2.5.4 Emergency Diesel Generator

Design Description

1.0 System Description

The emergency diesel generators (EDG) provide a standby source of Class 1E power to safety-related and non-safety-related loads during conditions that result in a loss of preferred power to emergency power supply system (EPSS) buses.

2.0 Arrangement

2.1 The functional arrangement of the EDG fuel oil storage and transfer system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1—Emergency Diesel Generator Equipment Mechanical Design and 2.5.4-2—Emergency Diesel Generator Support Systems Electrical Equipment Design, and as shown on Figure 2.5.4-1—Emergency Diesel Generator Fuel Oil Storage and Transfer System Functional Arrangement.

2.2 Deleted.

2.3 Deleted.

2.4 The functional arrangement of the EDG lubricating oil system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1—Emergency Diesel Generator Equipment Mechanical Design and 2.5.4-2—Emergency Diesel Generator Support Systems Electrical Equipment Design, and as shown on Figure 2.5.4-2—Emergency Diesel Generator Lubricating Oil System Functional Arrangement.

2.5 The functional arrangement of the EDG air intake and exhaust system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1—Emergency Diesel Generator Equipment Mechanical Design and 2.5.4-2—Emergency Diesel Generator Support Systems Electrical Equipment Design, and as shown on Figure 2.5.4-3—Emergency Diesel Generator Air Intake and Exhaust System Functional Arrangement.

2.6 The functional arrangement of the EDG cooling water system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1—Emergency Diesel Generator Equipment Mechanical Design and 2.5.4-2—Emergency Diesel Generator Support Systems Electrical Equipment Design, and as shown on Figure 2.5.4-4—Emergency Diesel Generator Cooling Water System Functional Arrangement.

2.7 The functional arrangement of the EDG starting air system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1—Emergency Diesel Generator Equipment Mechanical Design and 2.5.4-2—Emergency Diesel Generator Support Systems Electrical Equipment Design, and as shown on Figure 2.5.4-5—Emergency Diesel Generator Starting Air System Functional Arrangement.

3.0 Mechanical Design Features

3.1 Pumps and valves listed in Table 2.5.4-1 will be functionally designed and qualified such that each pump and valve is capable of performing its intended function for a full range of system differential pressure and flow, ambient temperatures, and available voltage (as applicable) under conditions ranging from normal operating to design-basis accident conditions.

3.2 Deleted.

3.3 Deleted.

3.4 Deleted.

3.5 Deleted.

3.6 Deleted.

3.7 Equipment identified as Seismic Category I in Table 2.5.4-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.5.4-1.

3.8 Deleted.

3.9 Each EDG has a fuel oil storage tank.

3.10 Each EDG has a fuel oil day tank.

3.11 Each fuel oil transfer pump capacity is greater than EDG fuel oil consumption at the continuous rating.

3.12 Each EDG starting air system is capable of providing air to start the respective EDG without being recharged.

3.13 Check valves listed in Table 2.5.4-1 will function to change position as listed in Table 2.5.4-1 under normal operating conditions.

3.14 Each EDG lubricating oil system provides lubrication to the engine and turbocharger wearing parts during engine operation.

3.15 Each EDG exhaust path has a bypass exhaust path.

3.16 Deleted.

3.17 Deleted.

3.18 Deleted.

3.19 Deleted.

3.20 Deleted.

3.21 ASME Code Class 1, 2 and 3 piping systems are designed in accordance with ASME Code Section III requirements.

3.22 As-built ASME Code Class 1, 2, and 3 components are reconciled with the design requirements.

3.23 Pressure-boundary welds in ASME Code Class 1, 2 and 3 components meet ASME Code Section III non-destructive examination requirements.

3.24 ASME Code Class 1, 2 and 3 components retain their pressure-boundary integrity at their design pressure.

3.25 ASME Code Class 1, 2 and 3 components are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.

4.0 I&C Design Features, Displays, and Controls

4.1 Displays listed in Table 2.5.4-2 and Table 2.5.4-3—Emergency Diesel Generator Electrical Equipment Design are indicated on the PICS operator workstations in the main control room (MCR) and the remote shutdown station (RSS).

4.2 Controls on the PICS operator workstations in the MCR and the RSS perform the function listed in Table 2.5.4-2 and Table 2.5.4-3.

4.3 Equipment listed as being controlled by a priority and actuator control system (PACS) module in Table 2.5.4-2 responds to the state requested and provides drive monitoring signals back to the PACS module. The PACS module will protect the equipment by terminating the output command upon the equipment reaching the requested state.

