



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

DOCKET NO. 50-334

BEAVER VALLEY POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 196
License No. DPR-66

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated July 20, 1995, as supplemented December 4, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

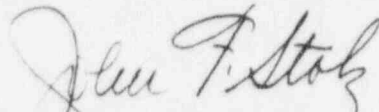
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 196, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance, to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 12, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 196

FACILITY OPERATING LICENSE NO. DPR-66

DOCKET NO. 50-334

Replace the following pages of Appendix A Technical Specifications, with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3/4 8-1	3/4 8-1
3/4 8-2	3/4 8-2
3/4 8-3	3/4 8-3
3/4 8-4	3/4 8-4
3/4 8-4a	3/4 8-4a
---	3/4 8-4b
B 3/4 8-2	B 3/4 8-2
---	B 3/4 8-3

3/4.8 ELECTRICAL POWER SYSTEMS

3/4.8.1 A.C. SOURCES

OPERATING

LIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators each with:
 1. Separate day and engine-mounted fuel tanks containing a minimum of 900 gallons of fuel,
 2. A separate fuel storage system containing a minimum of 17,500 gallons of fuel, and
 3. A separate fuel transfer pump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one offsite circuit inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator⁽¹⁾ inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the diesel generator became inoperable due to any cause other than an independently testable component, testing or preplanned preventative maintenance, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing

(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

Surveillance Requirement 4.8.1.1.2.a.5 within 24 hours⁽²⁾ unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. Restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

- c. With one offsite circuit and one diesel generator⁽¹⁾ inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the diesel generator became inoperable due to any cause other than an independently testable component, testing or preplanned preventative maintenance, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 8 hours⁽²⁾ unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. Restore one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Action Statement a or b, as appropriate with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for an OPERABLE diesel or a restored to OPERABLE diesel satisfies the diesel generator test requirement of Action Statement b.

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- (1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.
- (2) This action is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY.

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

- d. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Following restoration of one offsite source, follow Action Statement a with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable offsite A.C. circuit.
- e. With two of the required diesel generators⁽¹⁾ inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore 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. Following restoration of one diesel generator unit, follow Action Statement b with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable diesel generator. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for a restored to OPERABLE diesel satisfies the diesel generator test requirement of Action Statement b.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Two physically independent circuits between the offsite transmission network and the on-site Class 1E distribution system 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 by transferring (manually and automatically) unit power supply from the unit circuit to the system circuit.

(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

SURVEILLANCE REQUIREMENTS (Continued)

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by:
 1. Verifying the fuel level in the day and engine-mounted fuel tank,
 2. Verifying the fuel level in the fuel storage tank,
 3. (Deleted)
 4. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day and engine-mounted tank,
 5. Verifying the diesel starts from standby conditions,⁽⁴⁾ and can be gradually accelerated to synchronous speed with generator voltage⁽³⁾ ≥ 4106 volts and ≤ 4368 volts and frequency⁽³⁾ ≥ 58.8 Hz and ≤ 61.2 Hz,
 6. Verifying the generator is synchronized, loaded⁽⁵⁾ to ≥ 1425 kw, and operates for ≥ 60 minutes, and
 7. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses.
- b. 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 a load of ≥ 450 kw without tripping,

(3) The values for voltage and frequency are analysis values. These value bands shall be appropriately reduced to account for measurement uncertainties.

(4) All diesel generator starts may be followed by a warmup period prior to loading.

(5) Diesel generator loadings may include gradual loading as recommended by the manufacturer.

SURVEILLANCE REQUIREMENTS (Continued)

3. Simulating a loss of offsite power in conjunction with a safety injection signal, and:
 - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
 - b) Verifying the diesel starts from standby conditions on the auto-start signal, energizes the emergency busses with permanently connected loads in ≤ 10 seconds, energizes the auto-connected emergency loads through the load sequencer and operates for ≥ 5 minutes while its generator is loaded with the emergency loads. After energization of these loads, the steady state voltage⁽³⁾ and frequency⁽³⁾ shall be maintained at ≥ 4106 volts and ≤ 4368 volts, and ≥ 58.8 Hz and ≤ 61.2 Hz.⁽⁶⁾
 4. Verifying that on a loss of power to the emergency busses, all diesel generator trips, except engine overspeed, generator differential and overcurrent, are automatically disabled,
 5. Verifying the diesel generator operates for ≥ 60 minutes while loaded to ≥ 2750 kw,
 6. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 2850 kw, and
 7. Verifying that the automatic load sequence timer is OPERABLE with each load sequence time within $\pm 10\%$ of its required value.
- c. Check for and remove accumulated water:
1. From the day tank, at least once per 31 days and after each operation of the diesel where the period of operation was greater than 1 hour, and
 2. From the fuel oil storage tank, at least once per 92 days.

