Controls
Fire Water Distribution System – CIV	30SGB30AA032	1^{N} 2^{A}	Yes	Yes	Position	Open-Close

1. Equipment tag numbers are provided for information only and are not part of the certified design.

2. ^{N} denotes the division the equipment is normally powered from; ^{A} denotes the division the equipment is powered from when alternate feed is implemented.

Table 3.5-3—Containment Isolation Valves
Sheet 1 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
Fuel Pool Cooling System	30FAL12AA001	5B	≤ 29.5 sec
Fuel Pool Cooling System	30FAL12AA002	5A	≤ 29.5 sec
Fuel Pool Cooling System	30FAL15AA002	5A	≤ 29.5 sec
Fuel Pool Cooling System	30FAL15AA003	6B	n/a
Demineralized Water Distribution System	30GHC74AA001	5A	≤ 14.5 sec
Demineralized Water Distribution System	30GHC74AA002	5B	≤ 14.5 sec
Extra Borating System	30JDH10AA006	5A	≤ 14.5 sec
Extra Borating System	30JDH10AA007	6B	n/a
Extra Borating System	30JDH40AA006	5A	≤ 14.5 sec
Extra Borating System	30JDH40AA007	6B	n/a
Chemical & Volume Control System	30JEW01AA005	5A	≤ 14.5 sec
Chemical & Volume Control System	30JEW01AA006	6B	n/a
Chemical & Volume Control System	30JEW50AA001	5B	≤ 14.5 sec
Chemical & Volume Control System	30JEW50AA002	5A	≤ 14.5 sec
Leak Off System - Inflating/Deflating Subsystem	30JMM10AA006	5B	≤ 49.5 sec
Leak Off System - Inflating/Deflating Subsystem	30JMM10AA007	5A	≤ 49.5 sec
Leak Off System - Leakage Exhaust Subsystem	30JMM23AA001	5B	≤ 14.5 sec
Leak Off System - Leakage Exhaust Subsystem	30JMM23AA002	5A	≤ 14.5 sec
Leak Off System - Leaktightness Test Subsystem	30JMM30AA001	1B	n/a
Leak Off System - Leaktightness Test Subsystem	30JMM30AA003	1A	n/a
Severe Accident Heat Removal System	30JMQ40AA001	5A	≤ 59.5 sec
Severe Accident Heat Removal System	30JMQ41AA001	5A	≤ 39.5 sec
Severe Accident Heat Removal System	30JMQ41AA002	6B	n/a
Severe Accident Heat Removal System	30JMQ42AA001	5A	≤ 39.5 sec
Severe Accident Heat Removal System	30JMQ42AA002	6B	n/a
Severe Accident Heat Removal System	30JMQ43AA001	5A	≤ 19.5 sec
Severe Accident Heat Removal System	30JMQ43AA002	6B	n/a

Table 3.5-3—Containment Isolation Valves
Sheet 2 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
Hydrogen Monitoring System	30JMU50AA075	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA076	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA077	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA078	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA079	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA080	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA081	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA082	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA083	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU50AA084	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA085	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA086	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA087	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA088	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA089	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA090	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA091	5B	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA092	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA093	5A	≤ 14.5 sec
Hydrogen Monitoring System	30JMU51AA094	5B	≤ 14.5 sec
Residual Heat Removal System	30JNA10AA002	5B	≤ 49.5 sec
Residual Heat Removal System	30JNA10AA003	5A	≤ 49.5 sec
Residual Heat Removal System	30JNA20AA002	5B	≤ 49.5 sec
Residual Heat Removal System	30JNA20AA003	5A	≤ 49.5 sec
Residual Heat Removal System	30JNA30AA002	5B	≤ 49.5 sec
Residual Heat Removal System	30JNA30AA003	5A	≤ 49.5 sec
Residual Heat Removal System	30JNA40AA002	5B	≤ 49.5 sec
Residual Heat Removal System	30JNA40AA003	5A	≤ 49.5 sec
Medium Head Safety Injection System	30JND10AA002	5A	≤ 29.5 sec
Medium Head Safety Injection System	30JND10AA007	6B	n/a
Medium Head Safety Injection System	30JND20AA002	5A	≤ 29.5 sec
Medium Head Safety Injection System	30JND20AA007	6B	n/a

