2.5 Electrical Power

2.5.1 Class 1E Emergency Power Supply System

Design Description

1.0 System Description

The Class 1E emergency power supply system (EPSS) provides electrical power for systems that are essential to reactor shutdown, containment isolation and heat removal, reactor core cooling, and preventing a significant release of radioactive material to the environment. The EPSS distributes power to safety-related and non-safety-related plant loads during normal and abnormal operations.

EPSS divisions are independent and physically separated during normal bus alignments. An alternate feed is provided between EPSS divisions 1 and 2, and between divisions 3 and 4 to provide the normal and standby source of power to required safety systems, safety support systems, or equipment that do not have the required redundancy when certain electrical equipment, including emergency diesel generators, are out of service. With an alternate feed installed, independence is maintained between the EPSS divisions with the alternate feed installed and the divisions without an alternate feed installed. The divisions without the alternate feed installed are independent of each other.

2.0 Arrangement

2.1 The functional arrangement of EPSS is as described in the Design Description of Section 2.5.1, Tables 2.5.1-1—Class 1E Emergency Power Supply System Electrical Equipment Location and 2.5.1-2—Class 1E Emergency Power Supply System Electrical Equipment Design, and as shown on Figure 2.5.1-1—Class 1E Emergency Power Supply System Functional Arrangement.

2.2 Deleted.

2.3 Deleted.

2.4 Deleted.

3.0 Mechanical Design Features

3.1 Equipment identified as Class 1E in Table 2.5.1-2 can withstand seismic design basis loads without a loss of safety function(s).

4.0 I&C Design Features, Displays, and Controls

4.1 Displays listed in Table 2.5.1-2 are indicated on the PICS operator workstations in the main control room (MCR) and remote shutdown station (RSS).

4.2 Controls on the PICS operator workstations in the MCR and the RSS perform the function listed in Table 2.5.1-2.

5.0 Electrical Design Features

5.1 Physical separation exists between Class 1E EPSS equipment listed in Table 2.5.1-2 and non-Class 1E equipment.

5.2 Non-safety-related loads connected to the EPSS are electrically isolated from the EPSS by an isolation device.

5.3 Without the alternate feed installed, independence is maintained between the EPSS divisions.

5.4 With the alternate feed installed from EPSS division 1 to division 2; independence is maintained between the load group created by divisions 1 and 2, and EPSS divisions 3 and 4 which are independent of each other.

5.5 With the alternate feed installed from EPSS division 2 to division 1; independence is maintained between the load group created by divisions 1 and 2, and EPSS divisions 3 and 4 which are independent of each other.

5.6 With the alternate feed installed from EPSS division 3 to division 4; independence is maintained between the load group created by divisions 3 and 4, and EPSS divisions 1 and 2 which are independent of each other.

5.7 With the alternate feed installed from EPSS division 4 to division 3; independence is maintained between the load group created by divisions 3 and 4, and EPSS divisions 1 and 2 which are independent of each other.

5.8 Control power for EPSS switchgear and load centers listed in Table 2.5.1-2 is provided by the Class 1E emergency uninterruptible power supply (EUPS) system from the respective division.

5.9 Deleted.

5.10 Deleted.

5.11 EPSS switchgear, load centers, motor control centers (MCC), and transformers, listed in Table 2.5.1-2, and their feeder breakers and load breakers, are sized to supply their load requirements.

5.12 EPSS cables and buses are sized to supply their assigned load requirements.

5.13 EPSS interrupting devices (e.g., circuit breakers and fuses) are coordinated so that the circuit interrupting device closest to the fault opens before other devices.

5.14 EPSS switchgear, load centers, MCCs, and transformers listed in Table 2.5.1-2 are rated to withstand fault currents for the time required to clear the fault from its power source.

5.15 The feeder and load circuit breakers for EPSS switchgear, load centers and MCCs are rated to interrupt fault currents.

5.16 EPSS 6.9 kV and 480V feeder and load circuit breakers open at the breaker trip setpoints.

6.0 Equipment and System Performance

6.1 Each EPSS division has an assigned EDG that provides power if there is a loss of offsite power.

6.2 Each EPSS 6.9 kV switchgear offsite power supply circuit breaker is opened by a protection system LOOP signal.

6.3 The EPSS provides voltage at the supplied safety-related equipment during normal and accident conditions that exceed the minimum required operating voltage of that equipment.

