

2.5.3 Station Blackout Alternate AC Source

1.0 Description

Two station blackout diesel generators (SBODG) are provided as the alternate ac (AAC) source to provide power to station loads necessary to bring and maintain the plant in a safe shutdown condition during non design basis accident station blackout conditions.

2.0 I&C Design Features, Alarms, Displays and Controls

2.1 Displays listed in Table 2.5.3-1—Station Blackout Alternate AC Source Electrical Equipment Design, are retrievable in the main control room (MCR) and the remote shutdown station (RSS) as listed in Table 2.5.3-1.

2.2 SBODG equipment controls are provided in the MCR and RSS as listed in Table 2.5.3-1.

3.0 Mechanical Design Features

3.1 The SBODG air start system is independent of the emergency diesel generator (EDG) air start system.

4.0 Electrical Considerations

4.1 The SBODGs are connected to the emergency power supply system (EPSS) Class 1E buses through two in series circuit breakers (one Class 1E circuit breaker at the Class 1E EPSS bus and one non-Class 1E circuit breaker at the non-Class 1E normal power supply system (NPSS) bus).

4.2 SBODG #1 is capable of connecting to EPSS divisions 1 and 2.

4.3 SBODG #2 is capable of connecting to EPSS divisions 3 and 4.

4.4 Each SBODG is sized to power one set of safe shutdown loads.

5.0 Inspection, Tests, Analyses and Acceptance Criteria

5.1 Table 2.5.3-2—Station Blackout Alternate AC Source Inspections, Tests, Analyses, and Acceptance Criteria, provides the ITAAC for the station blackout AAC source.

Table 2.5.3-1—Station Blackout Alternate AC Source Electrical Equipment Design

Equipment Description	Equipment Tag Number (1)	IEEE Class 1E	MCR/RSS Displays	MCR/RSS Controls
SBODG #1	30XKA50	No	Generator voltage, current, frequency, power, reactive power. Engine running, not running / Generator voltage, current, frequency, power, reactive power. Engine running, not running	Generator output voltage raise and lower, output breaker close and trip. Engine start, stop, governor raise and lower / Generator output voltage raise and lower, output breaker close and trip. Engine start, stop, governor raise and lower
SBODG #2	30XKA80	No	Generator voltage, current, frequency, power, reactive power. Engine running, not running / Generator voltage, current, frequency, power, reactive power. Engine running, not running	Generator output voltage raise and lower, output breaker close and trip. Engine start, stop, governor raise and lower / Generator output voltage raise and lower, output breaker close and trip. Engine start, stop, governor raise and lower

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

Table 2.5.3-2—Station Blackout Alternate AC Source Inspections, Tests, Analyses, and Acceptance Criteria

	Commitment	Inspection, Test or Analysis	Acceptance Criteria
2.1	Displays listed in Table 2.5.3-1 are retrievable in the MCR and RSS as listed in Table 2.5.3-1.	An inspection will be performed.	Displays listed in Table 2.5.3-1 as being retrieved in the MCR can be retrieved in the MCR. Displays listed in Table 2.5.3-1 as being retrieved in the RSS can be retrieved in the RSS.
2.2	SBODG equipment controls are provided in the MCR and RSS as listed in Table 2.5.3-1.	A test will be performed.	Controls listed in Table 2.5.3-1 as being in the MCR exist in the MCR. Controls listed in Table 2.5.3-1 as being in the RSS exist in the RSS.
3.1	The SBODG air start system is independent of the EDG air start system.	An inspection will be performed.	Each SBODG has an air start system that is independent of the EDG air start systems.
4.1	The SBODGs are connected to the EPSS Class 1E buses through two in series circuit breakers (one Class 1E circuit breaker at the Class 1E EPSS bus and one non-Class 1E circuit breaker at the non-Class 1E NPSS bus).	An inspection will be performed.	The SBODGs are connected to the EPSS Class 1E buses through two in series circuit breakers (one Class 1E circuit breaker at the Class 1E EPSS bus and one non-Class 1E circuit breaker at the non-Class 1E NPSS bus).
4.2	SBODG #1 is capable of connecting to EPSS divisions 1 and 2.	Testing is performed by starting and connecting SBODG #1 to EPSS divisions 1 and 2.	SBODG #1 is capable of connecting to EPSS divisions 1 and 2.
4.3	SBODG #2 is capable of connecting to EPSS divisions 3 and 4.	Testing is performed by starting and connecting SBODG #2 to EPSS divisions 3 and 4.	SBODG #2 is capable of connecting to EPSS divisions 3 and 4.
4.4	Each SBODG is sized to power one set of safe shutdown loads.	A test will be performed.	Each SBODG is sized to power one set of safe shutdown loads.