2.7.2 Safety Chilled Water System

1.0 Description

The safety chilled water system (SCWS) is a safety-related system that delivers refrigerated chilled water to the safety-related heating, ventilation, air conditioning (HVAC) systems and to Division 1 and Division 4 low head safety injection (LHSI) motor cooler and pump sealing cooler.

The SCWS significant safety-related function is to provide chilled water as a heat sink to safety-related HVAC systems, the main control room (MCR) habitability, and cooling of the LHSI pump seal coolers and motor coolers in Division 1 and Division 4 in the event of a design basis accident.

The SCWS significant non-safety-related function is for Division 1 and Division 4 to function in the event of a station blackout (SBO) or loss of ultimate heat sink.

2.0 Arrangement

2.1 The functional arrangement of the SCWS is as shown on Figure 2.7.2-1—Safety Chilled Water System Functional Arrangement.

2.2 The location of the SCWS equipment is as listed in Table 2.7.2-1—Safety Chilled Water System Equipment Mechanical Design.

2.3 Physical separation exists between divisions of the SCWS, excluding cross-connected piping.

3.0 Mechanical Design Features

3.1 Pumps and valves listed in Table 2.7.2-1 will be functionally designed and qualified such that each pump and 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 conditions ranging from normal operating to design-basis accident conditions.

3.2 Check valves listed in Table 2.7.2-1 will function as listed in Table 2.7.2-1.

3.3 Deleted.

3.4 Components identified as Seismic Category I in Table 2.7.2-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.7.2-1.

3.5 Deleted.

3.6 Deleted.

3.7 Deleted.

3.8 Deleted.

3.9 SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 is designed in accordance with ASME Code Section III requirements.

3.10 SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 is installed in accordance with an ASME Code Section III Design Report.

3.11 Pressure boundary welds in SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 are in accordance with ASME Code Section III.

3.12 SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 retains pressure boundary integrity at design pressure.

3.13 SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 is installed and inspected in accordance with ASME Code Section III requirements.

3.14 Components listed in Table 2.7.2-1 as ASME Code Section III are designed in accordance with ASME Code Section III requirements.

3.15 Components listed in Table 2.7.2-1 as ASME Code Section III are fabricated in accordance with ASME Code Section III requirements.

3.16 Pressure boundary welds on components listed in Table 2.7.2-1 as ASME Code Section III are in accordance with ASME Code Section III requirements.

3.17 Components listed in Table 2.7.2-1 as ASME Code Section III retain pressure boundary integrity at design pressure.

3.18 Components listed in Table 2.7.2-1 as ASME Code Section III are installed in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Displays and Controls

4.1 Displays listed in Table 2.7.2-2—Safety Chilled Water System Equipment I&C and Electrical Design are retrievable in the MCR and the remote shutdown station (RSS) as listed in Table 2.7.2-2.

4.2 The SCWS equipment controls are provided in the MCR and the RSS as listed in Table 2.7.2-2.

4.3 Deleted

4.4 The SCWS has the following interlocks with Division 1 and 2 or Division 3 and 4 cross-tied: The non running division chiller and pump(s) automatically start if the running division chiller or pumps(s) trip.

5.0 Electrical Power Design Features

5.1 The components designated as Class 1E in Table 2.7.2-2 are powered from Class 1E division as listed in Table 2.7.2-2 in a normal or alternate feed condition.

5.2 Valves listed in Table 2.7.2-2 fail as-is on loss of power.

6.0 Environmental Qualifications

6.1 Components in Table 2.7.2-2, that are designated as harsh environment, will perform the function listed in Table 2.7.2-1 in the environments that exist during and following design basis events.

7.0 Equipment and System Performance

7.1 The SCWS chiller refrigerating units shown on Figure 2.7.2-1 have the capacity to provide chilled water at the temperature to support the heat removal requirements of each user.

7.2 The pumps listed in Table 2.7.2-1 have net positive suction head available (NPSHA) that is greater than net positive suction head required (NPSHR) at system run-out flow.

7.3 The SCWS delivers water to the equipment listed in Table 2.7.2-1.

7.4 Class 1E valves listed in Table 2.7.2-2 can perform the function listed in Table 2.7.2-1 under system operating conditions.

7.5 The SCWS provides for flow testing of the chilled water circulation pumps during plant operation.

7.6 The SCWS expansion tank maintains a reserve volume to accommodate system leakage for seven days

8.0 System Inspections, Tests, Analysis, and Acceptance Criteria

Table 2.7.2-3 lists the SCWS ITAAC.

