

ATTACHMENT A

PROPOSED CHANGES TO APPENDIX A,
TECHNICAL SPECIFICATIONS OF FACILITY
OPERATING LICENSES NPF-37, 66, 72 AND 77

Revised Pages

Byron

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Braidwood

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ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 31 days by checking for and removing accumulated water from the fuel oil storage tanks;
- d. By sampling 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°F, when compared to the supplier's certificate, or an absolute specific gravity at 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;
 - 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, if the 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.
- e. 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.
- f. At least once per 18 months,* during shutdown, by:
- 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 ^{the largest single} a load of greater (SX pump) ~~than or equal to 1034 kW~~ while maintaining voltage at 4160 ± 420 volts and frequency at 60 ± 4.5 Hz, (transient state), 60 ± 1.2 Hz (steady state).

*The specified 18 month interval may be extended to 31 months for Cycle 1 only.

3/4.8 ELECTRICAL POWER SYSTEMS

BASES

3/4.8.1, 3/4.8.2 and 3/4.8.3 A.C. SOURCES, D.C. SOURCES, and ONSITE POWER DISTRIBUTION

The OPERABILITY of the A.C. and D.C power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for: (1) the safe shutdown of the facility, and (2) the mitigation and control of accident conditions within the facility. The minimum specified independent and redundant A.C. and D.C. power sources and distribution systems satisfy the requirements of General Design Criterion 17 of Appendix A to 10 CFR Part 50.

The ACTION requirements specified for the levels of degradation of the power sources provide restriction upon continued facility operation commensurate with the level of degradation. The OPERABILITY of the power sources are consistent with the initial condition assumptions of the safety analyses and are based upon maintaining at least one redundant set of onsite A.C. and D.C. power sources and associated distribution systems OPERABLE during accident conditions coincident with an assumed loss-of-offsite power and single failure of the other onsite A.C. source. The A.C. and D.C. source allowable out-of-service times are based on Regulatory Guide 1.93, "Availability of Electrical Power Sources," December 1974. When one diesel generator is inoperable, there is an additional ACTION requirement to verify that all required systems, subsystems, trains, components and devices, that depend on the remaining OPERABLE diesel generator as a source of emergency power, are also OPERABLE, and that the diesel-driven auxiliary feedwater pump is OPERABLE. This requirement is intended to provide assurance that a loss-of-offsite power event will not result in a complete loss of safety function of critical systems during the period one of the diesel generators is inoperable. The term verify as used in this context means to administratively check by examining logs or other information to determine if certain 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 OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods, and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The Surveillance Requirements for demonstrating the OPERABILITY of the diesel generators are in accordance with the recommendations of Regulatory Guides 1.9, "Selection of Diesel Generator Set Capacity for Standby Power Supplies," March 10, 1971, 1.108, "Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants," Revision 1, August 1977, and 1.137, "Fuel-Oil Systems for Standby Diesel Generators," Revision 1, October 1979.

The station chose its largest emergency load to be the SX pump. ~~The maximum BHP of the SX pump is 1247 per FSAR Table 8.3-1. A BHP of 1247 corresponds to a load of 1034 kW.~~ *Successfully rejecting the SX pump load demonstrates compliance with R.G. 1.108 Section C.2.a.4.*

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

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ATTACHMENT B

BACKGROUND INFORMATION

The proposed amendment would modify diesel generator (DG) surveillance requirement 4.8.1.1.2.f.2. The intent of this surveillance is to verify that generator voltage and frequency transients, caused by rejection of the largest single emergency electrical load, are within limits specified by Regulatory Guide 1.108 "Periodic Testing of Diesel Generators...". The present surveillance requires that the DG be shown capable of maintaining voltage and frequency within limits upon rejection of a 1034 kW load. The largest single diesel generator load is the essential service water (SX) pump. The 1034 kW load is based on a conservative estimate of the maximum power consumption of a SX pump, 1247 horsepower (930 kW), further increased to 1034 kW by an assumption of 90% motor efficiency. The power consumption estimate was taken from FSAR Table 8.3-1. This table contains a list of conservatively estimated emergency loads used to demonstrate that the DG's were designed with sufficient capacity to meet worst case emergency conditions. The individual loads listed in the table were not intended to be, nor are they, accurate representations of the actual power consumption of the equipment under normal conditions.

The only practical method to reject the largest single load (with the DG in isochronous "emergency" mode) is to operate the largest load, the SX pump, and trip it off the diesel generator. This proposed amendment would replace the 1034 kW test load requirement with the requirement to use the SX pump as the test load. This is consistent with Regulatory Guide 1.108, position C.2.a.4, which states that the largest single load should be shed. This change does not revise the intent of the surveillance, but clarifies it by identifying the actual load that must be shed to perform the test.

ATTACHMENT C

EVALUATION OF SIGNIFICANT HAZARDS CONSIDERATION

Commonwealth Edison has evaluated this proposed amendment and determined that it involves no significant hazards consideration. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the amendment would not:

- 1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or
- 2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or
- 3) Involve a significant reduction in a margin of safety.

The diesel generators are installed to provide onsite emergency AC power in the event of a loss of offsite power. The proposed amendment modifies a diesel generator surveillance concerning rejection of its largest single load when operating in the isochronous mode. Modifying this diesel generator surveillance requirement has no effect on the probability of a loss of offsite power.

The consequences of a loss of offsite power will not be affected by this amendment because the surveillance will continue to demonstrate that a diesel generator maintains proper voltage and frequency if its largest single load is removed instantaneously.

This amendment only clarifies what the actual largest single load is for a diesel generator. Nothing is being changed regarding the manner in which the surveillance is performed. The amendment does not allow any new modes of operation beyond those normally performed at operating PWR's and it does not allow any modifications to the plant. For these reasons, operation of the facility in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

The voltage and frequency requirements specified in this surveillance are not being changed nor is the actual electrical load which is rejected from the diesel generator during this surveillance. As a result, this amendment does not involve a significant reduction in a margin of safety.

For the reasons stated above, Commonwealth Edison believes this proposed amendment involves no significant hazards consideration.