5.0 Electrical Power Design Features

5.1 The EDG control power is provided by the EUPS from the respective division.

5.2 Equipment designated as Class 1E in Table 2.5.4-2 are powered from the Class 1E division listed in Table 2.5.4-2.

5.3 Each EDG output rating is greater than the analyzed loads assigned in the respective emergency power supply system (EPSS) division.

5.4 Valves listed in Table 2.5.4-2 fail to the position as listed in Table 2.5.4-2 on loss of power.

6.0 Equipment and System Performance

6.1 Each EDG is started by a protection system loss of offsite power (LOOP) signal from the respective EPSS division medium voltage bus.

6.2 Each EDG is started by a protection system safety injection system (SIS) actuation signal.

6.3 Each EDG will start and connect to the respective EPSS division medium voltage bus in an undervoltage condition concurrent with a SIS actuation signal.

6.4 The EDG lubricating oil system heat exchangers listed in Table 2.5.4-1 have the capacity to transfer the design heat load to the essential service water system.

6.5 Class 1E valves listed in Table 2.5.4-2 will function to change position as listed in Table 2.5.4-1 under normal operating conditions.

6.6 The EDG cooling water system heat exchangers as listed in Table 2.5.4-1 have the capacity to transfer the design heat load to the essential service water system.

6.7 Each EDG is capable of starting from standby conditions and achieving required voltage and frequency.

Inspections, Tests, Analyses, and Acceptance Criteria

Table 2.5.4-4 lists the EDG ITAAC.