6.4 EPSS loads are sequentially energized by the protection system during loss of offsite power (LOOP) or loss of coolant accident (LOCA) conditions.

6.5 Each EPSS division transfers from the normal offsite circuit to the alternate offsite power supply circuit on an emergency auxiliary transformer failure signal.

6.6 EPSS loads that are sequenced by the protection system are shed by the protection system in an undervoltage condition prior to load sequencing.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.5.1-3 lists the EPSS ITAAC.

Table 2.5.1-1—EPSS Equipment Location
Sheet 1 of 3

Description	Tag Number(1)	Location
6.9 kV Switchgear	31BDA	Division 1 Safeguard Building
6.9 kV Switchgear	32BDA	Division 2 Safeguard Building
6.9 kV Switchgear	33BDA	Division 3 Safeguard Building
6.9 kV Switchgear	34BDA	Division 4 Safeguard Building
6.9 kV Switchgear	31BDB	Division 1 Safeguard Building
6.9 kV Switchgear	32BDB	Division 2 Safeguard Building
6.9 kV Switchgear	33BDB	Division 3 Safeguard Building
6.9 kV Switchgear	34BDB	Division 4 Safeguard Building
6.9 kV Switchgear	31BDC	Division 1 Safeguard Building
6.9 kV Switchgear	34BDC	Division 4 Safeguard Building
6.9 kV Switchgear	31BDD	Division 1 ESW Pump Building
6.9 kV Switchgear	32BDD	Division 2 ESW Pump Building
6.9 kV Switchgear	33BDD	Division 3 ESW Pump Building
6.9 kV Switchgear	34BDD	Division 4 ESW Pump Building
480V Load Center	31BMB	Division 1 Safeguard Building
480V Load Center	32BMB	Division 2 Safeguard Building
480V Load Center	33BMB	Division 3 Safeguard Building
480V Load Center	34BMB	Division 4 Safeguard Building
480V Load Center	31BMC	Division 1 Safeguard Building
480V Load Center	34BMC	Division 4 Safeguard Building
480V Load Center	31BMD	Division 1 ESW Pump Building
480V Load Center	32BMD	Division 2 ESW Pump Building
480V Load Center	33BMD	Division 3 ESW Pump Building
480V Load Center	34BMD	Division 4 ESW Pump Building
480V MCC	31BNA01	Division 1 EDG Building
480V MCC	32BNA01	Division 2 EDG Building
480V MCC	33BNA01	Division 3 EDG Building
480V MCC	34BNA01	Division 4 EDG Building
480V MCC	32BNA02	Division 2 Safeguard Building
480V MCC	33BNA02	Division 3 Safeguard Building
480V MCC	31BNB01	Division 1 Safeguard Building
480V MCC	32BNB01	Division 2 Safeguard Building

Table 2.5.1-1—EPSS Equipment Location
Sheet 2 of 3

Description	Tag Number[(1)]	Location
480V MCC	33BNB01	Division 3 Safeguard Building
480V MCC	34BNB01	Division 4 Safeguard Building
480V MCC	31BNB02	Division 1 Safeguard Building
480V MCC	32BNB02	Division 2 Safeguard Building
480V MCC	33BNB02	Division 3 Safeguard Building
480V MCC	34BNB02	Division 4 Safeguard Building
480V MCC	31BNB03	Division 1 Safeguard Building
480V MCC	32BNB03	Division 2 Safeguard Building
480V MCC	33BNB03	Division 3 Safeguard Building
480V MCC	34BNB03	Division 4 Safeguard Building
480V MCC	31BNC01	Division 1 Safeguard Building
480V MCC	34BNC01	Division 4 Safeguard Building
480V MCC	31BND01	Division 1 ESW Pump Building
480V MCC	32BND01	Division 2 ESW Pump Building
480V MCC	33BND01	Division 3 ESW Pump Building
480V MCC	34BND01	Division 4 ESW Pump Building
Transformer	31BMT01	Division 1 EDG Building
Transformer	32BMT01	Division 2 EDG Building
Transformer	33BMT01	Division 3 EDG Building
Transformer	34BMT01	Division 4 EDG Building
Transformer	31BMT02	Division 1 Safeguard Building
Transformer	32BMT02	Division 2 Safeguard Building
Transformer	33BMT02	Division 3 Safeguard Building
Transformer	34BMT02	Division 4 Safeguard Building
Transformer	31BMT03	Division 1 Safeguard Building
Transformer	32BMT03	Division 2 Safeguard Building
Transformer	33BMT03	Division 3 Safeguard Building
Transformer	34BMT03	Division 4 Safeguard Building
Transformer	31BMT04	Division 1 ESW Pump Building
Transformer	32BMT04	Division 2 ESW Pump Building
Transformer	33BMT04	Division 3 ESW Pump Building
Transformer	34BMT04	Division 4 ESW Pump Building