Table 2.7.2-1—Safety Chilled Water System Equipment Mechanical Design (3 Sheets)

Description	Tag Number (1)	Location	ASME Code Section III	Function	Seismic Category
Safety Chilled Water Division 1					
Air Cooled Condenser	30QKA10AC002	Safeguard Building 1	Yes	Run	I
Evaporator	30QKA10AC001	Safeguard Building 1	Yes	Run	I
Chilled Water Circulation Pump	30QKA10AP107	Safeguard Building 1	Yes	Run	I
Chilled Water Circulation Pump	30QKA10AP108	Safeguard Building 1	Yes	Run	I
Expansion Tank	30QKA10BB101	Safeguard Building 1	Yes	Maintain system static pressure	I
Flow Control Valve	30QKA10AA101	Safeguard Building 1	Yes	Open-Close	I
Flow Control Valve	30QKB10AA101	Safeguard Building 1	Yes	Open-Close	I
Flow Control Valve	30QKC10AA101	Safeguard Building 1	Yes	Open-Close	I
Check Valve	30QKA10AA003	Safeguard Building 1	Yes	Open-Close	I
Check Valve	30QKA10AA018	Safeguard Building 1	Yes	Open-Close	I
Check Valve	30QKC10AA028	Safeguard Building 1	Yes	Open-Close	I
Cross-Tie Valve	30QKA10AA102	Safeguard Building 1	Yes	Open-Close	I
Cross-Tie Valve	30QKA10AA103	Safeguard Building 1	Yes	Open-Close	I
Flow Control Valve	30QKC10AA025	Safeguard Building 1	Yes	Open-Close	I
Safety Chilled Water Division 2					
Water Cooled Condenser	30QKA20AC002	Safeguard Building 2	Yes	Run	I
Evaporator	30QKA20AC001	Safeguard Building 2	Yes	Run	I
Chilled Water Circulation Pump	30QKA20AP107	Safeguard Building 2	Yes	Run	I

Table 2.7.2-1—Safety Chilled Water System Equipment Mechanical Design (3 Sheets)

Description	Tag Number (1)	Location	ASME Code Section III	Function	Seismic Category
Chilled Water Circulation Pump	30QKA20AP108	Safeguard Building 2	Yes	Run	I
Expansion Tank	30QKA20BB101	Safeguard Building 2	Yes	Maintain system static pressure	I
Flow Control Valve	30QKA20AA101	Safeguard Building 2	Yes	Open-Close	I
Flow Control Valve	30QKB20AA101	Safeguard Building 2	Yes	Open-Close	I
Flow Control Valve	30QKC20AA101	Safeguard Building 2	Yes	Open-Close	I
Check Valve	30QKA20AA003	Safeguard Building 2	Yes	Open-Close	I
Check Valve	30QKA20AA018	Safeguard Building 2	Yes	Open-Close	I
Cross-Tie Valve	30QKA20AA102	Safeguard Building 2	Yes	Open-Close	I
Cross-Tie Valve	30QKA20AA103	Safeguard Building 2	Yes	Open-Close	I
Safety Chilled Water Division 3					
Water Cooled Condenser	30QKA30AC002	Safeguard Building 3	Yes	Run	I
Evaporator	30QKA30AC001	Safeguard Building 3	Yes	Run	I
Chilled Water Circulation Pump	30QKA30AP107	Safeguard Building 3	Yes	Run	I
Chilled Water Circulation Pump	30QKA30AP108	Safeguard Building 3	Yes	Run	I
Expansion Tank	30QKA30BB101	Safeguard Building 3	Yes	Maintain system static pressure	I
Flow Control Valve	30QKA30AA101	Safeguard Building 3	Yes	Open-Close	I
Flow Control Valve	30QKB30AA101	Safeguard Building 3	Yes	Open-Close	I
Flow Control Valve	30QKC30AA101	Safeguard Building 3	Yes	Open-Close	I
Check Valve	30QKA30AA003	Safeguard Building 3	Yes	Open-Close	I

Table 2.7.2-1—Safety Chilled Water System Equipment Mechanical Design (3 Sheets)