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 1 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Emergency Diesel Generator	30XJA10 30XJA20 30XJA30 30XJA40	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	N/A	Supply Emergency Power	I
Fuel Oil Storage Tank	30XJN10BB001 30XJN20BB001 30XJN30BB001 30XJN40BB001	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Storage Volume	I
Fuel Oil Transfer Pump	30XJN10AP100A 30XJN20AP100A 30XJN30AP100A 30XJN40AP100A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Run	I
Fuel Oil Transfer Pump	30XJN10AP100B 30XJN20AP100B 30XJN30AP100B 30XJN40AP100B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Run	I
Fuel Oil Day Tank	30XJN10BB002 30XJN20BB002 30XJN30BB002 30XJN40BB002	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Storage Volume	I
Fuel Oil Strainer	30XJN10AT260A 30XJN20AT260A 30XJN30AT260A 30XJN40AT260A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 2 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Fuel Oil Strainer	30XJN10AT260B 30XJN20AT260B 30XJN30AT260B 30XJN40AT260B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Check Valve	30XJN10AA201A 30XJN20AA201A 30XJN30AA201A 30XJN40AA201A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Check Valve	30XJN10AA201B 30XJN20AA201B 30XJN30AA201B 30XJN40AA201B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Check Valve	30XJN10AA226 30XJN20AA226 30XJN30AA226 30XJN40AA226	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Open / Close	I
Check Valve	30XJN10AA227 30XJN20AA227 30XJN30AA227 30XJN40AA227	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Open / Close	I
Check Valve	30XJN10AA228 30XJN20AA228 30XJN30AA228 30XJN40AA228	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Open / Close	I
Fuel Oil Filter Supply Selector Valve	30XJN10AA267 30XJN20AA267 30XJN30AA267 30XJN40AA267	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 3 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Fuel Oil Filter	30XJN10AT267A 30XJN20AT267A 30XJN30AT267A 30XJN40AT267A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Fuel Oil Filter	30XJN10AT267B 30XJN20AT267B 30XJN30AT267B 30XJN40AT267B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Fuel Oil Strainer Supply Selector Valve	30XJN10AA271 30XJN20AA271 30XJN30AA271 30XJN40AA271	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Fuel Oil Strainer	30XJN10AT271A 30XJN20AT271A 30XJN30AT271A 30XJN40AT271A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Fuel Oil Strainer	30XJN10AT271B 30XJN20AT271B 30XJN30AT271B 30XJN40AT271B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Engine Driven Fuel Oil Pump	30XJN10AP110 30XJN20AP110 30XJN30AP110 30XJN40AP110	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Run	I
Fuel Oil Pump	30XJN10AP120 30XJN20AP120 30XJN30AP120 30XJN40AP120	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Run	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 4 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Fuel Oil Filter Supply Selector Valve	30XJN10AA280 30XJN20AA280 30XJN30AA280 30XJN40AA280	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Fuel Oil Filter	30XJN10AT280A 30XJN20AT280A 30XJN30AT280A 30XJN40AT280A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Filter	I
Fuel Oil Filter	30XJN10AT280B 30XJN20AT280B 30XJN30AT280B 30XJN40AT280B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Filter	
Lube Oil System Valve	30XJV10AA170 30XJV20AA170 30XJV30AA170 30XJV40AA170	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Lube Oil System Valve	30XJV10AA171 30XJV20AA171 30XJV30AA171 30XJV40AA171	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Lube Oil System Valve	30XJV10AA154 30XJV20AA154 30XJV30AA154 30XJV40AA154	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Lube Oil Temperature Control Valve	30XJV10AA111 30XJV20AA111 30XJV30AA111 30XJV40AA111	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 5 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Lube Oil Strainer Supply Selector Valve	30XJV10AA265 30XJV20AA265 30XJV30AA265 30XJV40AA265	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Lube Oil Pump Discharge Filter Selector Valve	30XJV10AA260 30XJV20AA260 30XJV30AA260 30XJV40AA260	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Lube Oil System Heat Exchanger	30XJV10AC001 30XJV20AC001 30XJV30AC001 30XJV40AC001	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Heat Transfer Device	I
Check Valve	30XJV10AA207 30XJV20AA207 30XJV30AA207 30XJV40AA207	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Check Valve	30XJV10AA206 30XJV20AA206 30XJV30AA206 30XJV40AA206	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Lube Oil Filter	30XJV10AT110A 30XJV20AT110A 30XJV30AT110A 30XJV40AT110A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Lube Oil Filter	30XJV10AT110B 30XJV20AT110B 30XJV30AT110B 30XJV40AT110B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 6 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Lube Oil Strainer	30XJV10AT115A 30XJV20AT115A 30XJV30AT115A 30XJV40AT115A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Lube Oil Strainer	30XJV10AT115B 30XJV20AT115B 30XJV30AT115B 30XJV40AT115B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Engine Driven Lube Oil Pump	30XJV10AP110A 30XJV20AP110A 30XJV30AP110A 30XJV40AP110A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Run	I
Engine Driven Lube Oil Pump	30XJV10AP110B 30XJV20AP110B 30XJV30AP110B 30XJV40AP110B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Run	I
Lube Oil Pump Suction Strainer	30XJV10AT109A 30XJV20AT109A 30XJV30AT109A 30XJV40AT109A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Filter	I
Lube Oil Pump Suction Strainer	30XJV10AT109B 30XJV20AT109B 30XJV30AT109B 30XJV40AT109B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Filter	I
Engine Sump	30XJV10BB110 30XJV20BB110 30XJV30BB110 30XJV40BB110	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Storage Volume	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 7 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Lube Oil Tank	30XJV10BB100 30XJV20BB100 30XJV30BB100 30XJV40BB100	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Storage Volume	I