Table 3.5-3—Containment Isolation Valves
Sheet 3 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
Medium Head Safety Injection System	30JND30AA002	5A	≤ 29.5 sec
Medium Head Safety Injection System	30JND30AA007	6B	n/a
Medium Head Safety Injection System	30JND40AA002	5A	≤ 29.5 sec
Medium Head Safety Injection System	30JND40AA007	6B	n/a
Low Head Safety Injection System	30JNG10AA009	6B	n/a
Low Head Safety Injection System	30JNG10AA060	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG10AA061	5A	≤ 19.5 sec
Low Head Safety Injection System	30JNG12AA001	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG15AA004	5B	≤ 14.5 sec
Low Head Safety Injection System	30JNG20AA009	6B	n/a
Low Head Safety Injection System	30JNG20AA060	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG20AA061	5A	≤ 19.5 sec
Low Head Safety Injection System	30JNG22AA001	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG25AA004	5B	≤ 14.5 sec
Low Head Safety Injection System	30JNG30AA009	6B	n/a
Low Head Safety Injection System	30JNG30AA060	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG30AA061	5A	≤ 19.5 sec
Low Head Safety Injection System	30JNG32AA001	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG35AA004	5B	≤ 14.5 sec
Low Head Safety Injection System	30JNG40AA009	6B	n/a
Low Head Safety Injection System	30JNG40AA060	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG40AA061	5A	≤ 19.5 sec
Low Head Safety Injection System	30JNG42AA001	5A	≤ 39.5 sec
Low Head Safety Injection System	30JNG45AA004	5B	≤ 14.5 sec
In-Containment Refueling Water Storage Tank System	30JNK10AA001	5A	≤ 59.5 sec
In-Containment Refueling Water Storage Tank System	30JNK10AA009	5A	≤ 29.5 sec
In-Containment Refueling Water Storage Tank System	30JNK10AA013	5A	≤ 29.5 sec
In-Containment Refueling Water Storage Tank System	30JNK11AA009	5A	≤ 59.5 sec
In-Containment Refueling Water Storage Tank System	30JNK20AA001	5A	≤ 59.5 sec

Table 3.5-3—Containment Isolation Valves
Sheet 4 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
In-Containment Refueling Water Storage Tank System	30JNK30AA001	5A	≤ 59.5 sec
In-Containment Refueling Water Storage Tank System	30JNK40AA001	5A	≤ 59.5 sec
Component Cooling Water System	30KAB30AA049	5A	≤ 14.5 sec
Component Cooling Water System	30KAB30AA050	5B	≤ 14.5 sec
Component Cooling Water System	30KAB30AA051	5B	≤ 14.5 sec
Component Cooling Water System	30KAB30AA052	5A	≤ 14.5 sec
Component Cooling Water System	30KAB30AA053	5A	≤ 14.5 sec
Component Cooling Water System	30KAB30AA054	5B	≤ 14.5 sec
Component Cooling Water System	30KAB30AA055	5B	≤ 14.5 sec
Component Cooling Water System	30KAB30AA056	5A	≤ 14.5 sec
Component Cooling Water System	30KAB40AA001	5A	≤ 49.5 sec
Component Cooling Water System	30KAB40AA002	6B	n/a
Component Cooling Water System	30KAB40AA006	5A	≤ 49.5 sec
Component Cooling Water System	30KAB40AA012	5B	≤ 49.5 sec
Component Cooling Water System	30KAB60AA013	5A	≤ 59.5 sec
Component Cooling Water System	30KAB60AA014	6B	n/a
Component Cooling Water System	30KAB60AA018	5B	≤ 59.5 sec
Component Cooling Water System	30KAB60AA019	5A	≤ 59.5 sec
Component Cooling Water System	30KAB70AA013	5A	≤ 59.5 sec
Component Cooling Water System	30KAB70AA014	6B	n/a
Component Cooling Water System	30KAB70AA018	5B	≤ 59.5 sec
Component Cooling Water System	30KAB70AA019	5A	≤ 59.5 sec
Chemical & Volume Control System	30KBA14AA002	5B	≤ 29.5 sec
Chemical & Volume Control System	30KBA14AA003	5A	≤ 29.5 sec
Chemical & Volume Control System	30KBA34AA002	5A	≤ 19.5 sec
Chemical & Volume Control System	30KBA34AA003	6B	n/a
Containment Building Ventilation System	30KLA10AA001	5A	≤ 4.9 sec
Containment Building Ventilation System	30KLA10AA003	5B	≤ 4.9 sec
Containment Building Ventilation System	30KLA20AA001	5B	≤ 4.9 sec
Containment Building Ventilation System	30KLA20AA003	5A	≤ 4.9 sec
Containment Building Ventilation System	30KLA30AA002	5A	n/a

