2.6.7 Electrical Division of Safeguard Building Ventilation System

Design Description

1.0 System 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 ambient conditions for the safety related equipment in the electrical and I&C rooms of the Safeguard Buildings during accident conditions.
- Maintains 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 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 described in the Design Description of Section 2.6.7, Tables 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design and 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design, and as shown on Figures 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Division 1 and Division 4 Air Intake Functional Arrangement, 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Division 1 and Division 4 Air Supply and

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

2.2 Deleted.

2.3 Physical separation exists between divisions of the SBVSE located in the Safeguard Buildings as shown on Figure 2.6.7-1.

3.0 Mechanical Design Features

3.1 Deleted.

3.2 Class 1E dampers listed in Table 2.6.7-2 will function to change position as listed in Table 2.6.7-1 under normal operating conditions.

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

3.5 Equipment 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 Equipment listed in Table 2.6.7-1 as ASME AG-1 Code are installed, inspected, and tested in accordance with ASME AG-1 Code requirements.

4.0 I&C Design Features, Displays, and Controls

4.1 Displays listed in Table 2.6.7-2 are indicated on the PICS operator workstations in the MCR and the RSS.

4.2 Controls on the PICS operator workstations in the MCR and the RSS perform the function 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 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 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 The SBVSE provides cooling to maintain design temperatures in the Electrical Division of the Safeguard Buildings, while operating in a design basis accident alignment.

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

6.3 The SBVSE maintains the hydrogen concentration levels in the battery rooms below one percent by volume.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.6.7-3 lists the SBVSE ITAAC.

Table 2.6.7-1—SBVSE Equipment Mechanical Design
Sheet 1 of 6

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—SBVSE Equipment Mechanical Design
Sheet 2 of 6

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—SBVSE Equipment Mechanical Design
Sheet 3 of 6

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—SBVSE Equipment Mechanical Design
Sheet 4 of 6

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—SBVSE Equipment Mechanical Design
Sheet 5 of 6

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—SBVSE Equipment Mechanical Design
Sheet 6 of 6

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—SBVSE Equipment I&C and Electrical Design
Sheet 1 of 11

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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 2 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Air Intake Safeguard Building Division 3						
Electric Heater	30SAC03AH001	Safeguard Building 3	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 3 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 4 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 5 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 6 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 7 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
Sheet 8 of 11

Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
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

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
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Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
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
Battery Room Exhaust Air Flow	30SAC44CF001	Safeguard Building 4	Division 4	N/A	Flow/ Flow	N/A
Outside Air Temperature Sensors	30SAC01CT001/002 30SAC02CT001/002 30SAC03CT001/002 30SAC04CT001/002	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	N/A	N/A	Temp / Temp	N/A
Temperature Sensors Upstream of heaters	30SAC01CT501 30SAC02CT501 30SAC03CT501 30SAC04CT501	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	N/A	N/A	Temp / Temp	N/A

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
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Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Protective Switch-off Temperature for heaters	30SAC01CT003 30SAC02CT003 30SAC03CT003 30SAC04CT003	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	N/A	N/A	Temp / Temp	N/A
Temperature Sensors Downstream of heaters	30SAC01CT004/005 30SAC02CT004/005 30SAC03CT004/005 30SAC04CT004/005	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	N/A	N/A	Temp / Temp	N/A
Temperature Sensors Downstream of Moisture Separators	30SAC01CT502 30SAC02CT502 30SAC03CT502 30SAC04CT502	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	N/A	N/A	Temp / Temp	N/A

Table 2.6.7-2—SBVSE Equipment I&C and Electrical Design
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Description	Tag Number(1)	Location	IEEE Class 1E(2)	PACS	MCR / RSS Displays	MCR / RSS Controls
Supply Air Temperature Sensors	30SAC01CT006 30SAC02CT006 30SAC03CT006 30SAC04CT006	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	N/A	N/A	Temp / Temp	N/A