Keep-Warm/Prelube Pump Relief Valve	30XJV10AA194 30XJV20AA194 30XJV30AA194 30XJV40AA194	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I
Air Intake Filter	30XJQ10AT110A 30XJQ20AT110A 30XJQ30AT110A 30XJQ40AT110A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Air Intake Filter	30XJQ10AT110B 30XJQ20AT110B 30XJQ30AT110B 30XJQ40AT110B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Filter	I
Air Intake Silencer	30XJQ10BS111 30XJQ20BS111 30XJQ30BS111 30XJQ40BS111	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Design DP	I
Air Intake Heater	30XJQ10AH111 30XJQ20AH111 30XJQ30AH111 30XJQ40AH111	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Heater	I
Air Intake Damper	30XJQ10AA112A 30XJQ20AA112A 30XJQ30AA112A 30XJQ40AA112A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 8 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Air Intake Damper	30XJQ10AA112B 30XJQ20AA112B 30XJQ30AA112B 30XJQ40AA112B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I
Exhaust Bypass Rupture Disk	30XJR10AA121 30XJR20AA121 30XJR30AA121 30XJR40AA121	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Provide Engine Exhaust Path	I
Jacket Water Loop Heat Exchanger	30XJG10AC001 30XJG20AC001 30XJG30AC001 30XJG40AC001	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Heat Transfer Device	I
Jacket Water Heat Temperature Regulating Valve	30XJG10AA111 30XJG20AA111 30XJG30AA111 30XJG40AA111	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Cooling System Expansion Tank	30XJG10BB001 30XJG20BB001 30XJG30BB001 30XJG40BB001	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Storage Volume	I
Fill Valve	30XJG10AA150 30XJG20AA150 30XJG30AA150 30XJG40AA150	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Fill Valve	30XJG10AA151 30XJG20AA151 30XJG30AA151 30XJG40AA151	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 9 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Keep Warm Circuit Isolation Valve	30XJG10AA160 30XJG20AA160 30XJG30AA160 30XJG40AA160	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Keep Warm Circuit Isolation Valve	30XJG10AA161 30XJG20AA161 30XJG30AA161 30XJG40AA161	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Jacket Water Standby Circulation Pump Relief Valve	30XJG10AA192 30XJG20AA192 30XJG30AA192 30XJG40AA192	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Check Valve	30XJG10AA201 30XJG20AA201 30XJG30AA201 30XJG40AA201	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Check Valve	30XJG10AA202 30XJG20AA202 30XJG30AA202 30XJG40AA202	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Check Valve	30XJG10AA203 30XJG20AA203 30XJG30AA203 30XJG40AA203	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Close	I
Engine Driven Jacket Water Pump	30XJG10AP110 30XJG20AP110 30XJG30AP110 30XJG40AP110	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Run	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 10 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Intercooler Loop Heat Exchanger	30XJG10AC002 30XJG20AC002 30XJG30AC002 30XJG40AC002	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Heat Transfer Device	I
Intercooler Temperature Regulating Valve	30XJG10AA121 30XJG20AA121 30XJG30AA121 30XJG40AA121	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Combustion Air Preheater Temperature Regulating Valve	30XJG10AA110 30XJG20AA110 30XJG30AA110 30XJG40AA110	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Intercooler Water Engine Driven Pump	30XJG10AP120 30XJG20AP120 30XJG30AP120 30XJG40AP120	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Run	I
Intercooler Combustion Air Heat Exchanger	30XJG10AC120A 30XJG20AC120A 30XJG30AC120A 30XJG40AC120A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Heat Transfer Device	I
Intercooler Combustion Air Heat Exchanger	30XJG10AC120B 30XJG20AC120B 30XJG30AC120B 30XJG40AC120B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Heat Transfer Device	I
Governor Oil Cooler	30XJG10AC120C 30XJG20AC120C 30XJG30AC120C 30XJG40AC120C	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Heat Transfer Device	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 11 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Generator Bearing Cooler	30XJG10AC170 30XJG20AC170 30XJG30AC170 30XJG40AC170	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Heat Transfer Device	I
Starting Air Receiver	30XJX10BB001A 30XJX20BB001A 30XJX30BB001A 30XJX40BB001A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Storage Volume	I
Starting Air Receiver	30XJX10BB001B 30XJX20BB001B 30XJX30BB001B 30XJX40BB001B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Storage Volume	I
Check Valve	30XJX10AA210A 30XJX20AA210A 30XJX30AA210A 30XJX40AA210A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open, Close	I
Check Valve	30XJX10AA210B 30XJX20AA210B 30XJX30AA210B 30XJX40AA210B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open, Close	I
Check Valve	30XJX10AA211A 30XJX20AA211A 30XJX30AA211A 30XJX40AA211A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open, Close	I
Check Valve	30XJX10AA211B 30XJX20AA211B 30XJX30AA211B 30XJX40AA211B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open, Close	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 12 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Check Valve	30XJX10AA226A 30XJX20AA226A 30XJX30AA226A 30XJX40AA226A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open, Close	I
Check Valve	30XJX10AA226B 30XJX20AA226B 30XJX30AA226B 30XJX40AA226B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open, Close	I
Air Start Valve	30XJX10AA120A 30XJX20AA120A 30XJX30AA120A 30XJX40AA120A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Open	I
Air Start Valve	30XJX10AA120B 30XJX20AA120B 30XJX30AA120B 30XJX40AA120B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Open	I
Air Start Pilot Valve	30XJX10AA122A 30XJX20AA122A 30XJX30AA122A 30XJX40AA122A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I
Air Start Pilot Valve	30XJX10AA122B 30XJX20AA122B 30XJX30AA122B 30XJX40AA122B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I
Governor Boost Solenoid Valve	30XJX10AA124A 30XJX20AA124A 30XJX30AA124A 30XJX40AA124A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I