Table 3.5-3—Containment Isolation Valves
Sheet 5 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
Containment Building Ventilation System	30KLA30AA003	5B	n/a
Containment Building Ventilation System	30KLA40AA001	5B	n/a
Containment Building Ventilation System	30KLA40AA002	5A	n/a
Containment Building Ventilation System	30KLA60AA701	1A	n/a
Containment Building Ventilation System	30KLA60AA702	1A	n/a
Containment Building Ventilation System	30KLA60AA703	1A	n/a
Containment Building Ventilation System	30KLA60AA704	1A	n/a
Containment Building Ventilation System	30KLA70AA701	1A	n/a
Containment Building Ventilation System	30KLA70AA702	1A	n/a
Containment Building Ventilation System	30KLA70AA703	1A	n/a
Containment Building Ventilation System	30KLA70AA704	1A	n/a
Containment Building Ventilation System	30KLA70AA706	1A	n/a
Containment Building Ventilation System	30KLA70AA707	1A	n/a
Containment Building Ventilation System	30KLA70AA708	1A	n/a
Containment Building Ventilation System	30KLA70AA709	1A	n/a
Gaseous Waste Processing System	30KPL84AA002	5A	≤ 14.5 sec
Gaseous Waste Processing System	30KPL84AA003	5B	≤ 14.5 sec
Gaseous Waste Processing System	30KPL85AA003	5B	≤ 14.5 sec
Gaseous Waste Processing System	30KPL85AA004	5A	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTA10AA017	5B	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTA10AA018	5A	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTC10AA005	5B	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTC10AA006	5A	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTC10AA010	5A	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTC10AA029	6B	n/a
Nuclear Island Drain & Vent System	30KTD10AA015	5A	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTD10AA024	5B	≤ 14.5 sec
Nuclear Island Drain & Vent System	30KTD10AA025	5A	≤ 14.5 sec
Nuclear Sampling System	30KUA10AA003	5B	≤ 14.5 sec
Nuclear Sampling System	30KUA10AA004	5A	≤ 14.5 sec
Nuclear Sampling System	30KUA20AA002	5B	≤ 14.5 sec
Nuclear Sampling System	30KUA20AA003	5A	≤ 14.5 sec

