

ATTACHMENT 3

PROPOSED TECHNICAL SPECIFICATIONS

Marked-up Technical Specification Pages:

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Insert "A" to page 3/4 8-4

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ELECTRICAL POWER SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

SHUTDOWN within the following 30 hours. This ACTION applies to both units simultaneously. With only one startup transformer and associated circuits restored, perform Surveillance Requirement 4.8.1.1.1.a on the OPERABLE Startup transformer at least once per 8 hours, and restore the other startup transformer and its associated circuits to OPERABLE status or shutdown in accordance with the provisions of Action Statement 3.8.1.1a with time requirements of that Action Statement based on the time of initial loss of a startup transformer. This ACTION applies to both units simultaneously.

- f. With two of the above required diesel generators inoperable, demonstrate the OPERABILITY of two startup transformers and their associated circuits by performing the requirements of Specification 4.8.1.1.1a. within 1 hour and at least once per 8 hours thereafter; restore at least one of the inoperable diesel generators to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore all required diesel generators to OPERABLE status within 72 hours from time of initial loss or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

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SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Each of the above required startup transformers and their associated circuits shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignments, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months while shutting down, by transferring manually unit power supply from the auxiliary transformer to the startup transformer.

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE*:

- a. In accordance with the frequency specified in Table 4.8-1 with diesel generator surveillances performed nonconcurrently by:
 - 1) Verifying the fuel volume in the day and skid-mounted fuel tanks (Unit 4-day tank only),
 - 2) Verifying the fuel volume in the fuel storage tank,
 - 3) Verifying the lubricating oil inventory in storage,

*All diesel generator starts for the purpose of these surveillances may be preceded by a prelube period as recommended by the manufacturer.

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ELECTRICAL POWER SYSTEMS

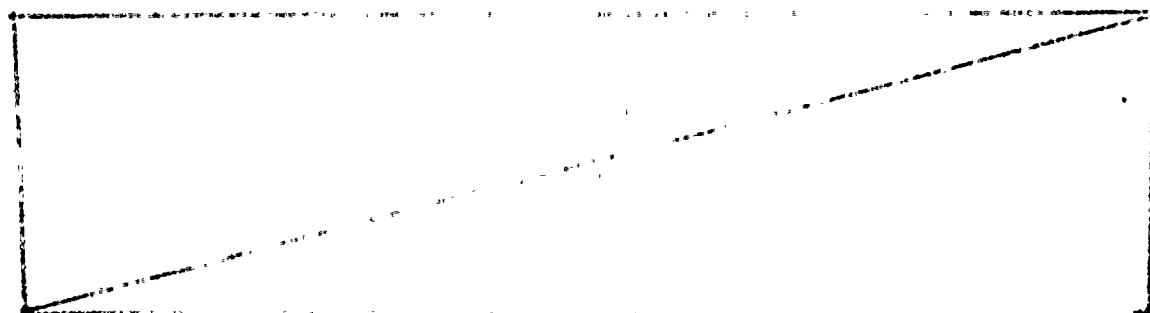
SURVEILLANCE REQUIREMENTS (Continued)

- 4) Verifying the diesel starts and accelerates to reach a generator voltage and frequency of 4160 ± 420 volts and 60 ± 1.2 Hz. Once per 184 days, these conditions shall be reached within 15 seconds after the start signal from normal conditions. For all other starts, warmup procedures, such as idling and gradual acceleration as recommended by the manufacturer may be used. The diesel generator shall be started for this test by using one of the following signals:
 - a) Manual, or
 - b) Simulated loss-of-offsite power by itself, or
 - c) Simulated loss-of-offsite power in conjunction with an ESF Actuation test signal, or
 - d) An ESF Actuation test signal by itself.
- 5) Verifying the generator is synchronized, loaded* to 2300 - 2500 kW (Unit 3), 2650-2850 kW (Unit 4)**, operates at this loaded condition for at least 60 minutes and for Unit 3 until automatic transfer of fuel from the day tank to the skid mounted tank is demonstrated, and the cooling system is demonstrated OPERABLE.
- 6) Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
- b. Demonstrating at least once per 92 days that a fuel transfer pump starts automatically and transfers fuel from the storage system to the day tank,
- c. At least once per 31 days and after each operation of the diesel where the period of operation was greater than or equal to 1 hour by checking for and removing accumulated water from the day and skid-mounted fuel tanks (Unit 4-day tank only);
- d. At least once per 31 days by checking for and removing accumulated water from the fuel oil storage tanks;
- e. By obtaining a composite sample of new fuel oil in accordance with ASTM-D4057 prior to addition to storage tanks and:
 - 1) By verifying in accordance with the tests specified in ASTM-D975-81 prior to addition to the storage tanks that the sample has:
 - a) An API Gravity of within 0.3 degrees at 60°F, or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute

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*May include gradual loading as recommended by the manufacturer so that the mechanical stress and wear on the diesel engine is minimized.

