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 in 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 Equipment listed in the Table 2.6.7-1 as ASME AG-1 is designed, installed, and tested per ASME AG-1.

3.2 Equipment listed in Table 2.6.7-1 performs the functions listed in Table 2.6.7-1.

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

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.

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 Motor operated dampers listed in Table 2.6.7-2 fail to the position as shown in Table 2.6.7-2 on loss of power.

6.0 Equipment and System Performance

6.1 The SBVSE automatically maintains ambient conditions by recirculation airflow and exhaust airflow within the Safeguard Buildings depending on the outside air temperature.

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 (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Air intake Safeguard Building Division 1 and Division 4					
Pressure wave protection dampers	30SAC01 AA001 30SAC04 AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Electric heaters	30SAC01 AH001 30SAC04 AH001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual isolation dampers	30SAC01 AA002 30SAC04 AA002	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Motor operated dampers	30SAC01 AA003 30SAC04 AA003	Safeguard Building 1 Safeguard Building 4	Yes	Open	I
Motor operated dampers	30SAC01 AA004 30SAC04 AA004	Safeguard Building 1 Safeguard Building 4	Yes	Open	I
Pre-filters	30SAC01 AT004 30SAC04 AT004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Roughing filters	30SAC01 AT005 30SAC04 AT005	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Electric heaters	30SAC01 AH002 30SAC04 AH002	Safeguard Building 1 Safeguard Building 4	Yes	On / Off (based on ambient conditions)	I
Air cooling coils	30SAC01 AC001 30SAC04 AC001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Moisture separators	30SAC01 AT006 30SAC04 AT006	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Supply air fans	30SAC01 AN001 30SAC04 AN001	Safeguard Building 1 Safeguard Building 4	Yes	Run	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Humidifiers	30SAC01 AT007 30SAC01 AT008 30SAC04 AT007 30SAC04 AT008	Safeguard Building 1 Safeguard Building 1 Safeguard Building 4 Safeguard Building 4	Yes	N/A	I
Backdraft dampers	30SAC01 AA005 30SAC04 AA005	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11 AA001 30SAC14 AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11 AA004 30SAC14 AA004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11 AA005 30SAC14 AA005	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC11 AA003 30SAC14 AA003	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Air Intake Safeguard Building Division 2 and Division 3					
Pressure wave protection dampers	30SAC02 AA001 30SAC03 AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Electric heaters	30SAC02 AH001 30SAC03 AH001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC02 AA002 30SAC03 AA002	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Motor operated dampers	30SAC02 AA003 30SAC03 AA003	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Motor operated dampers	30SAC02 AA004 30SAC03 AA004	Safeguard Building 2 Safeguard Building 3	Yes	Open	I