Description	Tag Number (1)	Location	ASME Code Section III	Function	Seismic Category
Check Valve	30QKA30AA018	Safeguard Building 3	Yes	Open-Close	I
Cross-Tie Valve	30QKA30AA102	Safeguard Building 3	Yes	Open-Close	I
Cross-Tie Valve	30QKA30AA103	Safeguard Building 3	Yes	Open-Close	I
Safety Chilled Water Division 4					
Air Cooled Condenser	30QKA40AC002	Safeguard Building 4	Yes	Run	I
Evaporator	30QKA40AC001	Safeguard Building 4	Yes	Run	I
Chilled Water Circulation Pump	30QKA40AP107	Safeguard Building 4	Yes	Run	I
Chilled Water Circulation Pump	30QKA40AP108	Safeguard Building 4	Yes	Run	I
Expansion Tank	30QKA40BB101	Safeguard Building 4	Yes	Maintain system static pressure	I
Flow Control Valve	30QKA40AA101	Safeguard Building 4	Yes	Open-Close	I
Flow Control Valve	30QKB40AA101	Safeguard Building 4	Yes	Open-Close	I
Flow Control Valve	30QKC40AA101	Safeguard Building 4	Yes	Open-Close	I
Check Valve	30QKA40AA003	Safeguard Building 4	Yes	Open-Close	I
Check Valve	30QKA40AA018	Safeguard Building 4	Yes	Open-Close	I
Check Valve	30QKC40AA028	Safeguard Building 4	Yes	Open-Close	I
Cross-Tie Valve	30QKA40AA102	Safeguard Building 4	Yes	Open-Close	I
Cross-Tie Valve	30QKA40AA103	Safeguard Building 4	Yes	Open-Close	I
Flow Control Valve	30QKC40AA025	Safeguard Building 4	Yes	Open-Close	I

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

Table 2.7.2–2—Safety Chilled Water System Equipment I&C and Electrical Design (4 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	EQ – Harsh Env.	PACS	MRC / RSS Displays	MCR / RSS Controls
Safety Chilled Water Division 1							
Chiller Refrigerating Unit with Air Cooled Condenser	30QKA10AH112	Safeguard Building 1	Division 1^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA10AP107	Safeguard Building 1	Division 1^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA10AP108	Safeguard Building 1	Division 1^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Cross-Tie Valve	30QKA10AA102	Safeguard Building 1	Division 1^N Division 2^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Cross-Tie Valve	30QKA10AA103	Safeguard Building 1	Division 1^N Division 2^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Flow Control Valve	30QKA10AA101	Safeguard Building 1	Division 1^N Division 2^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKB10AA101	Safeguard Building 1	Division 1^N Division 2^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKC10AA101	Safeguard Building 1	Division 1^N Division 2^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKC10AA025	Safeguard Building 1	Division 1^N Division 2^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Safety Chilled Water Division 2							
Chiller Refrigerating Unit with Water Cooled Condenser	30QKA20AH112	Safeguard Building 2	Division 2^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop

Table 2.7.2–2—Safety Chilled Water System Equipment I&C and Electrical Design (4 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	EQ – Harsh Env.	PACS	MRC / RSS Displays	MCR / RSS Controls
Chilled Water Circulation Pump	30QKA20AP107	Safeguard Building 2	Division 2^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA20AP108	Safeguard Building 2	Division 2^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Cross-Tie Valve	30QKA20AA102	Safeguard Building 2	Division 2^N Division 1^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Cross-Tie Valve	30QKA20AA103	Safeguard Building 2	Division 2^N Division 1^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Flow Control Valve	30QKA20AA101	Safeguard Building 2	Division 2^N Division 1^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKB20AA101	Safeguard Building 2	Division 2^N Division 1^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKC20AA101	Safeguard Building 2	Division 2^N Division 1^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Safety Chilled Water Division 3							
Chiller Refrigerating Unit with Water Cooled Condenser	30QKA30AH112	Safeguard Building 3	Division 3^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA30AP107	Safeguard Building 3	Division 3^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA30AP108	Safeguard Building 3	Division 3^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Cross-Tie Valve	30QKA30AA102	Safeguard Building 3	Division 3^N Division 4^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close