**Momentary transients outside these load bands do not invalidate this test.



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- g. With one or more diesel generators with new fuel oil properties outside the required Diesel Fuel Oil Testing Program limits, restore the fuel oil properties to within the required limits within 30 days.
- h. With one or more diesel generators with stored fuel oil total particulates outside the required Diesel Fuel Oil Testing Program limits, restore the fuel oil total particulates to within the required limits within 7 days.

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- e. By verifying fuel oil properties of new fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.
- f. By verifying fuel oil properties of stored fuel oil are tested in accordance with, and maintained within the limits of, the Diesel Fuel Oil Testing Program.

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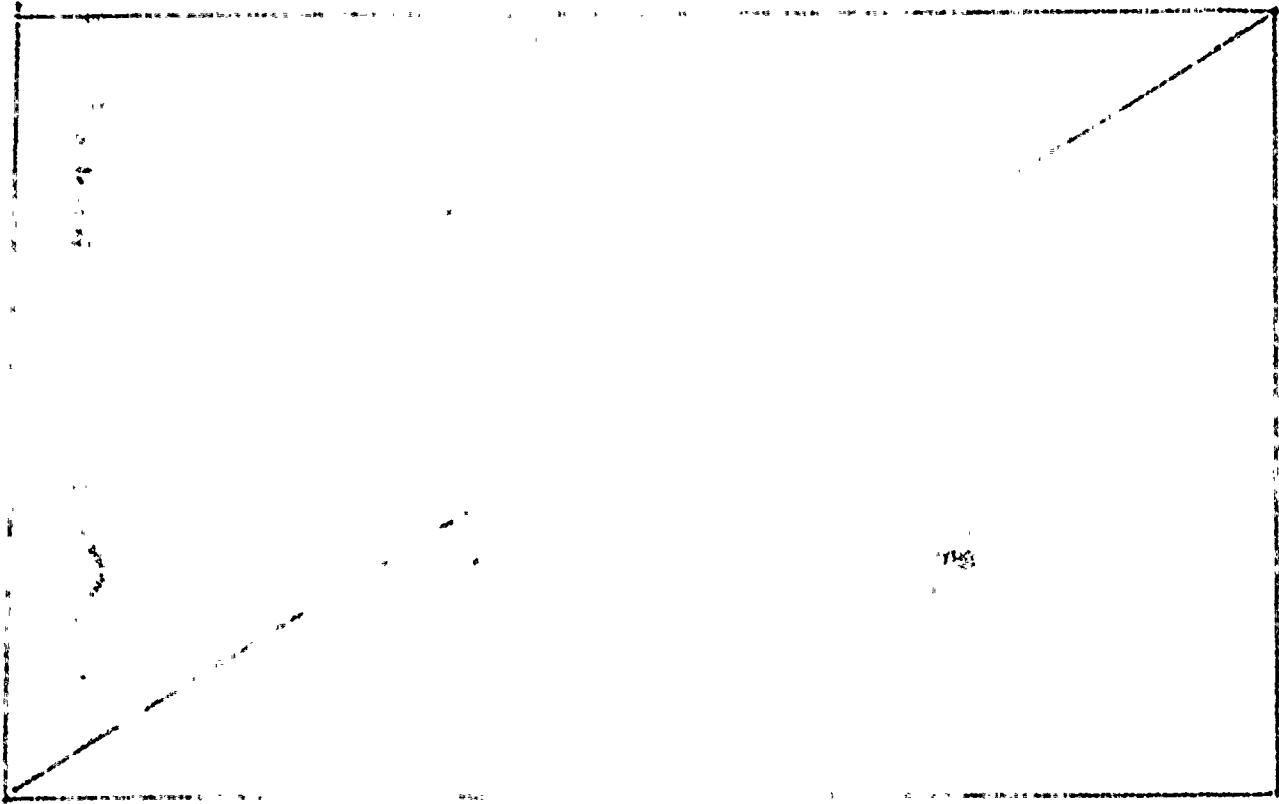
ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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- specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees, when tested in accordance with ASTM-D1298-80;
- b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;
- c) A flash point equal to or greater than 125°F; and
- d) A clear and bright appearance with proper color when tested in accordance with ASTM-D4176-82.
- 2) By verifying within 30 days of obtaining the sample that the other properties specified in Table 1 of ASTM-D975-81 are met when tested in accordance with ASTM-D975-81 except that the analysis for sulfur may be performed in accordance with ASTM-D1552-79 or ASTM-D2622-82.
- f. At least once every 31 days by obtaining a sample of fuel oil from the storage tank in accordance with ASTM-D2276-78, and verifying that total particulate contamination is less than 10 mg/liter when checked in accordance with ASTM-D2276-78, Method A;
- g. At least once per 18 months, during shutdown (applicable to only the two diesel generators associated with the unit):
- 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service;
 - 2)* Verifying the generator capability to reject a load of greater than or equal to 380 kW while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 1.2 Hz;
 - 3)* Verifying the generator capability to reject a load of greater than or equal to 2500 kW (Unit 3), 2874 kW (Unit 4) without tripping. The generator voltage shall return to less than or equal to 4784 volts within 2 seconds following the load rejection;
 - 4) Simulating a loss-of-offsite power by itself, and:
 - a) Verifying deenergization of the emergency busses and load shedding from the emergency busses, and
 - b) Verifying the diesel starts on the auto-start signal, energizes the emergency busses with any permanently

*For the purpose of this test, warmup procedures, such as idling, gradual acceleration, and gradual loading as recommended by the manufacturer may be used.