Table 2.5.1-1—EPSS Equipment Location
Sheet 3 of 3

Description	Tag Number(1)	Location
Voltage Regulating Transformer	31BNT01	Division 1 Safeguard Building
Voltage Regulating Transformer	32BNT01	Division 2 Safeguard Building
Voltage Regulating Transformer	33BNT01	Division 3 Safeguard Building
Voltage Regulating Transformer	34BNT01	Division 4 Safeguard Building

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

Table 2.5.1-2—EPSS Electrical Equipment Design
Sheet 1 of 5

Description	Tag Number(1)	IEEE Class 1E	MCR / RSS Displays	MCR / RSS Controls
6.9 kV Switchgear	31BDA	Yes	Bus Voltage / Bus Voltage	Incoming Source Breaker Open-Close / Incoming Source Breaker Open-Close
6.9 kV Switchgear	32BDA	Yes	Bus Voltage / Bus Voltage	Incoming Source Breaker Open-Close / Incoming Source Breaker Open-Close
6.9 kV Switchgear	33BDA	Yes	Bus Voltage / Bus Voltage	Incoming Source Breaker Open-Close / Incoming Source Breaker Open-Close
6.9 kV Switchgear	34BDA	Yes	Bus Voltage / Bus Voltage	Incoming Source Breaker Open-Close / Incoming Source Breaker Open-Close
6.9 kV Switchgear	31BDB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	32BDB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	33BDB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	34BDB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	31BDC	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	34BDC	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	31BDD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	32BDD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close

Table 2.5.1-2—EPSS Electrical Equipment Design
Sheet 2 of 5

Description	Tag Number(1)	IEEE Class 1E	MCR / RSS Displays	MCR / RSS Controls
6.9 kV Switchgear	33BDD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
6.9 kV Switchgear	34BDD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	31BMB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	32BMB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	33BMB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	34BMB	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	31BMC	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	34BMC	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	31BMD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	32BMD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	33BMD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V Load Center	34BMD	Yes	Bus Voltage / Bus Voltage	Feeder Breaker Open-Close / Feeder Breaker Open-Close
480V MCC	31BNA01	Yes	N/A / N/A	N/A / N/A
480V MCC	32BNA01	Yes	N/A / N/A	N/A / N/A

Table 2.5.1-2—EPSS Electrical Equipment Design
Sheet 3 of 5

Description	Tag Number(1)	IEEE Class 1E	MCR / RSS Displays	MCR / RSS Controls
480V MCC	33BNA01	Yes	N/A / N/A	N/A / N/A
480V MCC	34BNA01	Yes	N/A / N/A	N/A / N/A
480V MCC	32BNA02	Yes	N/A / N/A	N/A / N/A
480V MCC	33BNA02	Yes	N/A / N/A	N/A / N/A
480V MCC	31BNB01	Yes	N/A / N/A	N/A / N/A
480V MCC	32BNB01	Yes	N/A / N/A	N/A / N/A
480V MCC	33BNB01	Yes	N/A / N/A	N/A / N/A
480V MCC	34BNB01	Yes	N/A / N/A	N/A / N/A
480V MCC	31BNB02	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	32BNB02	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	33BNB02	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	34BNB02	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	31BNB03	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	32BNB03	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	33BNB03	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	34BNB03	Yes	Bus Voltage / Bus Voltage	N/A / N/A
480V MCC	31BNC01	Yes	N/A / N/A	N/A / N/A
480V MCC	34BNC01	Yes	N/A / N/A	N/A / N/A
480V MCC	31BND01	Yes	N/A / N/A	N/A / N/A
480V MCC	32BND01	Yes	N/A / N/A	N/A / N/A
480V MCC	33BND01	Yes	N/A / N/A	N/A / N/A
480V MCC	34BND01	Yes	N/A / N/A	N/A / N/A