Table 2.5.4-1—EDG Equipment Mechanical Design
Sheet 13 of 13

Description	Tag Number(1)	Location	ASME Code Section III	Function	Seismic Category
Governor Boost Solenoid Valve	30XJX10AA124B 30XJX20AA124B 30XJX30AA124B 30XJX40AA124B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open	I
Starting Air Receiver Blowdown Valve	30XJX10AA411A 30XJX20AA411A 30XJX30AA411A 30XJX40AA411A	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Starting Air Receiver Blowdown Valve	30XJX10AA411B 30XJX20AA411B 30XJX30AA411B 30XJX40AA411B	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	Yes	Open / Close	I
Governor Booster	30XJG10AC130 30XJG20AC130 30XJG30AC130 30XJG40AC130	Division 1 EPGB Division 2 EPGB Division 3 EPGB Division 4 EPGB	No	Run	I

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

Table 2.5.4-2—EDG Support Systems Electrical Equipment Design
Sheet 1 of 3

Description	Tag Number[1]	IEEE Class 1E[2]	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Fuel Oil Transfer Pumps	30XJN10AP100A 30XJN20AP100A 30XJN30AP100A 30XJN40AP100A	Division 1 Division 2 Division 3 Division 4	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Fuel Oil Transfer Pumps	30XJN10AP100B 30XJN20AP100B 30XJN30AP100B 30XJN40AP100B	Division 1 Division 2 Division 3 Division 4	N/A	Yes	On-Off / On-Off	Start-Stop / Start-Stop
Fuel Oil Pump	30XJN10AP120 30XJN20AP120 30XJN30AP120 30XJN40AP120	Division 1 Division 2 Division 3 Division 4	N/A	Yes	None / None	None / None
Lube Oil Temperature Control Valve	30XJV10AA111 30XJV20AA111 30XJV30AA111 30XJV40AA111	Division 1 Division 2 Division 3 Division 4	N/A	Yes	None / None	None / None
Lube Oil System Valves	30XJV10AA170 30XJV20AA170 30XJV30AA170 30XJV40AA170	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Lube Oil System Valves	30XJV10AA171 30XJV20AA171 30XJV30AA171 30XJV40AA171	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None

Table 2.5.4-2—EDG Support Systems Electrical Equipment Design
Sheet 2 of 3

Description	Tag Number(1)	IEEE Class 1E(2)	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Lube Oil System Valve	30XJV10AA154 30XJV20AA154 30XJV30AA154 30XJV40AA154	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Air Intake Damper	30XJQ10AA112A 30XJQ20AA112A 30XJQ30AA112A 30XJQ40AA112A	Division 1 Division 2 Division 3 Division 4	As is	Yes	None / None	None / None
Air Intake Damper	30XJQ10AA112B 30XJQ20AA112B 30XJQ30AA112B 30XJQ40AA112B	Division 1 Division 2 Division 3 Division 4	As is	Yes	None / None	None / None
Keep Warm Circuit Isolation Valve	30XJG10AA160 30XJG20AA160 30XJG30AA160 30XJG40AA160	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Keep Warm Circuit Isolation Valve	30XJG10AA161 30XJG20AA161 30XJG30AA161 30XJG40AA161	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Fill Valve	30XJG10AA150 30XJG20AA150 30XJG30AA150 30XJG40AA150	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Fill Valve	30XJG10AA151 30XJG20AA151 30XJG30AA151 30XJG40AA151	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None

Table 2.5.4-2—EDG Support Systems Electrical Equipment Design
Sheet 3 of 3

Description	Tag Number(1)	IEEE Class 1E(2)	Failure Position	PACS	MCR / RSS Displays	MCR / RSS Controls
Air Start Pilot Valve	30XJX10AA122A 30XJX20AA122A 30XJX30AA122A 30XJX40AA122A	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Air Start Pilot Valve	30XJX10AA122B 30XJX20AA122B 30XJX30AA122B 30XJX40AA122B	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Starting Air Receiver Blowdown Valve	30XJX10AA411A 30XJX20AA411A 30XJX30AA411A 30XJX40AA411A	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Starting Air Receiver Blowdown Valve	30XJX10AA411B 30XJX20AA411B 30XJX30AA411B 30XJX40AA411B	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Governor Boost Valve Solenoid	30XJX10AA124A 30XJX20AA124A 30XJX30AA124A 30XJX40AA124A	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None
Governor Boost Valve Solenoid	30XJX10AA124B 30XJX20AA124B 30XJX30AA124B 30XJX40AA124B	Division 1 Division 2 Division 3 Division 4	Closed	Yes	None / None	None / None

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

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

Table 2.5.4-3—EDG Electrical Equipment Design

Description	Tag Number(1)	MCR / RSS Displays	MCR / RSS Controls
Emergency Diesel Generator	30XKA10AG(2)	Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm / Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm.	Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower / Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower
Emergency Diesel Generator	30XKA20AG(2)	Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm / Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm.	Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower / Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower
Emergency Diesel Generator	30XKA30AG(2)	Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm / Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm.	Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower / Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower
Emergency Diesel Generator	30XKA40AG(2)	Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm / Generator voltage, current, frequency, power, reactive power. Engine running, not running, tripped, general EDG trouble alarm.	Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower / Generator output voltage raise-lower, output breaker close-trip. Engine start-stop-emergency trip, governor raise-lower

