2.6.7 Electrical Division of Safeguard Building Ventilation System

1.0 Description

The electrical division of safeguard building ventilation system (SBVSE) provides ventilation of the electrical areas of Safeguard Buildings 1. 2, 3, & 4 to control the building ambient conditions for design basis accidents, personnel comfort, and equipment protection. The SBVSE provides cooling, heating, filtration, and ventilation for the electrical areas of the Safeguard Buildings to remove equipment heat and heat generated from other sources. The system is also capable of providing heat to maintain a minimum temperature in the buildings.

The SBVSE provides the following safety-related functions:

- Maintains acceptable ambient conditions for the safety related components in the electrical and I&C rooms of the Safeguard Buildings during accident conditions.
- Maintains acceptable ambient conditions inside the Emergency Feed Water System pump rooms and Component Cooling Water System rooms of the Safeguard Buildings during accident conditions.
- Ventilates the battery rooms and Safety Chilled Water System rooms in the Safeguard Buildings to maintain the hydrogen concentration and the refrigerant concentration below allowable limits during accident conditions.

The SBVSE provides the following non-safety related functions:

- Maintains acceptable ambient conditions in the Safeguard Buildings for equipment operation and personnel comfort during normal plant operation and plant maintenance.
- Ventilates the battery rooms and Safety Chilled Water System rooms in the Safeguard Building to maintain the hydrogen concentration and the refrigerant concentration below allowable limits during normal plant operation and plant maintenance.
- Supplies air to the Safeguard Building Controlled Area Ventilation System (SBVS) during normal plant operation.

2.0 Arrangement

2.1 The functional arrangement of the SBVSE is as shown on the following figures:

- Figure 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Division 1 and Division 4 Air Intake Functional Arrangement.
- Figure 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Division 1 and Division 4 Air Supply and Exhaust Functional Arrangement.

- Figure 2.6.7-3—Electrical Division of Safeguard Building Ventilation System Division 2 and Division 3 Air Intake Functional Arrangement.

- Figure 2.6.7-4—Electrical Division of Safeguard Building Ventilation System Division 2 and Division 3 Air Supply and Exhaust Functional Arrangement.

2.2 The location of the SBVSE equipment is as listed in Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design.

2.3 Physical separation exists between the safety- related trains of the SBVSE.

3.0 Mechanical Design Features

3.1 Deleted.

3.2 Equipment listed in Table 2.6.7-1 can perform the functions listed in Table 2.6.7-1 under system operating conditions.

3.3 Components identified as Seismic Category I in Table 2.6.7-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.6.7-1.

3.4 Components listed in Table 2.6.7-1 as ASME AG-1 Code are designed in accordance with ASME AG-1 Code requirements.

3.5 Components listed in Table 2.6.7-1 as ASME AG-1 Code are fabricated in accordance with ASME AG-1 Code requirements, including welding requirements.

3.6 Components listed in Table 2.6.7-1 as ASME AG-1 Code are inspected and tested in accordance with ASME AG-1 Code requirements.

4.0 Displays and Controls

4.1 Displays listed in Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design, are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.6.7-2.

4.2 The SBVSE equipment controls exist in the MCR and RSS as listed in Table 2.6.7-2.

4.3 Equipment listed as being controlled by a priority and actuator control system (PACS) module in Table 2.6.7-2 responds to the state requested by a test signal.

5.0 Electrical Power Design Features

5.1 The equipment designated as Class 1E in Table 2.6.7-2 are powered from the Class 1E division as listed in Table 2.6.7-2 in a normal or alternate feed condition.

5.2 Deleted.

6.0 Equipment and System Performance

6.1 Each SBVSE air intake train has the capability to remove the design heat load.

6.2 The recirculation cooling units start and stop automatically in the emergency feedwater system and the component cooling water system pump rooms when the room temperature reaches preset maximum and minimum temperatures in the pump rooms.

7.0 Inspections, Tests, Analyses and Acceptance Criteria (ITAAC)

Table 2.6.7-3 lists the SBVSE ITAAC.

