

Docket No. 50-423  
B14598

Attachment 1

Millstone Unit No. 3  
Proposed Revision to Technical Specifications

Emergency Diesel Generator Fuel Oil Storage Capacity  
Markup Pages

September 1993

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3/4.B ELECTRICAL POWER SYSTEMS3/4.B.1 A.C. SOURCESOPERATINGLIMITING CONDITION FOR OPERATION

3.B.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) A separate day tank containing a minimum volume of 295 gallons of fuel, <sup>278</sup>
  - 2) A separate Fuel Storage System containing a minimum volume of 32,760 gallons of fuel,
  - 3) A separate fuel transfer pump,
  - 4) Lubricating oil storage containing a minimum total volume of 280 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. If either diesel generator has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.5 separately for each such diesel generator within 24 hours. 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 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 preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 24 hours\*; 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.

\*This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY.

ELECTRICAL POWER SYSTEMSA. C. SOURCESSHUTDOWNLIMITING CONDITION FOR OPERATION

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

- a. One circuit between the offsite transmission network and the Onsite Class 1E Distribution System, and
- b. One diesel generator with:
  - 1) A day tank containing a minimum volume of <sup>278</sup>295 gallons of fuel,
  - 2) A fuel storage system containing a minimum volume of 32,760 gallons of fuel,
  - 3) A fuel transfer pump,
  - 4) Lubricating oil storage containing a minimum total volume of 280 gallons of lubricating oil, and
  - 5) Capability to transfer lubricating oil from storage to the diesel generator unit.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above minimum required A. C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over the fuel storage pool, and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to 5.4 square inch vent. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

SURVEILLANCE REQUIREMENTS

4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1, 4.8.1.1.2 (except for Specification 4.8.1.1.2a.6), and 4.8.1.1.3.

BASES3/4.8.1, 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 steam-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.

INSERT A

#### INSERT A

Technical Specifications 3.8.1.1.b.1 and 3.8.1.2.b.1 require a minimum volume of 278 gallons be contained in each of the diesel generator day tanks. This capacity ensures that a minimum usable volume of 189 gallons is available to permit operation of each of the diesel generators for approximately 27 minutes with the diesel generators loaded to the 2,000 hour rating of 5335 kW. The shutoff level for the (two) fuel oil transfer pumps is 493 gallons (413 gallons usable volume) which corresponds to approximately 60 minutes of engine operation at the 2,000 hour rating. The first pump has a make-up setpoint of 372 gallons (284 gallons usable volume) which corresponds to approximately 42 minutes of operation at the 2,000 hour rating. The 278 gallon day tank low level value corresponds to the auto make-up setpoint of the second pump and is therefore the lowest value of fuel oil with auto make-up capability. Loss of the two redundant pumps would cause day tank level to drop below the minimum value.

Technical Specifications 3.8.1.1.b.2 and 3.8.1.2.b.2 require a minimum volume of 32,760 gallons be contained in each of the diesel generator's fuel storage systems. This capacity ensures that a minimum usable volume (29,180 gallons) is available to permit operation of each of the diesel generators for approximately three days with the diesel generators loaded to the 2,000 hour rating of 5335 kW. The ability to cross-tie the diesel generator fuel oil supply tanks ensures that one diesel generator may operate up to approximately six days. Additional fuel oil can be supplied to the site within twenty-four hours after contacting a fuel oil supplier.

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Attachment 2

Millstone Unit No. 3  
Proposed Revision to Technical Specifications  
Emergency Diesel Generator Fuel Oil Storage Capacity  
Retyped Pages

September 1993



### 3/4.8 ELECTRICAL POWER SYSTEMS

#### 3/4.8.1 A.C. SOURCES

##### OPERATING

##### LIMITING CONDITION FOR OPERATION

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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) A separate day tank containing a minimum volume of 278 gallons of fuel,
  - 2) A separate Fuel Storage System containing a minimum volume of 32,760 gallons of fuel,
  - 3) A separate fuel transfer pump,
  - 4) Lubricating oil storage containing a minimum total volume of 280 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. If either diesel generator has not been successfully tested within the past 24 hours, demonstrate its OPERABILITY by performing Surveillance Requirement 4.8.1.1.2.a.5 separately for each such diesel generator within 24 hours. 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 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 preplanned preventative maintenance or testing, demonstrate the OPERABILITY of the remaining OPERABLE diesel generator by performing Surveillance Requirement 4.8.1.1.2.a.5 within 24 hours\*; 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.

\*This test is required to be completed regardless of when the inoperable diesel generator is restored to OPERABILITY.

## A. C. SOURCES

### SHUTDOWN

#### LIMITING CONDITION FOR OPERATION

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

- a. One circuit between the offsite transmission network and the Onsite Class 1E Distribution System, and
- b. One diesel generator with:
  - 1) A day tank containing a minimum volume of 278 gallons of fuel,
  - 2) A fuel storage system containing a minimum volume of 32,760 gallons of fuel,
  - 3) A fuel transfer pump,
  - 4) Lubricating oil storage containing a minimum total volume of 280 gallons of lubricating oil, and
  - 5) Capability to transfer lubricating oil from storage to the diesel generator unit.

APPLICABILITY: MODES 5 and 6.

#### ACTION:

With less than the above minimum required A. C. electrical power sources OPERABLE, immediately suspend all operations involving CORE ALTERATIONS, positive reactivity changes, movement of irradiated fuel, or crane operation with loads over the fuel storage pool, and within 8 hours, depressurize and vent the Reactor Coolant System through a greater than or equal to 5.4 square inch vent. In addition, when in MODE 5 with the reactor coolant loops not filled, or in MODE 6 with the water level less than 23 feet above the reactor vessel flange, immediately initiate corrective action to restore the required sources to OPERABLE status as soon as possible.

#### SURVEILLANCE REQUIREMENT

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4.8.1.2 The above required A.C. electrical power sources shall be demonstrated OPERABLE by the performance of each of the requirements of Specifications 4.8.1.1.1, 4.8.1.1.2 (except for Specification 4.8.1.1.2a.6), and 4.8.1.1.3.



### 3/4.8 ELECTRICAL POWER SYSTEMS

#### BASES

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

Technical Specifications 3.8.1.1.b.1 and 3.8.1.2.b.1 require a minimum volume of 278 gallons be contained in each of the diesel generator day tanks. This capacity ensures that a minimum usable volume of 189 gallons is available to permit operation of each of the diesel generators for approximately 27 minutes with the diesel generators loaded to the 2,000 hour rating of 5335 kW. The shutoff level for the (two) fuel oil transfer pumps is 493 gallons (413 gallons usable volume) which corresponds to approximately 60 minutes of engine operation at the 2,000 hour rating. The first pump has a make-up setpoint of 372 gallons (284 gallons usable volume) which corresponds to approximately 42 minutes of operation at the 2,000 hour rating. The 278 gallon day tank low level value corresponds to the auto make-up setpoint of the second pump and is therefore the lowest value of fuel oil with auto make-up capability. Loss of the two redundant pumps would cause day tank level to drop below the minimum value.

Technical Specifications 3.8.1.1.b.2 and 3.8.1.2.b.2 require a minimum volume of 32,760 gallons be contained in each of the diesel generator's fuel storage systems. This capacity ensures that a minimum usable volume (29,180 gallons) is available to permit operation of each of the diesel generators for approximately three days with the diesel generators loaded to the 2,000 hour rating of 5335 kW. The ability to cross-tie the diesel generator fuel oil supply tanks ensures that one diesel generator may operate up to approximately six days. Additional fuel oil can be supplied to the site within twenty-four hours after contacting a fuel oil supplier.