1. Equipment tag numbers are provided for information only and are not part of the certified design.
2. Emergency Diesel Generators are Class 1E.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 1 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
2.1	The functional arrangement of the EDG fuel oil storage and transfer system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-1.	An inspection of the as-built EDG fuel oil storage and transfer system functional arrangement will be performed.	The EDG fuel oil storage and transfer system conforms to the functional arrangement as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-1.
2.2	Deleted.	Deleted.	Deleted.
2.3	Deleted.	Deleted.	Deleted.
2.4	The functional arrangement of the EDG lubricating oil system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-2.	An inspection of the as-built EDG lubricating oil system functional arrangement will be performed.	The EDG lubricating oil system conforms to the functional arrangement as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-2.
2.5	The functional arrangement of the EDG air intake and exhaust system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-3.	An inspection of the as-built EDG air intake and exhaust system functional arrangement will be performed.	The EDG air intake and exhaust system conforms to the functional arrangement as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-3.
2.6	The functional arrangement of the EDG cooling water system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-4.	An inspection of the as-built EDG cooling water system functional arrangement will be performed.	The EDG cooling water system conforms to the functional arrangement as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-4.
2.7	The functional arrangement of the EDG starting air system is as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-5.	An inspection of the as-built EDG starting air system functional arrangement will be performed.	The EDG starting air system conforms to the functional arrangement as described in the Design Description of Section 2.5.4, Tables 2.5.4-1 and 2.5.4-2, and as shown on Figure 2.5.4-5.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 2 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.1	Pumps and valves listed in Table 2.5.4-1 will be functionally designed and qualified such that each pump and valve is capable of performing its intended function for a full range of system differential pressure and flow, ambient temperatures, and available voltage (as applicable) under design-basis accident conditions.	Tests or type tests of pumps and valves will be performed to demonstrate that the pumps and valves function under design-basis accident conditions.	A report concludes that the pumps and valves listed in Table 2.5.4-1 are capable of performing their intended function for a full range of system differential pressure and flow, ambient temperatures, and available voltage (as applicable) under design basis accident conditions.
3.2	Deleted.	Deleted.	Deleted.
3.3	Deleted.	Deleted.	Deleted.
3.4	Deleted.	Deleted.	Deleted.
3.5	Deleted.	Deleted.	Deleted.
3.6	Deleted.	Deleted.	Deleted.
3.7	Equipment identified as Seismic Category I in Table 2.5.4-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.5.4-1.	a. Type tests, analyses, or a combination of type tests and analyses will be performed on the equipment identified as Seismic Category I in Table 2.5.4-1 using analytical assumptions, or under conditions, which bound the Seismic Category I design requirements. b. An inspection will be performed of the as-built equipment identified as Seismic Category I in Table 2.5.4-1 to verify that the equipment, including anchorage, are installed per the approved design requirements.	a. Test/analysis reports conclude that the equipment identified as Seismic Category I in Table 2.5.4-1 can withstand seismic design basis loads without a loss of the function listed in Table 2.5.4-1 including the time required to perform the listed function. b. Inspection reports conclude that the equipment identified as Seismic Category I in Table 2.5.4-1, including anchorage, are installed per the approved design requirements.
3.8	Deleted.	Deleted.	Deleted.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 3 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.9	Each EDG has a fuel oil storage tank.	An inspection and analysis will be performed to verify each as-built EDG fuel oil storage tank capacity is greater than the volume of fuel oil consumed by the EDG operating at the continuous rating for seven days.	Each EDG fuel oil storage tank capacity is greater than the volume of fuel oil consumed by the EDG operating at the continuous rating for seven days.
3.10	Each EDG has a fuel oil day tank.	An inspection and analysis will be performed to verify each as-built EDG fuel oil day tank capacity is greater than the volume of fuel oil consumed by the EDG operating at the continuous rating for two hours.	Each EDG fuel oil day tank capacity is greater than the volume of fuel oil consumed by the EDG operating at the continuous rating for two hours.
3.11	Each fuel oil transfer pump capacity is greater than EDG fuel oil consumption at the continuous rating.	A test will be performed to verify each fuel oil transfer pump capacity is greater than EDG fuel oil consumption at the continuous rating.	The flow rate of each fuel oil transfer pump is greater than EDG fuel oil consumption at the continuous rating.
3.12	Each EDG starting air system is capable of providing air to start the respective EDG without being recharged.	A test will be performed to verify each EDG starting air system is capable of providing air to start the respective EDG without being recharged.	Each EDG starts five consecutive times without recharging respective starting air receivers between EDG starts.
3.13	Check valves listed in Table 2.5.4-1 will function to change position as listed in Table 2.5.4-1 under normal operating conditions.	Tests will be performed to verify the ability of check valves to change position under normal operating conditions.	The check valves change position as listed in Table 2.5.4-1 under normal operating conditions.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 4 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.14	Each EDG lubricating oil system provides lubrication to the engine and turbocharger wearing parts during engine operation.	a. An as-built analysis will be performed to demonstrates each EDG lubricating oil system oil volume is capable of supporting at least 7 days of full load operation b. A test will be performed to verify that each EDG and lubricating oil system operating at rated load conditions achieves stable temperatures and pressures.	a. Analysis concludes each EDG lubricating oil system oil volume is capable of supporting at least 7 days of full load operation. b. Each EDG and lubricating oil system operating at rated load conditions achieves stable temperatures and pressures stated in the approved design.
3.15	Each EDG exhaust path has a bypass exhaust path.	Type tests will be performed on the EDG exhaust bypass device to demonstrate rupture pressure limits.	Type test results conclude that the EDG rupture disk will rupture within the pressure limits within the approved design.
3.16	Deleted.	Deleted.	Deleted.
3.17	Deleted.	Deleted.	Deleted.
3.18	Deleted.	Deleted.	Deleted.
3.19	Deleted.	Deleted.	Deleted.
3.20	Deleted.	Deleted.	Deleted.
3.21	ASME Code Class 1, 2 and 3 piping systems are designed in accordance with ASME Code Section III requirements.	An inspection of piping design and analysis documentation required by the ASME Code Section III will be performed. {{DAC}}	ASME Code Section III Design Report(s) exist that meet the requirements of NCA-3550 and conclude that the design of the ASME Code Class 1, 2 and 3 piping system complies with the requirements of the ASME Code Section III. {{DAC}}