(3) The values for voltage and frequency are analysis values. These value bands shall be appropriately reduced to account for measurement uncertainties.

(6) The frequency limits apply for the diesel generator at full accident loading. An engineering evaluation of the test data at lower loads can be performed to demonstrate operability.

SURVEILLANCE REQUIREMENTS (Continued)

- d. By sampling new fuel oil in accordance with ASTM D4057-81 prior to addition to the 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 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 at 60°F 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 gravity was not determined by comparison with the supplier's certification,
 - c) A flash point equal to or greater than 125°F,
 - d) A water and sediment content of less than or equal to 0.05% when tested in accordance with ASTM D1796-83, and
 - e) A total particulate contamination level of less than 10 mg/liter when tested in accordance with ASTM D2276-78, Method A.
 2. By verifying within 31 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 tanks and day tanks 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.

BASES

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS
(Continued)

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates and compares the battery capacity at that time with the rated capacity.

Table 3.8-1 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and .015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than .020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than .010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

Operation with a battery cell's parameter outside the normal limit but within the allowable value specified in Table 3.8-1 is permitted for up to 7 days. During this 7 day period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than .020 below the manufacturer's recommended full charge specific gravity, ensures that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cell's specific gravity, ensures that an individual cell's specific gravity will not be more than .040 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and (4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.

Note (1) provides clarification of Specification 3.8.1.1 action requirements when the diesel generators are inoperable as a result of Surveillance Requirements 4.8.1.1.2.d.2 and 4.8.1.1.2.e in accordance with Regulatory Guide 1.137 Revision 1 Regulatory Position C.2.a.

For the purposes of SR 4.8.1.1.2.a.5 and SR 4.8.1.1.2.b.3.b testing, the diesel generators are started from standby conditions. Standby conditions for a diesel generator mean that the diesel engine oil is being continuously circulated and engine coolant and oil temperatures are being maintained consistent with manufacturer recommendations.

BASES

A.C. SOURCES, D.C. SOURCES AND ONSITE POWER DISTRIBUTION SYSTEMS
(Continued)

Footnote (6) permits an engineering evaluation to be performed if the frequency limits of SR 4.8.1.1.2.b.3.b are not met. The frequency limits prescribed in SR 4.8.1.1.2.b.3.b are based on full load conditions. Since SR 4.8.1.1.2.b.3.b is normally performed at less than full loading conditions, the resultant generator frequency may exceed the required frequency value range due to the design of the diesel generator governor, especially during lower loading. Under these conditions, it is acceptable to examine the frequency response vs. loading and by an engineering evaluation, determine that the governor is responding properly and would fall within the required frequency band while at full accident loading. The engineering evaluation consists of comparing previous voltage, frequency and power plots with the current plots of these same parameters. By comparing the above data, proper governor response can be verified. Based on governor response and the current governor droop setting, the frequency value obtained during performance of SR 4.8.1.1.2.b.3.b can be evaluated to ensure the frequency limits of SR 4.8.1.1.2.b.3.b at full accident loading would be met.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY

THE TOLEDO EDISON COMPANY

DOCKET NO. 50-412

BEAVER VALLEY POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 79
License No. NPF-73

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Duquesne Light Company, et al. (the licensee) dated July 20, 1995, as supplemented December 4, 1995, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

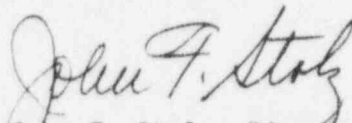
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-73 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 79, and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto are hereby incorporated in the license. DLCO shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of the date of its issuance, to be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: February 12, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 79

FACILITY OPERATING LICENSE NO. NPF-73

DOCKET NO. 50-412

Replace the following pages of Appendix A, Technical Specifications, with the enclosed pages as indicated. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3/4 8-1	3/4 8-1
3/4 8-2	3/4 8-2
3/4 8-3	3/4 8-3
3/4 8-4	3/4 8-4
3/4 8-5	3/4 8-5
---	3/4 8-5a
---	3/4 8-5b
B 3/4 8-3	B 3/4 8-3