Table 2.5.1-2—EPSS Electrical Equipment Design
Sheet 4 of 5

Description	Tag Number(1)	IEEE Class 1E	MCR / RSS Displays	MCR / RSS Controls
Transformer	31BMT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	32BMT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	33BMT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	34BMT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	31BMT02	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	32BMT02	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	33BMT02	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	34BMT02	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	31BMT03	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	32BMT03	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	33BMT03	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	34BMT03	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	31BMT04	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close

Table 2.5.1-2—EPSS Electrical Equipment Design
Sheet 5 of 5

Description	Tag Number(1)	IEEE Class 1E	MCR / RSS Displays	MCR / RSS Controls
Transformer	32BMT04	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	33BMT04	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Transformer	34BMT04	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Voltage Regulating Transformer	31BNT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Voltage Regulating Transformer	32BNT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Voltage Regulating Transformer	33BNT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close
Voltage Regulating Transformer	34BNT01	Yes	N/A / N/A	Feeder Breaker Open-Close / Feeder Breaker Open-Close

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

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
Sheet 1 of 7

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the EPSS is as described in the Design Description of Section 2.5.1, Tables 2.5.1-1 and 2.5.1-2, and as shown on Figure 2.5.1-1.	An inspection of the as-built EPSS functional arrangement will be performed.	The EPSS conforms to the functional arrangement as described in the Design Description of Section 2.5.1, Tables 2.5.1-1 and 2.5.1-2, and as shown on Figure 2.5.1-1.
2.2	Deleted.	Deleted.	Deleted.
2.3	Deleted.	Deleted.	Deleted.
2.4	Deleted.	Deleted.	Deleted.
3.1	Equipment identified Class 1E in Table 2.5.1-2 can withstand seismic design basis loads without a loss of safety function(s).	a. Type tests, analyses, or a combination of type tests and analyses will be performed on the equipment identified as Class 1E in Table 2.5.1-2 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 Class 1E in Table 2.5.1-2 to verify that the equipment, including anchorage, are installed in a condition bounded by the tested or analyzed condition.	a. Test/analysis reports conclude that the equipment identified as Class 1E in Table 2.5.1-2 can withstand seismic design basis loads without a loss of the safety function(s). b. Inspection reports conclude that the equipment identified as Class 1E in Table 2.5.1-2, including anchorage, are installed in a condition bounded by the tested or analyzed condition.

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
Sheet 2 of 7

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
4.1	Displays listed in Table 2.5.1-2 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 2.5.1-2 are indicated on the PICS operator workstations in the MCR. b. Tests will be performed to verify that the displays listed in Table 2.5.1-2 are indicated on the PICS operator workstations in the RSS.	a. Displays listed in Table 2.5.1-2 are indicated on the PICS operator workstations in the MCR. b. Displays listed in Table 2.5.1-2 are indicated on the PICS operator workstations in the RSS.
4.2	Controls on the PICS operator workstations in the MCR and the RSS perform the function listed in Table 2.5.1-2.	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 2.5.1-2. b. Controls on the PICS operator workstations in the RSS perform the function listed in Table 2.5.1-2.
5.1	Physical separation exists between Class 1E EPSS equipment listed in Table 2.5.1-2 and non-Class 1E equipment.	An inspection will be performed to verify that as-built Class 1E EPSS equipment is physically separated from as-built non-Class 1E equipment.	The Class 1E EPSS equipment listed in Table 2.5.1-2 is separated from non-Class 1E equipment by at least 3 ft horizontally and at least 5 ft vertically.
5.2	Non-safety-related loads connected to the EPSS are electrically isolated from the EPSS by an isolation device.	a. Type tests, analyses, or a combination of type tests and analyses of the isolation devices will be performed. b. An inspection will be performed of the as-built non-safety-related loads connected to the EPSS.	a. The isolation devices used between the EPSS and non-safety-related loads are qualified to provide electrical isolation. b. A qualified electrical isolation device exists between non-safety-related loads connected to the EPSS and the EPSS.