Table 2.7.2–2—Safety Chilled Water System Equipment I&C and Electrical Design (4 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	EQ – Harsh Env.	PACS	MRC / RSS Displays	MCR / RSS Controls
Cross-Tie Valve	30QKA30AA103	Safeguard Building 3	Division 3^N Division 4^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Flow Control Valve	30QKA30AA101	Safeguard Building 3	Division 3^N Division 4^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKB30AA101	Safeguard Building 3	Division 3^N Division 4^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKC30AA101	Safeguard Building 3	Division 3^N Division 4^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Safety Chilled Water Division 4							
Chiller Refrigerating Unit with Air Cooled Condenser	30QKA40AH112	Safeguard Building 4	Division 4^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA40AP107	Safeguard Building 4	Division 4^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Chilled Water Circulation Pump	30QKA40AP108	Safeguard Building 4	Division 4^N	Yes	Yes	On-off / On-off	Start-Stop / Start-Stop
Cross-Tie Valve	30QKA40AA102	Safeguard Building 4	Division 4^N Division 3^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Cross-Tie Valve	30QKA40AA103	Safeguard Building 4	Division 4^N Division 3^A	Yes	Yes	Pos / Pos	Open-Close / Open-Close
Flow Control Valve	30QKA40AA101	Safeguard Building 4	Division 4^N Division 3^A	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKB40AA101	Safeguard Building 4	Division 4^N Division 3^A	Yes	Yes	Pos / Pos	Throttling / Throttling

Table 2.7.2–2—Safety Chilled Water System Equipment I&C and Electrical Design (4 Sheets)

Description	Tag Number (1)	Location	IEEE Class 1E (2)	EQ – Harsh Env.	PACS	MRC / RSS Displays	MCR / RSS Controls
Flow Control Valve	30QKC40AA101	Safeguard Building 4	Division 4^{N} Division 3^{A}	Yes	Yes	Pos / Pos	Throttling / Throttling
Flow Control Valve	30QKC40AA025	Safeguard Building 4	Division 4^{N} Division 3^{A}	Yes	Yes	Pos / Pos	Throttling / Throttling

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

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

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the SCWS is as shown on Figure 2.7.2-1.	Inspections of the as-built system is as shown on Figure 2.7.2-1 will be conducted.	The as-built SCWS conforms to the functional arrangement as shown on Figure 2.7.2-1.
2.2	The location of the SCWS equipment is as listed in Table 2.7.2-1.	An inspection will be performed of the location of the equipment listed in Table 2.7.2-1.	The equipment listed in Table 2.7.2-1 is located as listed in Table 2.7.2-1.
2.3	Physical separation exists between divisions of the SCWS.	Inspection will be performed to verify that the divisions of the SCWS are located in separate Safeguard Buildings.	The divisions of the SCWS are located in separate Safeguard Buildings as shown on Figure 2.7.2-1.
3.1	Pumps and valves listed in Table 2.7.2-1 will be functionally designed and qualified such that each pump and 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 conditions ranging from normal operating to design-basis accident conditions.	Tests or type tests of the pumps and valves listed in Table 2.7.2-1 will be conducted to demonstrate that the pumps and valves function under conditions ranging from normal operating to design-basis accident conditions.	A test report exists and concludes that the pumps and valves listed in Table 2.7.2-1 function under conditions ranging from normal operating to design-basis accident conditions.
3.2	Check valves listed in Table 2.7.2-1 will function as listed in Table 2.7.2-1.	Tests will be performed for the operation of the check valves listed in Table 2.7.2-1.	The check valves listed in Table 2.7.2-1 perform the functions listed in Table 2.7.2-1.
3.3	Deleted.	Deleted.	Deleted.

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.4	Components identified as Seismic Category I in Table 2.7.2-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.7.2-1.	a. Type tests, analyses, or a combination of type tests and analyses will be performed on the components identified as Seismic Category I in Table 2.7.2-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements. b. Inspections will be performed of the Seismic Category I components identified in Table 2.7.2-1 to verify that the components, including anchorage, are installed as specified on the construction drawings and deviations have been reconciled to the seismic qualification reports (SQDP, EQDP, or analyses).	a. Seismic qualification reports (SQDP, EQDP, or analyses) exist and conclude that the Seismic Category I components identified in Table 2.7.2-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.7.2-1 including the time required to perform the listed function. b. Inspection reports exist and conclude that the Seismic Category I components identified in Table 2.7.2-1, including anchorage, are installed as specified on the construction drawings and deviations have been reconciled to the seismic qualification reports (SQDP, EQDP, or analyses).
3.5	Deleted.	Deleted.	Deleted.
3.6	Deleted.	Deleted.	Deleted.
3.7	Deleted.	Deleted.	Deleted.
3.8	Deleted.	Deleted.	Deleted.
3.9	SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 is designed in accordance with ASME Code Section III requirements.	Inspections of the ASME Code Section III Design Reports (NCA-3550) and associated reference documents will be performed. **{{DAC}}**	ASME Code Section III Design Reports (NCA-3550) exist and conclude that SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 complies with ASME Code Section III requirements. **{{DAC}}**

