

## 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

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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, inspected and tested in accordance with 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 a design basis seismic load without loss of safety functions 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 Actuators listed as being controlled by a priority actuator control system (PACS) module in Table 2.6.7-2 are controlled by a PACS module.

### **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 automatically in the emergency feedwater and the component cooling water system pump rooms when the room temperature reaches to a preset maximum temperature in the pump rooms.

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

The inspections, tests, analyses, and acceptance criteria (ITAAC) for the SBVSE are specified in Table 2.6.7-3—Electrical Division of Safeguard Building Ventilation System ITAAC.

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

<b>Equipment Description</b>	<b>Equipment Tag Number <sup>(1)</sup></b>	<b>Equipment Location</b>	<b>ASME AG-1 Code</b>	<b>Function</b>	<b>Seismic Category</b>
<b>Air intake Safeguard Building Division 1 and Division 4</b>					
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

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

<b>Equipment Description</b>	<b>Equipment Tag Number <sup>(1)</sup></b>	<b>Equipment Location</b>	<b>ASME AG-1 Code</b>	<b>Function</b>	<b>Seismic Category</b>
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
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
<b>Air Intake Safeguard Building Division 2 and Division 3</b>					
Pressure wave protection dampers	30SAC02 AA001 30SAC03 AA001	Safeguard Building 2 Safeguard Building 3	Yes	N/A	I
Electric heaters	30SAC02 AH001	Safeguard Building 2	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 <sup>(1)</sup>	Equipment Location	ASME AG-1 Code	Function	Seismic Category
	30SAC03 AH001	Safeguard Building 3			
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
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	Safeguard Building 2 Safeguard Building 2	Yes	N/A	I

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

<b>Equipment Description</b>	<b>Equipment Tag Number <sup>(1)</sup></b>	<b>Equipment Location</b>	<b>ASME AG-1 Code</b>	<b>Function</b>	<b>Seismic Category</b>
	30SAC03 AT007 30SAC03 AT008	Safeguard Building 3 Safeguard Building 3			
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
<b>Exhaust Train Safeguard Building Divisions 1 and 4</b>					
Manual dampers	30SAC31 AA001 30SAC34 AA001	Safeguard Building 1 Safeguard Building 4	Yes	N/A	I
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

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

<b>Equipment Description</b>	<b>Equipment Tag Number <sup>(1)</sup></b>	<b>Equipment Location</b>	<b>ASME AG-1 Code</b>	<b>Function</b>	<b>Seismic Category</b>
<b>Exhaust Train Safeguard Building Divisions 2 and 3</b>					
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
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
<b>Battery / Safety Chilled Water Room Exhaust Train, Safeguard Building Divisions 1, 2, 3, and 4</b>					
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



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

<b>Equipment Description</b>	<b>Equipment Tag Number <sup>(1)</sup></b>	<b>Equipment Location</b>	<b>ASME AG-1 Code</b>	<b>Function</b>	<b>Seismic Category</b>
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
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
<b>Recirculation Cooling Units, Safeguard Building Divisions 1, 2, 3, and 4</b>					
Air cooling coils	30SAC61 AC001 30SAC61 AC002	Safeguard Building 1 Safeguard Building 1	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 <sup>(1)</sup>	Equipment Location	ASME AG-1 Code	Function	Seismic Category
	30SAC62 AC001 30SAC62 AC002 30SAC63 AC001 30SAC63 AC002 30SAC64 AC001 30SAC64 AC002	Safeguard Building 2 Safeguard Building 2 Safeguard Building 3 Safeguard Building 3 Safeguard Building 4 Safeguard Building 4			
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
Recirculation Fans	30SAC61 AN001 30SAC61 AN02 30SAC62 AN001 30SAC62 AN002 30SAC63 AN001 30SAC63 AN002 30SAC64 AN001 30SAC64 AN002	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 (10 Sheets)**

Equipment Description	Equipment Tag Number <sup>(1)</sup>	Equipment Location	IEEE Class 1E Source <sup>(2)</sup>	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
<b>Air Intake Safeguard Building Division 1</b>							
Electric Heater	30SAC01 AH001	Safeguard Building 1	Division 1 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC01 AA003	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC01 AA004	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC01 AH002	Safeguard Building 1	Division 1 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC01 AN001	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
<b>Air Intake Safeguard Building Division 2</b>							
Electric Heater	30SAC02 AH001	Safeguard Building 2	Division 2 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC02 AA003	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC02 AA004	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC02 AH002	Safeguard Building 2	Division 2 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC02	Safeguard Building 2	Division 2 <sup>N</sup>	N/A	yes	On-Off /	Run-Stop /

**Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (10 Sheets)**

Equipment Description	Equipment Tag Number <sup>(1)</sup>	Equipment Location	IEEE Class 1E Source <sup>(2)</sup>	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
	AN001		Division 1 <sup>A</sup>			On-Off	Run-Stop
<b>Air Intake Safeguard Building Division 3</b>							
Electric Heater	30SAC03 AH001	Safeguard Building 3	Division 3 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC03 AA003	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC03 AA004	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC03 AH002	Safeguard Building 3	Division 3 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC03 AN001	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
<b>Air Intake Safeguard Building Division 4</b>							
Electric Heater	30SAC04 AH001	Safeguard Building 4	Division 4 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Motor operated damper	30SAC04 AA003	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Motor operated damper	30SAC04 AA004	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Electric heater	30SAC04 AH002	Safeguard Building 4	Division 4 <sup>N</sup>	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Supply air fan	30SAC04 AN001	Safeguard Building 4	Division 4 <sup>N</sup>	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 (10 Sheets)**

Equipment Description	Equipment Tag Number <sup>(1)</sup>	Equipment Location	IEEE Class 1E Source <sup>(2)</sup>	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
			Division 3 <sup>A</sup>				
<b>Exhaust Train, Safeguard Building Division 1</b>							
Exhaust Fan	30SAC31 AN001	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC31 AA002	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC51 AN001	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC51 AA003	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
<b>Exhaust Train, Safeguard Building Division 2</b>							
Exhaust Fan	30SAC32 AN001	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC32 AA002	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC52 AN001	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC52 AA003	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
<b>Exhaust Train, Safeguard Building</b>							

**Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (10 Sheets)**

Equipment Description	Equipment Tag Number <sup>(1)</sup>	Equipment Location	IEEE Class 1E Source <sup>(2)</sup>	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
<b>Division 3</b>							
Exhaust Fan	30SAC33 AN001	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC33 AA002	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC53 AN001	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC53 AA003	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
<b>Exhaust Train, Safeguard Building Division 4</b>							
Exhaust Fan	30SAC34 AN001	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC34 AA002	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
Exhaust Fan	30SAC54 AN001	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Motor operated damper	30SAC54 AA003	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	Close	Yes	Position / Position	Open-Close / Open-Close
<b>Recirculation Cooling Units, Safeguard Building Divisions 1, 2, 3, and 4</b>							
Recirculation Fan	30SAC61	Safeguard Building 1	Division 1 <sup>N</sup>	N/A	Yes	On-Off /	Run-Stop /

**Table 2.6.7-2—Electrical Division of Safeguard Building Ventilation System Equipment I&C and Electrical Design (10 Sheets)**

Equipment Description	Equipment Tag Number <sup>(1)</sup>	Equipment Location	IEEE Class 1E Source <sup>(2)</sup>	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
	AN001		Division 2 <sup>A</sup>			On-Off	Run-Stop
Recirculation Fan	30SAC61 AN002	Safeguard Building 1	Division 1 <sup>N</sup> Division 2 <sup>A</sup>	N/A	Yes	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC62 AN001	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	N/A	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC62 AN002	Safeguard Building 2	Division 2 <sup>N</sup> Division 1 <sup>A</sup>	N/A	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC63 AN001	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	N/A	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC63 AN002	Safeguard Building 3	Division 3 <sup>N</sup> Division 4 <sup>A</sup>	N/A	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC64 AN001	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	N/A	N/A	On-Off / On-Off	Run-Stop / Run-Stop
Recirculation Fan	30SAC64 AN002	Safeguard Building 4	Division 4 <sup>N</sup> Division 3 <sup>A</sup>	N/A	N/A	On-Off / On-Off	Run-Stop / Run-Stop
<b>Instruments</b>							
Battery room temperature	30SAC11 CT002	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC11 CT005	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC12 CT002	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC13 CT002	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 (10 Sheets)**

<b>Equipment Description</b>	<b>Equipment Tag Number<sup>(1)</sup></b>	<b>Equipment Location</b>	<b>IEEE Class 1E Source<sup>(2)</sup></b>	<b>Failure Position</b>	<b>PACS</b>	<b>MCR / RSS Displays</b>	<b>MCR / RSS Controls</b>
Battery room temperature	30SAC14 CT002	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Battery room temperature	30SAC14 CT005	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC11 CT003	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC12 CT003	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC13 CT003	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
I&C cabinet room temperature	30SAC14 CT003	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC11 CT006	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC12 CT006	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC12 CT007	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC13 CT006	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC13 CT007	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Switchgear room temperature	30SAC14 CT006	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 (10 Sheets)**

<b>Equipment Description</b>	<b>Equipment Tag Number<sup>(1)</sup></b>	<b>Equipment Location</b>	<b>IEEE Class 1E Source<sup>(2)</sup></b>	<b>Failure Position</b>	<b>PACS</b>	<b>MCR / RSS Displays</b>	<b>MCR / RSS Controls</b>
Switchgear room return air temperature	30SAC21 CT001	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC21 CT002	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC22 CT001	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC22 CT002	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC23 CT001	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC23 CT002	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC24 CT001	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Switchgear room return air temperature	30SAC24 CT002	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC61 CT001	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC61 CT002	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC62 CT001	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC62 CT002	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 (10 Sheets)**