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 5 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
3.22	As-built ASME Code Class 1, 2, and 3 components are reconciled with the design requirements.	A reconciliation analysis of ASME Code Class 1, 2, and 3 components will be performed.	ASME Code Design Report(s) exist that meet the requirements of NCA-3550, conclude that the design reconciliation has been completed for as-built ASME Code Class 1, 2 and 3 components, and document the results of the reconciliation analysis.
3.23	Pressure-boundary welds in ASME Code Class 1, 2 and 3 components meet ASME Code Section III non-destructive examination requirements.	An inspection of the as-built pressure-boundary welds in ASME Code Class 1, 2 and 3 components will be performed.	ASME Code reports(s) exist that conclude that ASME Code Section III requirements are met for non-destructive examination of pressure-boundary welds in ASME Code Class 1, 2 and 3 components.
3.24	ASME Code Class 1, 2 and 3 components retain their pressure-boundary integrity at their design pressure.	A hydrostatic test will be conducted on ASME Code Class 1, 2 and 3 components that are required to be hydrostatically tested by the ASME Code Section III.	ASME Code Data Report(s) exist and conclude that the results of the hydrostatic test of ASME Code Class 1, 2 and 3 components comply with the requirements of ASME Code Section III.
3.25	ASME Code Class 1, 2 and 3 components are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.	An inspection of the as-built construction activities and documentation for ASME Code Class 1, 2 and 3 components will be conducted.	ASME Code Data Report(s) exist that conclude that ASME Code Class 1, 2, and 3 components are fabricated, installed, and inspected in accordance with ASME Code Section III requirements.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 6 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
4.1	Displays listed in Table 2.5.4-2 and Table 2.5.4-3 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 2.5.4-2 and Table 2.5.4-3 are indicated on the PICS operator workstations in the MCR by using test input signals to PICS. b. Tests will be performed to verify that the displays listed in Table 2.5.4-2 and Table 2.5.4-3 are indicated on the PICS operator workstations in the RSS by using test input signals inputs to PICS.	a. Displays listed in Table 2.5.4-2 and Table 2.5.4-3 are indicated on the PICS operator workstations in the MCR. b. Displays listed in Table 2.5.4-2 and Table 2.5.4-3 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 2.5.4-2 and Table 2.5.4-3.	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 2.5.4-2 and Table 2.5.4-3. b. Controls on the PICS operator workstations in the RSS perform the function listed in Table 2.5.4-2 and Table 2.5.4-3.
4.3	Equipment listed as being controlled by a PACS module in Table 2.5.4-2 responds to the state requested and provides drive monitoring signals back to the PACS module. The PACS module will protect the equipment by terminating the output command upon the equipment reaching the requested state.	A test will be performed using test input signals to verify equipment controlled by a PACS module responds to the state requested and provides drive monitoring signals back to the PACS module.	Equipment listed as being controlled by a PACS module in Table 2.5.4-2 responds to the state requested and provides drive monitoring signals back to the PACS module. The PACS module will protect the equipment by terminating the output command upon the equipment reaching the requested state.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 7 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
5.1	The EDG control power is provided by the EUPS from the respective division.	A test will be performed by providing a test input signal in only one division.	The test input signal exists in only the EDG system under test when a test input signal is applied in the EDG system.
5.2	Equipment designated as Class 1E in Table 2.5.4-2 are powered from the Class 1E division listed in Table 2.5.4-2.	A test will be performed by providing a test input signal in each division.	The test input signal provided in each division is present at the respective Class 1E equipment identified in Table 2.5.4-2.