Table 3.5-3—Containment Isolation Valves
Sheet 6 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
Nuclear Sampling System	30KUA30AA003	5B	≤ 14.5 sec
Nuclear Sampling System	30KUA30AA004	5A	≤ 14.5 sec
Nuclear Sampling System	30KUB10AA001	5B	≤ 14.5 sec
Nuclear Sampling System	30KUB10AA002	5A	≤ 14.5 sec
Severe Accident Sampling System	30KUL51AA002	5A	≤ 14.5 sec
Severe Accident Sampling System	30KUL51AA003	5A	≤ 14.5 sec
Severe Accident Sampling System	30KUL52AA002	5A	≤ 14.5 sec
Severe Accident Sampling System	30KUL52AA003	5A	≤ 14.5 sec
Feedwater System	30LAB60AA002	5A	≤ 59.5 sec
Feedwater System	30LAB60AA003	6B	n/a
Feedwater System	30LAB70AA002	5A	≤ 59.5 sec
Feedwater System	30LAB70AA003	6B	n/a
Feedwater System	30LAB80AA002	5A	≤ 59.5 sec
Feedwater System	30LAB80AA003	6B	n/a
Feedwater System	30LAB90AA002	5A	≤ 59.5 sec
Feedwater System	30LAB90AA003	6B	n/a
Emergency Feedwater System	30LAR11AA006	5A	≤ 19.5 sec
Emergency Feedwater System	30LAR11AA007	6B	n/a
Emergency Feedwater System	30LAR21AA006	5A	≤ 19.5 sec
Emergency Feedwater System	30LAR21AA007	6B	n/a
Emergency Feedwater System	30LAR31AA006	5A	≤ 19.5 sec
Emergency Feedwater System	30LAR31AA007	6B	n/a
Emergency Feedwater System	30LAR41AA006	5A	≤ 19.5 sec
Emergency Feedwater System	30LAR41AA007	6B	n/a
Main Steam System	30LBA10AA002	1A	n/a
Main Steam System	30LBA10AA441	5A	≤ 14.5 sec
Main Steam System	30LBA11AA191	5A	n/a
Main Steam System	30LBA12AA191	5A	n/a
Main Steam System	30LBA13AA001	5A	n/a
Main Steam System	30LBA13AA101	5A	n/a
Main Steam System	30LBA14AA001	5A	≤ 29.5 sec
Main Steam System	30LBA20AA002	1A	n/a

Table 3.5-3—Containment Isolation Valves
Sheet 7 of 8

System	Tag Number[(1)]	Figure 3.5-1 Configuration	Valve Closure Time
Main Steam System	30LBA20AA441	5A	≤ 14.5 sec
Main Steam System	30LBA21AA191	5A	n/a
Main Steam System	30LBA22AA191	5A	n/a
Main Steam System	30LBA23AA001	5A	n/a
Main Steam System	30LBA23AA101	5A	n/a
Main Steam System	30LBA24AA001	5A	≤ 29.5 sec
Main Steam System	30LBA30AA002	1A	n/a
Main Steam System	30LBA30AA441	5A	≤ 14.5 sec
Main Steam System	30LBA31AA191	5A	n/a
Main Steam System	30LBA32AA191	5A	n/a
Main Steam System	30LBA33AA001	5A	n/a
Main Steam System	30LBA33AA101	5A	n/a
Main Steam System	30LBA34AA001	5A	≤ 29.5 sec
Main Steam System	30LBA40AA002	1A	n/a
Main Steam System	30LBA40AA441	5A	≤ 14.5 sec
Main Steam System	30LBA41AA191	5A	n/a
Main Steam System	30LBA42AA191	5A	n/a
Main Steam System	30LBA43AA001	5A	n/a
Main Steam System	30LBA43AA101	5A	n/a
Main Steam System	30LBA44AA001	5A	≤ 29.5 sec
Condensate System	30LCA90AA003	5A	≤ 29.5 sec
Condensate System	30LCA90AA004	6B	n/a
Condensate System	30LCA90AA005	5B	≤ 29.5 sec
Steam Generator Blowdown System	30LCA90AA006	5A	≤ 29.5 sec
Steam Generator Blowdown System	30LCQ51AA002	5B	≤ 29.5 sec
Steam Generator Blowdown System	30LCQ51AA003	5A	≤ 29.5 sec
Steam Generator Blowdown System	30LCQ52AA001	5B	≤ 59.5 sec
Steam Generator Blowdown System	30LCQ52AA002	5A	≤ 59.5 sec
Nitrogen Gas Distribution System	30QJB40AA001	5A	≤ 14.5 sec
Nitrogen Gas Distribution System	30QJB40AA002	5B	≤ 14.5 sec
Nitrogen Gas Distribution System	30QJB40AA003	5A	≤ 14.5 sec
Nitrogen Gas Distribution System	30QJB40AA004	5B	≤ 14.5 sec