<b>Equipment Description</b>	<b>Equipment Tag Number<sup>(1)</sup></b>	<b>Equipment Location</b>	<b>IEEE Class 1E Source<sup>(2)</sup></b>	<b>Failure Position</b>	<b>PACS</b>	<b>MCR / RSS Displays</b>	<b>MCR / RSS Controls</b>
Emergency Feedwater pump room temperature	30SAC63 CT001	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC63 CT002	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC64 CT001	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Emergency Feedwater pump room temperature	30SAC64 CT002	Safeguard Building 4	Division 4	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC61 CT003	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC61 CT004	Safeguard Building 1	Division 1	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC62 CT003	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC62 CT004	Safeguard Building 2	Division 2	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC63 CT003	Safeguard Building 3	Division 3	N/A	N/A	Temp/ Temp	N/A
Component Cooling Water system pump room temperature	30SAC63 CT004	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 (10 Sheets)**

Equipment Description	Equipment Tag Number <sup>(1)</sup>	Equipment Location	IEEE Class 1E Source <sup>(2)</sup>	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Component Cooling Water system pump room temperature	30SAC64 CT003	Safeguard Building 4	Division 4	N/A	N/A	Temp/Temp	N/A
Component Cooling Water system pump room temperature	30SAC64 CT004	Safeguard Building 4	Division 4	N/A	N/A	Temp/Temp	N/A
Battery Room Exhaust Air Flow	30SAC41 CF001	Safeguard Building 1	Division 1	N/A	N/A	Flow/Flow	N/A
Battery Room Exhaust Air Flow	30SAC42 CF001	Safeguard Building 2	Division 2	N/A	N/A	Flow/Flow	N/A
Battery Room Exhaust Air Flow	30SAC43 CF003	Safeguard Building 3	Division 3	N/A	N/A	Flow/Flow	N/A
Battery Room Exhaust Air Flow	30SAC44 CF004	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.
- 2) <sup>N</sup> denotes division the component is normally powered from, while <sup>A</sup> 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)**

<b>Reference Section Number</b>	<b>Commitment Wording</b>	<b>Inspection, Analysis or Test</b>	<b>Acceptance Criteria</b>
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	The equipment listed as being ASME AG-1 in Table 2.6.7-1 is designed, inspected, and tested in accordance with ASME AG-1..	Analysis will be performed and inspection will be conducted of the as-built components as listed in Table 2.6.7-1.	The SBVSE equipment listed in Table 2.6.7-1 is designed, inspected, and tested in accordance with ASME AG-1 Code.
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 and analyses or a combination of tests and analyses will be performed.	The as-installed equipment changes position as listed in Table 2.6.7-1 under system design basis conditions..
3.3	Equipment identified as Seismic Category I in Table 2.6.7-1 can withstand a design basis seismic load without loss of safety function as listed in Table 2.6.7-1.	a) Inspection will be performed of the equipment identified as Seismic Category I in Table 2.6.7-1. b) Type tests, tests, and analyses or a combination of tests and analyses will be performed on the equipment designated as Seismic Category I in Table 2.6.7-1.	a) The equipment designated as Seismic Category I in Table 2.6.7-1 is installed as designed. b) The equipment designated as Seismic Category I in Table 2.6.7-1 can withstand a design basis seismic load without loss of safety function.
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	a) The displays listed in Table 2.6.7-2 as being retrieved in the MCR can be retrieved in the MCR.

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

Reference Section Number	Commitment Wording	Inspection, Analysis or Test	Acceptance Criteria
		RSS as listed in table 2.6.7-2.	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	Actuators listed as controlled by a PACS module in Table 2.6.7-2 are controlled by a PACS module.	An operational test will be performed using test signals. An inspection will be performed on the actuation of the actuator.	The actuators listed as being controlled by a PACS module in Table 2.6.7-2 actuate 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	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	Tests will be performed on the capability of the system to maintain ambient	The SBVSE automatically maintains the recirculation airflows and exhaust

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

Reference Section Number	Commitment Wording	Inspection, Analysis or Test	Acceptance Criteria
	by recirculation airflows and exhaust airflows within the Safeguard Buildings depending on the outside air temperature.	conditions by recirculation airflows and exhaust airflows within the Safeguard Buildings.	airflows within the Safeguard Buildings by automatically adjusting the control dampers.
6.2	The recirculation cooling units start automatically in the emergency feedwater and the component cooling water system pump rooms when the room temperature reaches to preset maximum temperature in the pump rooms	A test will be performed to verify that recirculation cooling units start automatically when the pump room temperature reaches to a preset maximum temperature.	The recirculation cooling units start automatically when the pump room temperature reaches to a preset maximum temperature.