3/4.8 ELECTRICAL POWER SYSTEMS3/4.8.1 A.C. SOURCESOPERATINGLIMITING CONDITION FOR OPERATION

3.8.1.1 As a minimum, the following A.C. electrical power sources shall be OPERABLE:

- a. Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system, and
- b. Two separate and independent diesel generators each with:
 1. Separate day tank containing a minimum of 350 gallons of fuel,
 2. A separate fuel storage system containing a minimum of 53,225 gallons of fuel,
 3. A separate fuel transfer pump,
 4. Lubricating oil storage containing a minimum total volume of 504 gallons of lubricating oil, and
 5. Capability to transfer lubricating oil from storage to the diesel generator unit.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one offsite circuit inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter. Restore the offsite circuit to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours.
- b. With one diesel generator⁽¹⁾ inoperable, demonstrate the OPERABILITY of the A.C. offsite sources by performing Surveillance Requirement 4.8.1.1.1.a within 1 hour and at least once per 8 hours thereafter; and if the diesel

(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

generator became inoperable due to any cause other than an independently testable component, testing or preplanned preventative maintenance, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 24 hours⁽²⁾ unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. Restore the diesel generator to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

- c. With one offsite circuit and one diesel generator⁽¹⁾ inoperable, demonstrate the OPERABILITY of the remaining A.C. sources by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; and if the diesel generator became inoperable due to any cause other than an independently testable component, testing or preplanned preventative maintenance, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 8 hours⁽²⁾ unless the absence of any potential common mode failure for the remaining diesel generator is demonstrated. Restore one of the inoperable sources to OPERABLE status within 12 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Restore the other A.C. power source (offsite circuit or diesel generator) to OPERABLE status in accordance with the provisions of Action Statement a or b, as appropriate with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable A.C. power source. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for an OPERABLE diesel or a restored to OPERABLE diesel satisfies the diesel generator test requirement of Action Statement b.

(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

(2) This action is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY.

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

- d. With two of the required offsite A.C. circuits inoperable, restore one of the inoperable offsite sources to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Following restoration of one offsite source, follow Action Statement a with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable offsite A.C. circuit.

- e. With two of the required diesel generators⁽¹⁾ inoperable, demonstrate the OPERABILITY of two offsite A.C. circuits by performing Surveillance Requirement 4.8.1.1.1.a within one hour and at least once per 8 hours thereafter; restore 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. Following restoration of one diesel generator unit, follow Action Statement b with the time requirement of that Action Statement based on the time of initial loss of the remaining inoperable diesel generator. A successful test of diesel OPERABILITY per Surveillance Requirement 4.8.1.1.2.a.5 performed under this Action Statement for a restored to OPERABLE diesel satisfies the diesel generator test requirement of Action Statement b.

SURVEILLANCE REQUIREMENTS

4.8.1.1.1 Two physically independent circuits between the offsite transmission network and the onsite Class 1E distribution system shall be:

- a. Determined OPERABLE at least once per 7 days by verifying correct breaker alignment, indicated power availability, and
- b. Demonstrated OPERABLE at least once per 18 months by transferring (manually and automatically) unit power supply from the unit circuit to the system circuit.

(1) Fuel oil contained in the storage tanks not meeting the properties in accordance with 4.8.1.1.2.d.2 or 4.8.1.1.2.e shall be brought within the specified limits within 7 days.

SURVEILLANCE REQUIREMENTS (Continued)

4.8.1.1.2 Each diesel generator shall be demonstrated OPERABLE:

- a. At least once per 31 days on a STAGGERED TEST BASIS by:
 1. Verifying the fuel level in the day tank,
 2. Verifying the fuel level in the fuel storage tank,
 3. (Deleted)
 4. Verifying the fuel transfer pump can be started and transfers fuel from the storage system to the day tank,
 5. Verifying the diesel starts from standby conditions,⁽⁴⁾ and achieves steady state voltage⁽³⁾ of ≥ 3994 volts and ≤ 4368 volts and frequency⁽³⁾ of ≥ 58.8 Hz and ≤ 61.2 Hz,
 6. Verifying the generator is synchronized, loaded⁽⁵⁾ to $\geq 4,238$ kw, and operates for ≥ 60 minutes,
 7. Verifying the diesel generator is aligned to provide standby power to the associated emergency busses, and
 8. Verifying the lubricating oil inventory in storage.
- b. 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 a load of ≥ 825 kw without tripping,
 3. Simulating a loss of offsite power in conjunction with a safety injection signal, and:
 - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.