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
Sheet 3 of 7

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.3	Without an alternate feed installed, independence is maintained between the EPSS divisions.	Testing will be performed by providing a test input signal in each EPSS division, one division at a time.	Without an alternate feed installed, the test input signal exists only in the EPSS division under test, when a test input signal is applied in each EPSS division.
5.4	With the alternate feed installed from EPSS division 1 to division 2, independence is maintained between the load group created by divisions 1 and 2, and EPSS divisions 3 and 4 which are independent of each other.	Testing will be performed by providing a test input signal in each EPSS division, one division at a time, while the alternate feed is installed from EPSS division 1 to division 2.	a. A test input signal exists only in the load group created by Class 1E divisions 1 and 2 when the test input signal is provided in Class 1E division 1 or 2. b. A test input signal exists only in the division under test when the test input signal is provided in Class 1E division 3 or 4.
5.5	With the alternate feed installed from EPSS division 2 to division 1, independence is maintained between the load group created by divisions 1 and 2, and EPSS divisions 3 and 4 which are independent of each other.	Testing will be performed by providing a test input signal in each EPSS division, one division at a time, while the alternate feed is installed from EPSS division 2 to division 1.	a. A test input signal exists only in the load group created by Class 1E divisions 1 and 2 when the test input signal is provided in Class 1E division 1 or 2. b. A test input signal exists only in the division under test when the test input signal is provided in Class 1E division 3 or 4.

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
Sheet 4 of 7

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.6	With the alternate feed installed from EPSS division 3 to division 4, independence is maintained between the load group created by divisions 3 and 4, and EPSS divisions 1 and 2 which are independent of each other.	Testing will be performed by providing a test input signal in each EPSS division, one division at a time, while the alternate feed is installed from EPSS division 3 to division 4.	a. A test input signal exists only in the load group created by Class 1E divisions 3 and 4 when the test input signal is provided in Class 1E division 3 or 4. b. A test input signal exists only in the division under test when the test input signal is provided in Class 1E division 1 or 2.
5.7	With the alternate feed installed from EPSS division 4 to division 3, independence is maintained between the load group created by divisions 3 and 4, and EPSS divisions 1 and 2 which are independent of each other.	Testing will be performed by providing a test input signal in each EPSS division, one division at a time, while the alternate feed is installed from EPSS division 4 to division 3.	a. A test input signal exists only in the load group created by Class 1E divisions 3 and 4 when the test input signal is provided in Class 1E division 3 or 4. b. A test input signal exists only in the division under test when the test input signal is provided in Class 1E division 1 or 2
5.8	Control power for EPSS switchgear and load centers listed in Table 2.5.1-2 is provided by the EUPS from the respective division.	A test will be performed to verify that control power for EPSS switchgear and load centers is provided by the EUPS from the respective division.	The signal exists only in the control power circuit of the EPSS division under test for EPSS switchgear and load centers listed in Table 2.5.1-2.
5.9	Deleted.	Deleted.	Deleted.
5.10	Deleted.	Deleted.	Deleted.

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
Sheet 5 of 7

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.11	EPSS switchgear, load centers, MCCs, and transformers, listed in Table 2.5.1-2, and their feeder breakers and load breakers are sized to supply their load requirements.	An inspection and analysis will be performed to verify as-built EPSS switchgear, load centers, MCCs, and transformers, listed in Table 2.5.1-2, and their feeder breakers and load breakers are sized to supply their load requirements.	An equipment sizing analysis concludes that ratings for EPSS switchgear, load centers, MCCs, and transformers, listed in Table 2.5.1-2, and their feeder breakers and load breakers are greater than their analyzed load requirements.
5.12	EPSS cables and buses are sized to supply their assigned load requirements.	An inspection and analysis will be performed to verify as-built EPSS cables and buses are sized to supply their assigned load requirements.	An equipment sizing analysis concludes EPSS cables and buses are sized to supply analyzed load requirements.
5.13	EPSS interrupting devices (e.g., circuit breakers and fuses) are coordinated so that the circuit interrupting device closest to the fault opens before other devices.	An inspection and analysis will be performed to verify as-built EPSS interrupting devices (e.g., circuit breakers and fuses) are coordinated so that the circuit interrupting device closest to the fault opens before other devices.	An equipment protection and coordination analysis concludes that the EPSS interrupting devices (e.g., circuit breakers and fuses) are coordinated so that the circuit interrupting device closest to the fault opens before other devices.
5.14	EPSS switchgear, load centers, MCCs, and transformers listed in Table 2.5.1-2 are rated to withstand fault currents for the time required to clear the fault from its power source.	An inspection and analysis will be performed to verify as-built EPSS switchgear, load centers, MCCs, and transformers listed in Table 2.5.1-2 are rated to withstand fault currents for the time required to clear the fault from its power source.	A short-circuit analysis concludes that current capability for EPSS switchgear, load centers, MCCs, and transformers listed in Table 2.5.1-2 is greater than the analyzed fault currents for the time required to clear the fault from its power source as determined by circuit interrupting device coordination analysis.