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Pre- filters	30SAC02 AT004 30SAC03 AT004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Roughing filters	30SAC02 AT005 30SAC03 AT005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Electric heaters	30SAC02 AH002 30SAC03 AH002	Safeguard Building 2 Safeguard Building 3	Yes	On / Off (based on ambient conditions)	I
Air cooling coils	30SAC02 AC001 30SAC03 AC001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Moisture separators	30SAC02 AT006 30SAC03 AT006	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Supply air fans	30SAC02 AN001 30SAC03 AN001	Safeguard Building 2 Safeguard Building 3	Yes	Run	I
Backdraft dampers	30SAC02 AA005 30SAC03 AA005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Humidifiers	30SAC02 AT007 30SAC02 AT008 30SAC03 AT007 30SAC03 AT008	Safeguard Building 2 Safeguard Building 2 Safeguard Building 3 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC12 AA001 30SAC13 AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC12 AA005 30SAC13 AA005	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Exhaust Train Safeguard Building Divisions 1 and 4					
Manual dampers	30SAC31 AA001 30SAC34 AA001	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 (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Exhaust Fans	30SAC31 AN001 30SAC34 AN001	Safeguard Building 1 Safeguard Building 4	Yes	Run	I
Motor operated dampers	30SAC31 AA002 30SAC34 AA002	Safeguard Building 1 Safeguard Building 4	Yes	Open	I
Backdraft dampers	30SAC31 AA003 30SAC34 AA003	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC31 AA004 30SAC34 AA004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Pressure wave protection dampers	30SAC21 AA020 30SAC24 AA020	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC35 AA001 30SAC38 AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Manual dampers	30SAC35 AA004 30SAC38 AA004	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
Exhaust Train Safeguard Building Divisions 2 and 3					
Manual dampers	30SAC32 AA001 30SAC33 AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Exhaust Fans	30SAC32 AN001 30SAC33 AN001	Safeguard Building 2 Safeguard Building 3	Yes	Run	I
Motor operated dampers	30SAC32 AA002 30SAC33 AA002	Safeguard Building 2 Safeguard Building 3	Yes	Open	I
Backdraft dampers	30SAC32 AA003 30SAC33 AA003	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 (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Manual dampers	30SAC32 AA004 30SAC33 AA004	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Pressure wave protection dampers	30SAC22 AA030 30SAC23 AA030	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Manual dampers	30SAC22 AA001 30SAC23 AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Battery / Safety Chilled Water Room Exhaust Train Safeguard Building Divisions 1, 2, 3, and 4					
Manual dampers	30SAC51 AA001 30SAC52 AA001 30SAC53 AA001 30SAC54 AA001	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	N/A	I
Exhaust air fans	30SAC51 AN001 30SAC52 AN001 30SAC53 AN001 30SAC54 AN001	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	Run	I
Backdraft dampers	30SAC51 AA002 30SAC52 AA002 30SAC53 AA002 30SAC54 AA002	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	N/A	I
Motor operated dampers	30SAC51 AA003 30SAC52 AA003 30SAC53 AA003 30SAC54 AA003	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 (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Manual dampers	30SAC51 AA004 30SAC52 AA004 30SAC53 AA004 30SAC54 AA004	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	N/A	I
Motor operated dampers	30SAC51 AA006 30SAC52 AA006 30SAC53 AA006 30SAC54 AA006	Safeguard Building 1 Safeguard Building 2 Safeguard Building 3 Safeguard Building 4	Yes	Open	I
Recirculation Cooling Units Safeguard Building Divisions 1, 2, 3, and 4					
Air cooling coils	30SAC61 AC001 30SAC61 AC002 30SAC62 AC001 30SAC62 AC002 30SAC63 AC001 30SAC63 AC002 30SAC64 AC001 30SAC64 AC002	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	30SAC61 AT001 30SAC61 AT002 30SAC62 AT001 30SAC62 AT002 30SAC63 AT001 30SAC63 AT002 30SAC64 AT001 30SAC64 AT002	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

Table 2.6.7-1—Electrical Division of Safeguard Building Ventilation System Equipment Mechanical Design (7 Sheets)

Equipment Description	Equipment Tag Number (1)	Equipment Location	ASME AG-1 Code	Function	Seismic Category
Recirculation Fans	30SAC61 AN001	Safeguard Building 1	Yes	Run	I
	30SAC61 AN02	Safeguard Building 1			
	30SAC62 AN001	Safeguard Building 2			
	30SAC62 AN002	Safeguard Building 2			
	30SAC63 AN001	Safeguard Building 3			
	30SAC63 AN002	Safeguard Building 3			
	30SAC64 AN001	Safeguard Building 4			
	30SAC64 AN002	Safeguard Building 4			

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)

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

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

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

Equipment Description	Equipment Tag Number(1)	Equipment Location	IEEE Class 1E Source (2)	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Motor operated damper	30SAC34AA002	Safeguard Building 4	Division 4^N Division 3^A	Close	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC54AN001	Safeguard Building 4	Division 4^N Division 3^A	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC54AA003	Safeguard Building 4	Division 4^N Division 3^A	Close	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	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC61AN002	Safeguard Building 1	Division 1^N Division 2^A	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC62AN001	Safeguard Building 2	Division 2^N Division 1^A	N/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	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC63AN001	Safeguard Building 3	Division 3^N Division 4^A	N/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	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC64AN001	Safeguard Building 4	Division 4^N Division 3^A	N/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	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)

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

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

Equipment Description	Equipment Tag Number(1)	Equipment Location	IEEE Class 1E Source (2)	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Switchgear room return air temperature	30SAC24CT001	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC24CT002	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC61CT001	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC61CT002	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC62CT001	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC62CT002	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC63CT001	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC63CT002	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC64CT001	Safeguard Building 4	Division 4	N/A	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)