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Air intake Safeguard Building Division 1 and Division 4					
Electric heaters	30SAC01AH001 30SAC04AH001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual isolation dampers	30SAC01AA002 30SAC04AA002	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Motor operated dampers	30SAC01AA003 30SAC04AA003	Safeguard Building 1 Safeguard Building 4	Yes	Open	I
Motor operated dampers	30SAC01AA004 30SAC04AA004	Safeguard Building 1 Safeguard Building 4	Yes	Open	I
Pre-filters	30SAC01AT004 30SAC04AT004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Roughing filters	30SAC01AT005 30SAC04AT005	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Electric heaters	30SAC01AH002 30SAC04AH002	Safeguard Building 1 Safeguard Building 4	Yes	On / Off (based on ambient conditions)	I
Air cooling coils	30SAC01AC001 30SAC04AC001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Moisture separators	30SAC01AT006 30SAC04AT006	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Supply air fans	30SAC01AN001 30SAC04AN001	Safeguard Building 1 Safeguard Building 4	Yes	Run	I
Backdraft dampers	30SAC01AA005 30SAC04AA005	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Manual dampers	30SAC11AA001 30SAC14AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11AA004 30SAC14AA004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11AA005 30SAC14AA005	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11AA003 30SAC14AA003	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC05AA002 30SAC08AA002	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Air Intake Safeguard Building Division 2 and Division 3					
Electric heaters	30SAC02AH001 30SAC03AH001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC02AA002 30SAC03AA002	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Motor operated dampers	30SAC02AA003 30SAC03AA003	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Motor operated dampers	30SAC02AA004 30SAC03AA004	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Pre- filters	30SAC02AT004 30SAC03AT004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Roughing filters	30SAC02AT005 30SAC03AT005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Electric heaters	30SAC02AH002 30SAC03AH002	Safeguard Building 2 Safeguard Building 3	Yes	On / Off (based on ambient conditions)	I
Air cooling coils	30SAC02AC001 30SAC03AC001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Moisture separators	30SAC02AT006 30SAC03AT006	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Supply air fans	30SAC02AN001 30SAC03AN001	Safeguard Building 2 Safeguard Building 3	Yes	Run	I
Backdraft dampers	30SAC02AA005 30SAC03AA005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC12AA001 30SAC13AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC12AA005 30SAC13AA005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Exhaust Train Safeguard Building Divisions 1 and 4					
Manual dampers	30SAC31AA001 30SAC34AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Exhaust Fans	30SAC31AN001 30SAC34AN001	Safeguard Building 1 Safeguard Building 4	Yes	Run	I
Motor operated dampers	30SAC31AA002 30SAC34AA002	Safeguard Building 1 Safeguard Building 4	Yes	Open	I
Backdraft dampers	30SAC31AA003 30SAC34AA003	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Manual dampers	30SAC31AA004 30SAC34AA004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC35AA001 30SAC38AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC35AA004 30SAC38AA004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Exhaust Train Safeguard Building Divisions 2 and 3					
Manual dampers	30SAC32AA001 30SAC33AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Exhaust Fans	30SAC32AN001 30SAC33AN001	Safeguard Building 2 Safeguard Building 3	Yes	Run	I
Motor operated dampers	30SAC32AA002 30SAC33AA002	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Backdraft dampers	30SAC32AA003 30SAC33AA003	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC32AA004 30SAC33AA004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC22AA001 30SAC23AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Battery / Safety Chilled Water Room Exhaust Train Safeguard Building Divisions 1, 2, 3, and 4					
Manual dampers	30SAC51AA001 30SAC52AA001 30SAC53AA001 30SAC54AA001	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	N/A	I
Exhaust air fans	30SAC51AN001 30SAC52AN001 30SAC53AN001 30SAC54AN001	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	Run	I
Backdraft dampers	30SAC51AA002 30SAC52AA002 30SAC53AA002 30SAC54AA002	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	N/A	I
Motor operated dampers	30SAC51AA003 30SAC52AA003 30SAC53AA003 30SAC54AA003	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	Open	I
Manual dampers	30SAC51AA004 30SAC52AA004 30SAC53AA004 30SAC54AA004	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	N/A	I
Motor operated dampers	30SAC51AA006 30SAC52AA006 30SAC53AA006 30SAC54AA006	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	Open	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (6 Sheets)