(3) The values for voltage and frequency are analysis values. These value bands shall be appropriately reduced to account for measurement uncertainties.

(4) All diesel generator starts may be preceded by an engine prelube period and followed by a warmup period prior to loading.

(5) Diesel generator loadings may include gradual loading as recommended by the manufacturer.

SURVEILLANCE REQUIREMENTS (Continued)

- b) Verifying the diesel starts from standby conditions⁽⁶⁾ on the auto-start signal, energizes the emergency busses with permanently connected loads in ≤ 10 seconds, energizes the auto-connected emergency loads through the load sequencer and operates for ≥ 5 minutes while its generator is loaded with the emergency loads. After energization of these loads, the steady state voltage⁽³⁾ and frequency⁽³⁾ shall be maintained at ≥ 399.4 volts and ≤ 4368 volts, and ≥ 58.8 Hz and ≤ 61.2 Hz.
- 4. Verifying that on a loss of power to the emergency busses, all diesel generator trips, except engine overspeed, backup phase fault detection, generator differential current, and generator overexcitation are automatically disabled,
- 5. Verifying the diesel generator operates for ≥ 60 minutes while loaded to $\geq 4,238$ kw,
- 6. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 4,535 kw, and
- 7. Verifying that the automatic load sequence timer is OPERABLE with each load sequence time within $\pm 10\%$ of its required value.
- c. Check for and remove accumulated water:
 - 1. From the day tank, at least once per 31 days and after each operation of the diesel where the period of operation was greater than 1 hour, and
 - 2. From the fuel oil storage tank, at least once per 92 days.
- d. By sampling new fuel oil in accordance with ASTM D4057-81 prior to addition to the storage tanks and:

(3) The values for voltage and frequency are analysis values. These value bands shall be appropriately reduced to account for measurement uncertainties.

(6) All diesel generator starts may be preceded by an engine prelube period.

SURVEILLANCE REQUIREMENTS (Continued)

1. By verifying in accordance with the test 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 at 60°F 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 gravity was not determined by comparison with the supplier's certification,
 - c) A flash point equal to or greater than 125°F,
 - d) A water and sediment content of less than or equal to 0.05% when tested in accordance with ASTM D1796-83, and
 - e) A total particulate contamination level of less than 10 mg/liter when tested in accordance with ASTM D2276-78, Method A.
 2. By verifying within 31 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 tanks and day tanks 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.

SURVEILLANCE REQUIREMENTS (Continued)

- f. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting from standby conditions⁽⁶⁾ both diesel generators simultaneously, during shutdown, and verifying that each diesel generator achieves, in ≤ 10 seconds, voltage⁽³⁾ ≥ 3994 volts and ≤ 4368 volts, and frequency⁽³⁾ ≥ 58.8 Hz and ≤ 61.2 Hz.
- g. At least once per 10 years by draining each main fuel oil storage tank, removing the accumulated sediment, and cleaning the tank using a sodium hypochlorite solution or other appropriate cleaning solution.

(3) The values for voltage and frequency are analysis values. These value bands shall be appropriately reduced to account for measurement uncertainties.

(6) All diesel generator starts may be preceded by an engine prelube period.

BASES

3/4.8.1. 3/4.8.2 A.C. SOURCES AND ONSITE POWER DISTRIBUTION
(Continued)

gravity will not be more than 0.040 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and 4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.

Note (1) provides clarification of Specification 3.8.1.1 Action requirements when the diesel generators are inoperable as a result of Surveillance Requirements 4.8.1.1.2.d.2 and 4.8.1.1.2.e in accordance with Regulatory Guide 1.137, Revision 1, Position C.2.a.

For the purposes of SR 4.8.1.1.2.a.5, 4.8.1.1.2.b.3.b and 4.8.1.1.2.f testing, the diesel generators are started from standby conditions. Standby conditions for a diesel generator mean that the diesel engine coolant and oil are being continuously circulated and temperatures are being maintained consistent with manufacturer recommendations.