Equipment Description	Equipment Tag Number(1)	Equipment Location	IEEE Class 1E Source (2)	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Emergency Feedwater pump room temperature	30SAC64CT002	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC61CT003	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC61CT004	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC62CT003	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC62CT004	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC63CT003	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC63CT004	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC64CT003	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC64CT004	Safeguard Building 4	Division 4	N/A	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)

Equipment Description	Equipment Tag Number(1)	Equipment Location	IEEE Class 1E Source (2)	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Battery Room Exhaust Air Flow	30SAC41CF001	Safeguard Building 1	Division 1	N/A	N/A	Flow/ Flow	N/A
Battery Room Exhaust Air Flow	30SAC42CF001	Safeguard Building 2	Division 2	N/A	N/A	Flow/ Flow	N/A
Battery Room Exhaust Air Flow	30SAC43CF003	Safeguard Building 3	Division 3	N/A	N/A	Flow/ Flow	N/A
Battery Room Exhaust Air Flow	30SAC44CF004	Safeguard Building 4	Division 4	N/A	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 (3 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 in Figures 2.6.3-1 and 2.6.3-2.
2.2	Equipment shown on Figures 2.6.7-1, 2.6.7-2, 2.6.7-3 and 2.6.7-4 is located 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 are located in separate Safeguard Building.
3.1	Equipment listed in Table 2.6.7-1 as ASME AG-1 is designed, installed, and tested per ASME AG-1.	a. Analysis of the equipment identified in Table 2.6.7-1 as ASME AG-1 will be performed per ASME AG-1 design requirements. b. Inspections will be conducted on the equipment identified in Table 2.6.7-1 as ASME AG-1 to verify that the equipment is installed as specified on the construction drawings. c. Testing of the equipment identified in Table 2.6.7-1 as ASME AG-1 will be performed per ASME AG-1 testing requirements.	a. ASME AG-1 reports exist and conclude that the equipment identified in Table 2.6.7-1 as ASME AG-1 meets ASME AG-1 design requirements. b. Equipment identified in Table 2.6.7-1 as ASME AG-1 has been installed as specified on the construction drawings. c. Equipment identified in Table 2.6.7-1 as ASME AG-1 has been tested per ASME AG-1 testing requirements.
3.2	Equipment listed in Table 2.6.7-1 can perform the function listed in Table 2.6.7-1 under system design basis conditions.	Tests will be performed.	Equipment listed in Table 2.6.7-1 performs the function listed in the table under system design basis conditions.

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

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.3	Equipment identified as Seismic Category I in Table 2.6.7-1 can withstand seismic design basis loads without loss of safety function as 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 designated 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. Inspections will be performed of the as-installed Seismic Category I equipment listed in Table 2.6.7-1 to verify that the equipment including anchorage is installed as specified on the construction drawings.	a. Tests/analysis reports exist and conclude that the Seismic Category I equipment listed in Table 2.6.7-1 can withstand seismic design basis loads without loss of safety function. b. Inspection reports exist and conclude that the as-installed Seismic Category I equipment listed in Table 2.6.7-1 including anchorage is installed as specified on the construction drawings.
4.1	Displays listed in Table 2.6.7-2 are retrievable in the MCR and the RSS as listed.	Inspections will be performed for the existence or 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.
4.2	Controls exist in the MCR and the RSS as identified in Table 2.6.7-2.	Test 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.	A test 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.

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

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
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	Motor operated dampers listed in Table 2.6.7-2 fail to the position as shown in Table 2.6.7-2 on loss of power.	Testing will be performed for the motor operated dampers listed in Table 2.6.7-2 to verify the position of dampers on loss of power.	Following loss of power, the motor operated dampers listed in Table 2.6.7-2 fail to the position as shown in Table 2.6.7-2.
6.1	The SBVSE automatically maintains ambient conditions by recirculation airflows and exhaust airflows within the Safeguard Buildings depending on the outside air temperature.	Tests will be performed on the capability of the system to maintain ambient conditions by recirculation airflows and exhaust airflows within the Safeguard Buildings.	The SBVSE automatically maintains the ambient conditions by recirculation airflows and exhaust airflows within the Safeguard Buildings.
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.

Next File