Description	Tag Number (1)	Location	ASME AG-1 Code	Function	Seismic Category
Recirculation Cooling Units Safeguard Building Divisions 1, 2, 3, and 4					
Air cooling coils	30SAC61AC001 30SAC61AC002 30SAC62AC001 30SAC62AC002 30SAC63AC001 30SAC63AC002 30SAC64AC001 30SAC64AC002	Safeguard Building 1 Safeguard Building 1 Safeguard Building 2 Safeguard Building 2 Safeguard Building 3 Safeguard Building 3 Safeguard Building 4 Safeguard Building 4	Yes	N/A	I
Moisture separators	30SAC61AT001 30SAC61AT002 30SAC62AT001 30SAC62AT002 30SAC63AT001 30SAC63AT002 30SAC64AT001 30SAC64AT002	Safeguard Building 1 Safeguard Building 1 Safeguard Building 2 Safeguard Building 2 Safeguard Building 3 Safeguard Building 3 Safeguard Building 4 Safeguard Building 4	Yes	N/A	I
Recirculation Fans	30SAC61AN001 30SAC61AN02 30SAC62AN001 30SAC62AN002 30SAC63AN001 30SAC63AN002 30SAC64AN001 30SAC64AN002	Safeguard Building 1 Safeguard Building 1 Safeguard Building 2 Safeguard Building 2 Safeguard Building 3 Safeguard Building 3 Safeguard Building 4 Safeguard Building 4	Yes	Run	I

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

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Air Intake Safeguard Building Division 1						
Electric Heater	30SAC01AH001	Safeguard Building 1	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC01AA003	Safeguard Building 1	Division 1^{N} Division 2^{A}	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC01AA004	Safeguard Building 1	Division 1^{N} Division 2^{A}	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC01AH002	Safeguard Building 1	Division 1^{N}	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC01AN001	Safeguard Building 1	Division 1^{N} Division 2^{A}	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Air Intake Safeguard Building Division 2						
Electric Heater	30SAC02AH001	Safeguard Building 2	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC02AA003	Safeguard Building 2	Division 2^{N} Division 1^{A}	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC02AA004	Safeguard Building 2	Division 2^{N} Division 1^{A}	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC02AH002	Safeguard Building 2	Division 2^{N}	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC02AN001	Safeguard Building 2	Division 2^{N} Division 1^{A}	yes	On-Off / On-Off	Run-Stop / Run-Stop
Air Intake Safeguard Building Division 3						
Electric Heater	30SAC03AH001	Safeguard Building 3	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Motor operated damper	30SAC03AA003	Safeguard Building 3	Division 3^N Division 4^A	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC03AA004	Safeguard Building 3	Division 3^N Division 4^A	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC03AH002	Safeguard Building 3	Division 3^N	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC03AN001	Safeguard Building 3	Division 3^N Division 4^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Air Intake Safeguard Building Division 4						
Electric Heater	30SAC04AH001	Safeguard Building 4	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC04AA003	Safeguard Building 4	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC04AA004	Safeguard Building 4	Division 4^N Division 3^A	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC04AH002	Safeguard Building 4	Division 4^N	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC04AN001	Safeguard Building 4	Division 4^N Division 3^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Exhaust Train, Safeguard Building Division 1						
Exhaust Fan	30SAC31AN001	Safeguard Building 1	Division 1^N Division 2^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC31AA002	Safeguard Building 1	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Exhaust Fan	30SAC51AN001	Safeguard Building 1	Division 1^N Division 2^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC51AA003	Safeguard Building 1	Division 1^N Division 2^A	Yes	Position / Position	Open-Close / Open-Close
Exhaust Train, Safeguard Building Division 2						
Exhaust Fan	30SAC32AN001	Safeguard Building 2	Division 2^N Division 1^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC32AA002	Safeguard Building 2	Division 2^N Division 1^A	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC52AN001	Safeguard Building 2	Division 2^N Division 1^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC52AA003	Safeguard Building 2	Division 2^N Division 1^A	Yes	Position / Position	Open-Close / Open-Close
Exhaust Train, Safeguard Building Division 3						
Exhaust Fan	30SAC33AN001	Safeguard Building 3	Division 3^N Division 4^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC33AA002	Safeguard Building 3	Division 3^N Division 4^A	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC53AN001	Safeguard Building 3	Division 3^N Division 4^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC53AA003	Safeguard Building 3	Division 3^N Division 4^A	Yes	Position / Position	Open-Close / Open-Close
Exhaust Train, Safeguard Building Division 4						
Exhaust Fan	30SAC34AN001	Safeguard Building 4	Division 4^N Division 3^A	Yes	On-Off / On-Off	Run-Stop / Run-Stop