Table 3.5-3—Containment Isolation Valves
Sheet 8 of 8

System	Tag Number(1)	Figure 3.5-1 Configuration	Valve Closure Time
Operational Chilled Water Supply System	30QNJ41AA002	5A	≤ 39.5 sec
Operational Chilled Water Supply System	30QNJ41AA003	6B	n/a
Operational Chilled Water Supply System	30QNJ41AA027	5B	≤ 39.5 sec
Operational Chilled Water Supply System	30QNJ41AA028	5A	≤ 39.5 sec
Secondary Sampling System	30QUC11AA001	5A	≤ 14.5 sec
Secondary Sampling System	30QUC11AA011	5B	≤ 14.5 sec
Secondary Sampling System	30QUC12AA001	5A	≤ 14.5 sec
Secondary Sampling System	30QUC12AA011	5B	≤ 14.5 sec
Secondary Sampling System	30QUC13AA001	5A	≤ 14.5 sec
Secondary Sampling System	30QUC13AA011	5B	≤ 14.5 sec
Secondary Sampling System	30QUC14AA001	5A	≤ 14.5 sec
Secondary Sampling System	30QUC14AA011	5B	≤ 14.5 sec
Compressed Air System	30SCB01AA001	5A	≤ 14.5 sec
Compressed Air System	30SCB01AA002	5B	≤ 14.5 sec
Compressed Air System	30SCB02AA001	1A	n/a
Compressed Air System	30SCB02AA002	1B	n/a
Fire Water Distribution System	30SGB30AA031	5A	≤ 39.5 sec
Fire Water Distribution System	30SGB30AA032	5B	≤ 39.5 sec

1. Equipment tag numbers are provided for information only and are not part of the certified design.

Table 3.5-4—Containment Isolation ITAAC
Sheet 1 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the containment isolation equipment is as described in the Design Description of Section 3.5, Tables 3.5-1, 3.5-2, and 3.5-3, and as shown on Figure 3.5-1.	An inspection of the as-built containment isolation equipment functional arrangement will be performed.	The containment isolation equipment conforms to the functional arrangement as described in the Design Description of Section 3.5, Tables 3.5-1, 3.5-2, and 3.5-3, and as shown on Figure 3.5-1.
2.2	Deleted.	Deleted.	Deleted.
3.1	Valves listed in Table 3.5-1 will be functionally designed and qualified such that each valve is capable of performing its intended function for a full range of system differential pressure and flow, ambient temperatures, and available voltage (as applicable) under design basis accident conditions.	Tests or type tests of valves will be performed to demonstrate that the pumps and valves function under design basis accident conditions.	A report concludes that the valves listed in Table 3.5-1 are capable of performing their intended function for a full range of system differential pressure and flow, ambient temperatures, and available voltage (as applicable) under design basis accident conditions.
3.2	Check valves listed in Table 3.5-1 will function to change position as listed in Table 3.5-1 under normal operating conditions.	Tests will be performed to demonstrate the ability of check valves to change position under normal operating conditions.	The check valves change position as listed in Table 3.5-1 under normal operating conditions.
3.3	Deleted.	Deleted.	Deleted.

Table 3.5-4—Containment Isolation ITAAC
Sheet 2 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.4	Equipment identified as Seismic Category I in Table 3.5-1 can withstand seismic design basis loads without a loss of the function listed in Table 3.5-1.	a. Type tests, analyses, or a combination of type tests and analyses will be performed on the equipment identified as Seismic Category I in Table 3.5-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements. b. An inspection will be performed of the as-built equipment identified as Seismic Category I in Table 3.5-1 to verify that the equipment, including anchorage, are installed per the approved design requirements.	a. Test/analysis reports conclude that the equipment identified as Seismic Category I in Table 3.5-1 can withstand seismic design basis loads without a loss of the function listed in Table 3.5-1 including the time required to perform the listed function. b. Inspection reports conclude that the equipment identified as Seismic Category I in Table 3.5-1, including anchorage, are installed per the approved design requirements.
3.5	Deleted.	Deleted.	Deleted.
3.6	Deleted.	Deleted.	Deleted.
3.7	Deleted.	Deleted.	Deleted.
3.8	Deleted.	Deleted.	Deleted.
3.9	Deleted.	Deleted.	Deleted.
3.10	Deleted.	Deleted.	Deleted.
3.11	Deleted.	Deleted.	Deleted.
3.12	ASME Code Class 1, 2 and 3 piping systems are designed in accordance with ASME Code Section III requirements.	An inspection of piping design and analysis documentation required by the ASME Code Section III will be performed. {{DAC}}	ASME Code Section III Design Report(s) exist that meet the requirements of NCA-3550 and conclude that the design of the ASME Code Class 1, 2 and 3 piping system complies with the requirements of the ASME Code Section III. {{DAC}}