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

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

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the SBVSE is as described in the Design Description of Section 2.6.7, Tables 2.6.7-1 and 2.6.7-2, and as shown on Figures 2.6.7-1, 2.6.7-2, 2.6.7-3, and 2.6.7-4.	An inspection of the as-built SBVSE functional arrangement will be performed.	The SBVSE conforms to the functional arrangement as described in the Design Description of Section 2.6.7, Tables 2.6.7-1 and 2.6.7-2, and as shown on Figures 2.6.7-1, 2.6.7-2, 2.6.7-3, and 2.6.7-4.
2.2	Deleted.	Deleted.	Deleted.
2.3	Physical separation exists between divisions of the SBVSE located in the Safeguard Buildings as shown on Figure 2.6.7-1.	An inspection will be performed to verify that the as-built divisions of the SBVSE are located in separate Safeguard Buildings.	The divisions of the SBVSE are located in separate Safeguard Buildings as shown on Figure 2.6.7-1.
3.1	Deleted.	Deleted.	Deleted.
3.2	Class 1E dampers listed in Table 2.6.7-2 will function to change position as listed in Table 2.6.7-1 under normal operating conditions.	Tests will be performed to verify the ability of Class 1E dampers to change position under normal operating conditions.	Class 1E dampers listed in Table 2.6.7-2 change position as listed in Table 2.6.7-1 under normal operating conditions.
3.3	Equipment 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 equipment 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. b. An inspection will be performed of the as-built equipment identified as Seismic Category I in Table 2.6.7-1 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 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. b. Inspection reports conclude that the equipment identified as Seismic Category I in Table 2.6.7-1, including anchorage, are installed per the approved design requirements.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.4	Equipment listed in Table 2.6.7-1 as ASME AG-1 Code are designed in accordance with ASME AG-1 Code requirements.	An analysis will be performed of ASME AG-1 Code Design Verification Reports.	ASME AG-1 Code Design Verification Reports (AA-4400) conclude that the design of equipment listed as ASME AG-1 Code in Table 2.6.7-1 complies with ASME AG-1 Code requirements.
3.5	Equipment 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.	An inspection of the as-built fabrication activities and documentation for ASME AG-1 Code equipment will be conducted.	A report concludes that ASME AG-1 Code equipment listed in Table 2.6.7-1 are fabricated in accordance with ASME AG-1 Code requirements.
3.6	Equipment listed in Table 2.6.7-1 as ASME AG-1 Code are installed, inspected, and tested in accordance with ASME AG-1 Code requirements.	An inspection of the as-built construction activities and documentation for ASME AG-1 Code equipment will be conducted.	A report concludes that ASME AG-1 Code equipment listed in Table 2.6.7-1 are installed, inspected, and tested in accordance with ASME AG-1 Code requirements.
4.1	Displays listed in Table 2.6.7-2 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 2.6.7-2 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 2.6.7-2 are indicated on the PICS operator workstations in the RSS by using test input signals inputs to PICS.	a. Displays listed in Table 2.6.7-2 are indicated on the PICS operator workstations in the MCR. b. Displays listed in Table 2.6.7-2 are indicated on the PICS operator workstations in the RSS.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
4.2	Controls on the PICS operator workstations in the MCR and the RSS perform the function listed in Table 2.6.7-2.	a. Tests will be performed using controls on the PICS operator workstations in the MCR. b. Tests will be performed using controls on the PICS operator workstations in the RSS.	a. Controls on the PICS operator workstations in the MCR perform the function listed in Table 2.6.7-2. b. Controls on the PICS operator workstations in the RSS perform the function listed in Table 2.6.7-2.
4.3	Equipment listed as being controlled by a PACS module in Table 2.6.7-2 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 2.6.7-2 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.
5.1	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.	a. Testing will be performed by providing a test input signal in each normally aligned division. b. Testing will be performed by providing a test input signal in each division with the alternate feed aligned to the divisional pair.	a. The test input signal provided in the normally aligned division is present at the respective Class 1E equipment identified in Table 2.6.7-2. 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 2.6.7-2.
5.2	Deleted.	Deleted.	Deleted.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.1	The SBVSE provides cooling to maintain design temperatures in the Electrical Division of the Safeguard Buildings, while operating in a design basis accident alignment.	a. Tests and analysis will be performed to verify SBVSE provides cooling to maintain design temperatures in the Electrical Division of the Safeguard Buildings, while operating in a design basis accident alignment.	a. Each SBVSE cooling coil is capable of providing design cooling requirements, while operating in a design basis accident alignment.
		b. A test of the SBVSE fans will be performed to verify that the design air flow is greater than the approved design requirement.	b. Each SBVSE fan is capable of meeting the design air flow requirements, while operating in a design basis accident alignment.
6.2	The recirculation cooling units start and stop automatically in the EFWS and CCWS pump rooms when the room temperature reaches preset maximum and minimum temperatures in the pump rooms.	a. A test will be performed using test input signals to verify that recirculation cooling units start automatically in the EFWS and CCWS pump rooms when the pump room temperature reaches preset maximum temperatures in the pump rooms.	a. The recirculation cooling units start automatically in the EFWS and CCWS pump rooms prior to allowing the pump rooms to exceed the maximum design temperature.
		b. A test will be performed using test input signals to verify that recirculation cooling units stop automatically in the EFWS and CCWS pump rooms when the pump room temperature reaches preset minimum temperatures in the pump rooms.	b. The recirculation cooling units stop automatically in the EFWS and CCWS pump rooms prior to allowing the pump rooms to fall below the minimum design temperature.

Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.3	The SBVSE maintains the hydrogen concentration levels in the battery rooms below one percent by volume.	Tests and analysis will be performed to verify the air flow capability of the SBVSE is adequate to maintain the hydrogen concentration levels in the battery rooms below one percent.	The air flow capability of the SBVSE maintains the hydrogen concentration levels in the battery rooms below one percent by volume.