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ELECTRICAL POWER SYSTEMS

BASES (Continued)

With both startup transformers inoperable, the unit(s) are required to be shutdown consecutively, after 24 hours. A consecutive shutdown is used because a unit without its associated transformer must perform a natural circulation cooldown. By placing one unit in COLD SHUTDOWN before starting shutdown of the second unit, a dual unit natural circulation cooldown is avoided.

The term verify means to administratively check by examining logs or other information to determine if required components are out-of-service for maintenance or other reasons. It does not mean to perform the surveillance requirements needed to demonstrate the OPERABILITY of the component.

The EDG Surveillance testing requires that each EDG be started from normal conditions only once per 184 days with no additional warmup procedures. Normal conditions in this instance are defined as the pre-start temperature and lube oil conditions each EDG normally experiences with the continuous use of prelube systems and immersion heaters.

The fuel supply specified for the Unit 3 EDG's is based on the original criteria and design bases used to license the plant. The specified fuel supply will ensure sufficient fuel for either EDG associated with Unit 3 for at least a week. The fuel supply specified for the Unit 4 EDG's is based on the criteria provided in ANSI N195-1976 as endorsed by Regulatory Guide 1.137. The specified fuel supply will ensure sufficient fuel for each EDG associated with Unit 4 for at least a week.

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DIESEL FUEL OIL TESTING PROGRAM

The tests listed below are a means of determining whether new fuel oil is of the appropriate grade and has not been contaminated with substances that would have an immediate detrimental impact on diesel engine combustion. If results from these tests are within acceptable limits, the fuel oil may be added to the storage tanks without concern for contaminating the entire volume of fuel oil in the storage tanks. These tests are to be conducted prior to adding the new fuel to the storage tanks, but in no case is the time between receipt of new fuel and conducting the tests of Surveillance Requirement 4.8.1.1.2e. to exceed 30 days. The tests, limits, and applicable ASTM standards being used to evaluate the condition of new fuel oil are:

1. By obtaining a composite sample of new fuel oil in accordance with ASTM-D4057 prior to addition of new fuel oil to the diesel oil storage tanks and:
2. By verifying in accordance with the tests specified in ASTM-D975-81 prior to addition to the storage tanks that the sample has:
 - a) An API Gravity of within 0.3 degrees at 60°F, or a specific gravity of within 0.0016 at 60/60°F, when compared to the supplier's certificate, or an absolute specific gravity at 60/60°F of greater than or equal to 0.83 but less than or equal to 0.89, or an API gravity of greater than or equal to 27 degrees but less than or equal to 39 degrees, when tested in accordance with ASTM-D1298-80;
 - b) A kinematic viscosity at 40°C of greater than or equal to 1.9 centistokes, but less than or equal to 4.1 centistokes (alternatively, Saybolt viscosity, SUS at 100°F of greater than or equal to 32.6, but less than or equal to 40.1), if gravity was not determined by comparison with the supplier's certification;
 - c) A flash point equal to or greater than 125°F; and
 - d) A clear and bright appearance with proper color when tested in accordance with ASTM-D4176-82.

Failure to meet any of the above limits is cause for rejecting the new fuel oil, but does not represent a failure to meet the Limiting Condition for Operation of TS 3.8.1.1, since the fuel oil has not been added to the storage tanks.

Within 30 days following the initial new fuel oil sample, the fuel oil is analyzed to establish that the other properties specified in Table 1 of ASTM-D975-81 are met when tested in accordance with ASTM-D975-81 except that the analysis for sulfur may be performed in accordance

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with ASTM-D1552-79 or ASTM-D2622-82. The 30 day period is acceptable because the fuel oil properties of interest, even if they are not within limits, would not have an immediate effect on EDG operation. The diesel fuel oil surveillance in accordance with the Diesel Fuel Oil Testing Program will ensure the availability of high quality diesel fuel oil for the EDGs.

At least once every 31 days, a sample of fuel oil is obtained from the storage tanks in accordance with ASTM-D2276-78. The particulate contamination is verified to be less than 10 mg/liter when checked in accordance with ASTM-D2276-78, Method A. It is acceptable to obtain a field sample for subsequent laboratory testing in lieu of field testing.

Fuel oil degradation during long term storage shows up as an increase in particulate, due mostly to oxidation. The presence of particulate does not mean the fuel oil will not burn properly in a diesel engine. The particulate can cause fouling of filters and fuel oil injection equipment, however, which can cause engine failure.

The frequency for performing surveillance on stored fuel oil is based on stored fuel oil degradation trends which indicate that particulate concentration is unlikely to change significantly between surveillances.