Table 3.5-4—Containment Isolation ITAAC
Sheet 3 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.13	As-built ASME Code Class 1, 2 and 3 components are reconciled with the design requirements.	A reconciliation analysis of ASME Code Class 1, 2 and 3 components will be performed.	ASME Code Design Report(s) exist that meet the requirements of NCA-3550, conclude that the design reconciliation has been completed for as-built ASME Code Class 1, 2 and 3 components, and document the results of the reconciliation analysis.
3.14	Pressure-boundary welds in ASME Code Class 1, 2 and 3 components meet ASME Code Section III non-destructive examination requirements.	An inspection of the as-built pressure- boundary welds in ASME Code Class 1, 2 and 3 components will be performed.	ASME Code reports(s) exist that conclude that ASME Code Section III requirements are met for non-destructive examination of pressure-boundary welds in ASME Code Class 1, 2 and 3 components.
3.15	ASME Code Class 1, 2 and 3 components retain their pressure-boundary integrity at their design pressure.	A hydrostatic test will be conducted on ASME Code Class 1, 2 and 3 components that are required to be hydrostatically tested by the ASME Code Section III.	ASME Code Data Report(s) exist and conclude that the results of the hydrostatic test of ASME Code Class 1, 2 and 3 components comply with the requirements of ASME Code Section III.
3.16	ASME Code Class 1, 2 and 3 components are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.	An inspection of the as-built construction activities and documentation for ASME Code Class 1, 2 and 3 components will be conducted.	ASME Code Data Report(s) exist that conclude that ASME Code Class 1, 2 and 3 components are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.

Table 3.5-4—Containment Isolation ITAAC
Sheet 4 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.17	Containment isolation valves listed in Table 3.5-3 are located close to containment penetrations as practical with consideration of the following: • Access for inspection of welds. • Containment leak testing. • Replacement. • Valve maintenance.	An inspection and analysis will be performed to verify the as-built location of containment isolation valves.	A report concludes that the containment isolation valves listed in Table 3.5-3 are located as close to the containment penetrations as practical with consideration of the following: • Access for inspection of welds. • Containment leak testing. • Replacement. • Valve maintenance.
4.1	Displays listed in Table 3.5-2 are indicated on the PICS operator workstations in the MCR and the RSS.	a. Tests will be performed to verify that the displays listed in Table 3.5-2 are indicated on the PICS operator workstations in the MCR by using test input signals to PICS. b. Tests will be performed to verify that the displays listed in Table 3.5-2 are indicated on the PICS operator workstations in the RSS by using test input signals inputs to PICS.	a. Displays listed in Table 3.5-2 are indicated on the PICS operator workstations in the MCR. b. Displays listed in Table 3.5-2 are indicated on the PICS operator workstations in the RSS.
4.2	Controls on the PICS operator workstations in the MCR perform the function listed in Table 3.5-2.	Tests will be performed using controls on the PICS operator workstations in the MCR.	Controls on the PICS operator workstations in the MCR perform the function listed in Table 3.5-2.
4.3	Equipment listed as being controlled by a PACS module in Table 3.5-2 responds to the state requested and provides drive monitoring signals back to the PACS module. The PACS module will protect the equipment by terminating the output command upon the equipment reaching the requested state.	A test will be performed using test input signals to verify equipment controlled by a PACS module responds to the state requested and provides drive monitoring signals back to the PACS module.	Equipment listed as being controlled by a PACS module in Table 3.5-2 responds to the state requested and provides drive monitoring signals back to the PACS module. The PACS module will protect the equipment by terminating the output command upon the equipment reaching the requested state.