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.10	SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 is installed in accordance with an ASME Code Section III Design Report.	Analyses to reconcile as-built deviations to the ASME Code Design Reports (NCA-3550) will be performed.	For SCWS piping shown as ASME Code Section III on Figure 2.7.2-1, ASME Code Data Reports (N-5) exist and conclude that design reconciliation (NCA-3554) has been completed in accordance with the ASME Code Section III for the as-built system. The report(s) document the as-built condition.
3.11	Pressure boundary welds in SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 are in accordance with ASME Code Section III.	Inspections of pressure boundary welds verify that welding is performed in accordance with ASME Code Section III requirements.	ASME Code Section III Data Reports exist and conclude that pressure boundary welding for SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 has been performed in accordance with ASME Code Section III.
3.12	SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 retain pressure boundary integrity at design pressure.	Hydrostatic tests will be performed on the as-built system.	For SCWS piping shown as ASME Code Section III on Figure 2.7.2-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.13	SCWS piping shown as ASME Code Section III on Figure 2.7.2-1 is installed and inspected in accordance with ASME Code Section III requirements.	An inspection of the as-built piping will be performed.	For SCWS piping shown as ASME Code Section III on Figure 2.7.2-1, N–5 Data Reports exist and conclude that installation and inspection are in accordance with ASME Code Section III requirements.
3.14	Components listed in Table 2.7.2-1 as ASME Code Section III are designed in accordance with ASME Code Section III requirements.	Inspections of ASME Code Section III Design Reports and associated reference documents will be performed.	ASME Code Section III Design Reports (NCA-3550) exist and conclude that components listed as ASME Code Section III in Table 2.7.2-1 comply with ASME Code Section III requirements.

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.15	Components listed in Table 2.7.2-1 as ASME Code Section III are fabricated in accordance with ASME Code Section III requirements.	An analysis will be performed to verify that deviations to the component design reports (NCA-3550) have been reconciled.	ASME Code Section III Design Reports (NCA-3550) exist and conclude that components listed as ASME Code Section III in Table 2.7.2-1 comply with ASME Code Section III requirements and any deviations to the design report have been reconciled.
3.16	Pressure boundary welds on components listed in Table 2.7.2-1 as ASME Code Section III are in accordance with ASME Code Section III requirements.	Inspections of pressure boundary welds will be performed to verify that welding is performed in accordance with ASME Code Section III requirements.	For components listed as ASME Code Section III in Table 2.7.2-1, ASME Code Section III Data Reports (NCA-8000) exist and conclude that pressure boundary welding has been performed in accordance with ASME Code Section III.
3.17	Components listed in Table 2.7.2-1 as ASME Code Section III retain pressure boundary integrity at design pressure.	Hydrostatic tests will be performed on the components.	For components listed as ASME Code Section III in Table 2.7.2-1, ASME Code Section III Data Reports exist and conclude that hydrostatic test results comply with ASME Code Section III requirements.
3.18	Components listed in Table 2.7.2-1 as ASME Code Section III are installed in accordance with ASME Code Section III requirements.	An inspection of ASME Code Data Reports will be performed.	ASME Code Section III N-5 Data Reports exist and conclude that components listed as ASME Code Section III in Table 2.7.2-1 have been installed in accordance with ASME Code Section III requirements.
4.1	Displays exist or can be retrieved in the MCR and RSS as identified in Table 2.7.2-2.	Tests will be performed for the retrievability of the displays in the MCR or the RSS as listed in Table 2.7.2-2.	a. The displays listed in Table 2.7.2-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.7.2-2 as being retrieved in the RSS can be retrieved in the RSS.