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Motor operated damper	30SAC34AA002	Safeguard Building 4	Division 4^{N} Division 3^{A}	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC54AN001	Safeguard Building 4	Division 4^{N} Division 3^{A}	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC54AA003	Safeguard Building 4	Division 4^{N} Division 3^{A}	Yes	Position / Position	Open-Close / Open-Close
Recirculation Cooling Units, Safeguard Building Divisions 1, 2, 3, and 4						
Recirculation Fan	30SAC61AN001	Safeguard Building 1	Division 1^{N} Division 2^{A}	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC61AN002	Safeguard Building 1	Division 1^{N} Division 2^{A}	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC62AN001	Safeguard Building 2	Division 2^{N} Division 1^{A}	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC62AN002	Safeguard Building 2	Division 2^{N} Division 1^{A}	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC63AN001	Safeguard Building 3	Division 3^{N} Division 4^{A}	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC63AN002	Safeguard Building 3	Division 3^{N} Division 4^{A}	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC64AN001	Safeguard Building 4	Division 4^{N} Division 3^{A}	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC64AN002	Safeguard Building 4	Division 4^{N} Division 3^{A}	N/A	On-Off / On-Off	Run-Stop / Run-Stop

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Instruments						
Battery room temperature	30SAC11CT002	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC11CT005	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC12CT002	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC13CT002	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC14CT002	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC14CT005	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC11CT003	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC12CT003	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC13CT003	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC14CT003	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC11CT006	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC12CT006	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Switchgear room temperature	30SAC12CT007	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC13CT006	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC13CT007	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC14CT006	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC21CT001	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC21CT002	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC22CT001	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC22CT002	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC23CT001	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC23CT002	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC24CT001	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC24CT002	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Emergency Feedwater pump room temperature	30SAC61CT001	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC61CT002	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC62CT001	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC62CT002	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC63CT001	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC63CT002	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC64CT001	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC64CT002	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC61CT003	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Component Cooling Water system pump room temperature	30SAC61CT004	Safeguard Building 1	Division 1	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC62CT003	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC62CT004	Safeguard Building 2	Division 2	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC63CT003	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC63CT004	Safeguard Building 3	Division 3	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC64CT003	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC64CT004	Safeguard Building 4	Division 4	N/A	Temp/ Temp	N/A
Battery Room Exhaust Air Flow	30SAC41CF001	Safeguard Building 1	Division 1	N/A	Flow/ Flow	N/A

Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (9 Sheets)

Description	Tag Number(1)	Location	IEEE Class 1E (2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Battery Room Exhaust Air Flow	30SAC44CF001	Safeguard Building 4	Division 4	N/A	Flow/ Flow	N/A