5.3	Each EDG output rating is greater than the analyzed loads assigned in the respective EPSS division.	An inspection and analysis will be performed to verify each as-built EDG output rating is greater than the analyzed loads assigned in the respective EPSS divisions.	An analysis concludes each EDG output rating is greater than the analyzed loads assigned in the respective EPSS divisions.
5.4	Valves listed in Table 2.5.4-2 fail to the position as listed in Table 2.5.4-2 on loss of power.	Tests will be performed to verify that valves fail to the position as listed in Table 2.5.4-2 on loss of power.	Following loss of power, the air start pilot valves listed in Table 2.5.4-2 fail to the position as listed in Table 2.5.4-1.
6.1	Each EDG is started by a protection system LOOP signal from the respective EPSS division medium voltage bus.	A test will be performed using test input signals to verify that each EDG is started by a protection system LOOP signal from the respective EPSS division medium voltage bus.	Each EDG is started by a protection system LOOP signal from the respective EPSS division medium voltage bus, achieves rated speed and voltage and connects to the assigned EPSS bus in ≤ 15 seconds after receipt of a test input signal.
6.2	Each EDG is started by a protection system SIS actuation signal.	A test will be performed using test input signals to verify that each EDG is started by a protection system SIS actuation signal.	Each EDG is started by a protection system SIS actuation signal, achieves rated speed and voltage and remains disconnected from the EPSS.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 8 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.3	Each EDG will start and connect to the respective EPSS division medium voltage bus in an undervoltage condition concurrent with a SIS actuation signal.	A test will be performed using test input signals to verify that each EDG will start and connect to the respective EPSS division medium voltage bus in an undervoltage condition concurrent with a SIS actuation signal.	Each EDG starts and connects to the respective EPSS division medium voltage bus in an undervoltage condition concurrent with a SIS actuation signal. As loads are sequenced onto EPSS buses, EDG nominal output voltage and frequency remain ≥ 75 percent and 95 percent, respectively. Voltage and frequency are restored to within 10 percent and 2 percent nominal, respectively within 60 percent of each load sequence step.
6.4	The EDG lubricating oil system heat exchangers as listed in Table 2.5.4-1 have the capacity to transfer the design heat load to the essential service water system.	Tests and analyses will be performed to verify the capability of the EDG heat exchangers to transfer the design heat load to the essential service water system.	Each EDG lubricating oil system heat exchanger listed in Table 2.5.4-1 has the capacity to transfer the design heat load specified by the EDG manufacturer to the essential service water system.
6.5	Class 1E valves listed in Table 2.5.4-2 can perform the will function to change position as listed in Table 2.5.4-1 under normal operating conditions.	Tests will be performed to verify the ability of Class 1E valves to change position under normal operating conditions.	Class 1E valves listed in Table 2.5.4-2 change position as listed inTable 2.5.4-1 under normal operating conditions.
6.6	The EDG cooling water system heat exchangers as listed in Table 2.5.4-1 have the capacity to transfer the design heat load to the essential service water.	Tests and analyses will be performed to verify the capability of the EDG heat exchangers to transfer the design heat load to the essential service water.	Each EDG cooling water system heat exchanger listed in Table 2.5.4-1 has the capacity to transfer the design heat load specified by the EDG manufacturer to the essential service water system.

Table 2.5.4-4—Emergency Diesel Generator ITAAC
Sheet 9 of 9

Commitment Wording		Inspections, Tests, Analyses	Acceptance Criteria
6.7	Each EDG is capable of starting from standby conditions and achieving required voltage and frequency.	A test will be performed to verify that each EDG is capable of starting from standby conditions and achieving required voltage and frequency.	Each EDG starts from standby conditions and achieves voltage ≥ 6555 V and frequency ≥ 58.8 Hz in ≤ 15 seconds after receipt of a test input signal; and steady state voltage ≥ 6555 V and ≤ 7260 V, frequency ≥ 58.8 Hz and ≤ 61.2 Hz.