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
4.2	Controls exist in the MCR and the RSS as identified in Table 2.7.2-2.	Test will be performed for the existence of control signals from the MCR and the RSS to the equipment listed in Table 2.7.2-2.	a. The controls listed in Table 2.7.2-2 as being in the MCR exist in the MCR. b. The controls listed in Table 2.7.2-2 as being in the RSS exist in the RSS.
4.3	Deleted.	Deleted.	Deleted.
4.4	The SCWS has the following interlocks with Division 1 and 2 or Division 3 and 4 cross-tied: The non running division chiller and pump(s) automatically start if the running division chiller or pumps(s) trip.	Tests will be performed using test signals to verify the interlock.	The following interlock responds as specified below when activated by a test signal: With Division 1 and 2 or Division 3 and 4 cross-tied: The non running division chiller and pump(s) automatically start if the running division chiller or pumps(s) trip.
5.1	The components designated as Class 1E in Table 2.7.2-2 are powered from the Class 1E division as listed in Table 2.7.2-2 in a normal or alternate feed condition.	a. Testing will be performed for components designated as Class 1E in Table 2.7.2-2 by providing a test signal in each normally aligned division. b. Testing will be performed for components designated as Class 1E in Table 2.7.2-2 by providing a test signal in each division with the alternate feed aligned to the divisional pair.	a. The test signal provided in the normally aligned division is present at the respective Class 1E component identified in Table 2.7.2-2. b. The test signal provided in each division with the alternate feed aligned to the divisional pair is present at the respective Class 1E component identified in Table 2.7.2-2.
5.2	Valves listed in Table 2.7.2-2 fail as-is on loss of power.	Testing will be performed for the valves listed in Table 2.7.2-2 to fail as-is on loss of power.	Following loss of power, the valves listed in Table 2.7.2-2 fail as-is.

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.1	Components in Table 2.7.2-2, that are designated as harsh environment, will perform the function listed in Table 2.7.2-1 in the environments that exist during and following design basis events.	a. Type tests or type tests and analysis will be performed to demonstrate the ability of the components listed as harsh environment in Table 2.7.2-2 to perform the function listed in Table 2.7.2-1 for the environmental conditions that could occur during and following design basis events. b. Components listed as harsh environment in Table 2.7.2-2 will be inspected to verify installation in accordance with the construction drawings including the associated wiring, cables and terminations. Deviations to the construction drawings will be reconciled to the EQDP.	a. Environmental Qualification Data Packages (EQDP) exist and conclude that the components listed as harsh environment in Table 2.7.2-2 can perform the function listed in Table 2.7.2-1 during and following design basis events including the time required to perform the listed function. b. Inspection reports exists and conclude that the components listed in Table 2.7.2-2 as harsh environment has been installed per the construction drawings and any deviations have been reconciled to the EQDP.
7.1	The SCWS chiller refrigerating units shown on Figure 2.7.2-1, have the capacity to provide chilled water at the temperature to support the heat removal requirements of each user.	Tests and analyses will be performed to demonstrate the capability of the SCWS chiller refrigerating units to provide chilled water at a temperature to support the heat removal requirements of all users.	The SCWS chiller refrigerating units have the capacity to provide chilled water at the required temperature of 41°F.
7.2	The pumps listed in Table 2.7.2-1 have NPSHA that is greater than NPSHR at system run-out flow.	Testing will be performed to verify NPSHA for pumps listed in Table 2.7.2-1.	The pumps listed in Table 2.7.2-1 have NPSHA that is NPSHR at the minimum expansion tank level.

Table 2.7.2-3—Safety Chilled Water System ITAAC
(7 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
7.3	The SCWS delivers water to the equipment listed in Table 2.7.2-1.	Tests and analyses will be performed to determine the SCWS delivery rate under operating conditions.	The SCWS delivers at least the following flowrate to the equipment listed in Table 2.7.2-1. - 30 QKA 10/20/30/40 AP107: 565 gpm - 30 QKA 10/20/30/40 AP108: 565 gpm
7.4	Class 1E valves listed in Table 2.7.2-2 perform the function listed in Table 2.7.2-1 under system operating conditions.	Tests and analyses or a combination of tests and analyses will be performed to demonstrate the ability of the valves listed in Table 2.7.2-2 to change position as listed in Table 2.7.2-1 under system operating conditions.	The valve changes position as listed in Table 2.7.2-1 under system operating conditions.
7.5	The SCWS has provisions to allow full flow testing during plant operation.	Testing of flow of the SCWS through the recirculation loop back to the pump suction will be performed.	The flow test line allows full system flow through the recirculation loop back to the pump suction.
7.6	The SCWS expansion tank maintains a reserve volume to accommodate system leakage for seven days.	Tests and analysis will be performed to verify that the SCWS expansion tank maintains a reserve volume to accommodate system leakage for seven days.	SCWS expansion tank maintains a reserve volume of 100 gallons to accommodate system leakage for seven days.

Next File