Table 3.5-4—Containment Isolation ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.1	Equipment designated as Class 1E in Table 3.5-2 are powered from the Class 1E division as listed in Table 3.5-2 in a normal or alternate feed condition.	a. Testing will be performed by providing a test input signal in each normally aligned division.	a. The test input signal provided in the normally aligned division is present at the respective Class 1E equipment identified in Table 3.5-2.
		b. Testing will be performed by providing a test input signal in each division with the alternate feed aligned to the divisional pair.	b. The test input signal provided in each division with the alternate feed aligned to the divisional pair is present at the respective Class 1E equipment identified in Table 3.5-2.
5.2	Deleted.	Deleted.	Deleted.
5.3	Deleted.	Deleted.	Deleted.
5.4	Deleted.	Deleted.	Deleted.

Table 3.5-4—Containment Isolation ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.5	Containment electrical penetrations are protected from fault currents that are greater than continuous current rating.	a. An analysis will be performed to verify that containment electrical penetrations are protected from fault currents that are greater than continuous current rating.	a. Analysis concludes for electrical penetration assemblies that either maximum current through the containment electrical penetration does not exceed continuous current rating or the containment electrical penetration assembly circuits have redundant in-series protection devices which are coordinated with the protected containment electrical penetration assembly's rated short-circuit thermal capacity, preventing the analyzed current from exceeding the continuous current rating of the associated containment electrical penetration.
		b. An inspection will be performed to verify that as-built containment electrical penetration assembly circuits have redundant in-series protection devices which are coordinated with the protected containment electrical penetration assembly's rated short-circuit thermal capacity.	b. Containment electrical penetration assembly circuits have redundant in-series protection devices which are coordinated with the protected containment electrical penetration assembly's rated short-circuit thermal capacity.

Table 3.5-4—Containment Isolation ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.1	Equipment designated as harsh environment in Table 3.5-2 will perform the function listed in Table 3.5-1 under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions.	a. Type tests or type tests and analysis will be performed to demonstrate the ability of the equipment designated as harsh environment in Table 3.5-2 to perform the function listed in Table 3.5-1 under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions.	a. EQDPs conclude that the equipment designated as harsh environment in Table 3.5-2 can perform the function listed in Table 3.5-1 under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions, including the time required to perform the listed function.
		b. An inspection will be performed of the as-built equipment designated as harsh environment in Table 3.5-2 to verify that the equipment, including anchorage, are installed per the approved design requirements.	b. Inspection reports conclude that the equipment designated as harsh environment in Table 3.5-2, including anchorage, are installed per the approved design requirements.

Table 3.5-4—Containment Isolation ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.2	Containment electrical penetration assemblies designated as harsh environment in Table 3.5-2 can perform their function under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions.	a. Type tests or type tests and analysis will be performed to demonstrate the ability of the containment electrical penetration assemblies designated as harsh environment in Table 3.5-2 to perform their safety function under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions.	a. EQDPs conclude that the containment electrical penetration assemblies designated as harsh environment in Table 3.5-2 can perform their safety function under normal environmental conditions, containment test conditions, anticipated operational occurrences, and accident and post-accident environmental conditions, including the time required to perform the listed function.
		b. An inspection will be performed of the as-built containment electrical penetration assemblies designated as harsh environment in Table 3.5-2 to verify that the containment electrical penetration assemblies, including anchorage, are installed per the approved design requirements.	b. Inspection reports conclude that the containment electrical penetration assemblies designated as harsh environment in Table 3.5-2, including anchorage, are installed per the approved design requirements.
7.1	Class 1E valves listed in Table 3.5-2 will function to change position as listed in Table 3.5-1 under normal operating conditions.	Tests will be performed to demonstrate the ability of Class 1E valves to change position under normal operating conditions.	Class 1E valves listed in Table 3.5-2 change position as listed in Table 3.5-1 under normal operating conditions.

Table 3.5-4—Containment Isolation ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
7.2	Containment isolation valves listed in Table 3.5-3 close within the valve closure time listed in Table 3.5-3 after receipt of a containment isolation signal.	Tests will be performed using test input to demonstrate the ability of the containment isolation valves listed in Table 3.5-3 to close within the valve closure time after receipt of a containment isolation signal.	Containment isolation valves listed in Table 3.5-3 close within the valve closure time listed in Table 3.5-3 after receipt of a containment isolation test input signal from the PACS module.