1) Equipment tag numbers are provided for information only and are not part of the certified design. N denotes division the component is normally powered from, while A denotes the component is powered from when alternate feed is implemented.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC (4 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the SBVSE is as shown on Figures 2.6.7-1, 2.6.7-2, 2.6.7-3 and 2.6.7-4.	Inspections of the as-built system will be conducted.	The as-built SBVSE conforms to the functional arrangement as shown on Figures 2.6.3-1 and 2.6.3-2.
2.2	The location of the SBVSE equipment is as listed in Table 2.6.7-1.	An inspection will be performed of the location of the equipment listed in Table 2.6.7-1.	The equipment listed in Table 2.6.7-1 is located as listed in Table 2.6.7-1.
2.3	Physical separation exists between the safety-related trains of the SBVSE.	An inspection will be performed to verify that the safety-related trains of the SBVSE trains are located in separate Safeguard Building.	The SBVSE safety-related trains are located in separate Safeguard Buildings as listed in Table 2.6.7.1.
3.1	Deleted.	Deleted.	Deleted.
3.2	Equipment listed in Table 2.6.7-1 can perform the function listed in Table 2.6.7-1 under system operating conditions.	Tests will be performed.	Equipment listed in Table 2.6.7-1 performs the function listed in the table under system operating conditions.
3.3	Components identified as Seismic Category I in Table 2.6.7-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.6.7-1.	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 2.6.7-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements.	a. Seismic qualification reports (SQDP, EQDP, or analyses) exist and conclude that the Seismic Category I components identified in Table 2.6.7-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.6.7-1 including the time required to perform the listed function.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC (4 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
		b. Inspections will be performed of the Seismic Category I components identified in Table 2.6.7-1 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).	b. Inspection reports exist and conclude that the Seismic Category I components identified in Table 2.6.7-1, including anchorage, are installed as specified on the construction drawings and deviations have been reconciled to the seismic qualification reports (SQDP, EQDP, or analyses).
3.4	Components listed in Table 2.6.7-1 as ASME AG-1 Code are designed in accordance with ASME AG-1 Code requirements.	Inspections will be performed for the existence of ASME AG-1 Code Design Verification Reports.	ASME AG-1 Code Design Verification Reports (AA-4400) exist for components listed as ASME AG-1 Code in Table 2.6.7-1.
3.5	Components listed in Table 2.6.7-1 as ASME AG-1 Code are fabricated in accordance with ASME AG-1 Code requirements, including welding requirements.	Inspections will be performed to verify components are fabricated in accordance with ASME AG-1 Code requirements.	For components listed as ASME AG-1 Code in Table 2.6.7-1, reports exist and conclude that the component meets ASME AG-1 Code requirements, including welding requirements.
3.6	Components listed in Table 2.6.7-1 as ASME AG-1 Code are inspected and tested in accordance with ASME AG-1 Code requirements.	Inspections and tests will be performed on the components.	For components listed as ASME AG-1 Code in Table 2.6.7-1, reports exist and conclude that the component meets ASME AG-1 Code inspection and testing requirements.
4.1	Displays listed in Table 2.6.7-2 are retrievable in the MCR and the RSS as listed in Table 2.6.7-2.	Tests will be performed for the retrieve-ability of the displays in the MCR and the RSS as listed in table 2.6.7-2.	a. The displays listed in Table 2.6.7-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.6.7-2 as being retrieved in the RSS can be retrieved in the RSS.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC (4 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
4.2	Controls exist in the MCR and the RSS as identified in Table 2.6.7-2.	Tests will be performed for the existence of control signals from the MCR and the RSS to the equipment listed in Table 2.6.7-2.	a. The displays listed in Table 2.6.7-2 as being retrieved in the MCR can be retrieved in the MCR. b. The displays listed in Table 2.6.7-2 as being retrieved in the RSS can be retrieved in the RSS.
4.3	Equipment listed as controlled by a PACS module in Table 2.6.7-2 responds to the state requested by a test signal.	Tests will be performed using test signals.	Equipment listed as being controlled by a PACS module in Table 2.6.7-2 responds to the state requested by the test signal.
5.1	The components designated as Class 1E in Table 2.6.7-2 are powered from the Class 1E division as listed in Table 2.6.7-2 in a normal or alternate feed condition.	a. Testing will be performed for the components designated as Class 1E in Table 2.6.7-2 by providing a test signal in each normally aligned division. b. Testing will be performed for the components designated as Class 1E in Table 2.6.7-2 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 2.6.7-2. 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 2.6.7-2.
5.2	Deleted.	Deleted.	Deleted.
6.1	Each SBVSE air intake train has the capability to remove the design heat load.	a. An inspection of the manufacturer's documentation of the SBVSE supply air handling unit cooling coils will be performed.	a. Verify that each SBVSE 30 SAC 01/02/03/04 AC001 unit has a total cooling capacity of at least 1,134,900 Btu/hr.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC (4 Sheets)

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
		b. Test will be performed to verify capability of the SBVSE supply and recirculation/exhaust units to maintain ambient conditions within the Electrical Division of the Safeguard Buildings.	b. The test shall confirm that Switchgear Rooms are maintained between 59°F and 104°F, that I&C rooms are maintained between 68°F and 82°F, that all other areas are maintained between 41°F and 104°F. • Verify the SBVSE supply cooling fan has a nominal air flow of at least 29,500 scfm. • Verify the SBVSE recirculation/exhaust fan has a nominal air flow of at least 29,500 scfm.
6.2	The recirculation cooling units start and stop automatically in the emergency feedwater system and the component cooling water system pump rooms when the room temperature reaches preset maximum and minimum temperatures in the pump rooms	A test will be performed to verify that recirculation cooling units start and stop automatically when the pump room temperature reaches preset maximum and minimum temperatures in the pump rooms.	a. The recirculation cooling units start automatically when the pump room temperature is greater than or equal to 95°F. b. The recirculation cooling units stop automatically when the pump room temperature is less than or equal to 85°F.

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