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
Sheet 6 of 7

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.15	The feeder and load circuit breakers for EPSS switchgear, load centers and MCCs are rated to interrupt fault currents.	An inspection and analysis will be performed to verify as-built feeder and load circuit breakers for EPSS switchgear, load centers, and MCCs are rated to interrupt fault currents.	A report concludes that the current interrupting capability for EPSS switchgear, load center, and MCC feeder and load circuit breakers, is greater than the analyzed fault currents.
5.16	EPSS 6.9 kV and 480V feeder and load circuit breakers open at the breaker trip setpoints.	A bench test will be performed to verify as-built EPSS 6.9 kV and 480V feeder and load circuit breakers open at the breaker trip setpoints.	EPSS 6.9 kV and 480V feeder and load circuit breakers open at the trip setpoints.
6.1	Each EPSS division has an assigned EDG that provides power if there is a loss of offsite power.	Tests will be performed to verify that each EPSS division has an assigned EDG that provides power if there is a loss of offsite power.	Each EPSS division has an assigned EDG that provides power if there is a loss of offsite power.
6.2	Each EPSS 6.9 kV switchgear offsite power supply circuit breaker is opened by a protection system LOOP signal.	Tests will be performed using test input signals to verify that each EPSS 6.9 kV switchgear offsite power supply circuit breaker is opened by a protection system LOOP signal.	Each EPSS 6.9 kV switchgear offsite power supply circuit breaker automatically separates from the offsite power supply on a LOOP test input signal from the protection system.
6.3	The EPSS provides voltages at the supplied safety-related equipment during normal and accident conditions that exceed the minimum required operating voltage of that equipment.	a. An analysis will be performed to verify that the voltage at the supplied safety-related equipment during normal and accident conditions exceeds the minimum required operating voltage of that equipment. b. A test will be performed to verify that EPSS bus voltage measurements verify safety-related terminal voltages exceed the minimum required operating voltage for that equipment.	a. An analysis concludes the voltage at the supplied safety-related equipment during normal and accident conditions exceeds the minimum required operating voltage of that equipment. b. EPSS bus voltage measurements verify safety-related terminal voltages exceed the minimum required operating voltage for that equipment.

Table 2.5.1-3—Class 1E Emergency Power Supply System ITAAC
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Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.4	EPSS loads are sequentially energized by the protection system during LOOP or LOCA conditions.	a. A test will be performed on each EPSS division using test input signals to verify that EPSS loads are sequentially energized by the protection system during LOOP, LOCA, and LOOP/LOCA conditions without the alternate feed installed. b. A test will be performed on each EPSS division using test input signals to verify that EPSS loads are sequentially energized by the protection system during LOOP, LOCA and LOOP/LOCA conditions with the alternate feed installed.	a. EPSS loads are sequentially energized by the protection system during LOOP, LOCA, and LOOP/LOCA conditions without the alternate feed installed. b. EPSS loads are sequentially energized by the protection system during LOOP, LOCA and LOOP/LOCA conditions with the alternate feed installed.
6.5	Each EPSS division transfers from the normal offsite circuit to the alternate offsite power supply circuit on an emergency auxiliary transformer failure signal.	A test will be performed using test input signals to verify that each EPSS division transfers from the normal offsite circuit to the alternate offsite circuit on an emergency auxiliary transformer failure signal.	Each EPSS division transfers from the normal offsite circuit to the alternate offsite circuit on an emergency auxiliary transformer failure signal.
6.6	EPSS loads that are sequenced by the protection system are shed by the protection system in an undervoltage condition prior to load sequencing.	A test will be performed using test input signals to verify that EPSS loads that are sequenced by the protection system are shed by the protection system in an undervoltage condition prior to load sequencing.	EPSS loads that are sequenced by the protection system are shed by the protection system in an undervoltage condition prior to load sequencing.

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