

METROPOLITAN EDISON COMPANY  
JERSEY CENTRAL POWER & LIGHT COMPANY

AND

PENNSYLVANIA ELECTRIC COMPANY  
THREE MILE ISLAND NUCLEAR STATION UNIT 1

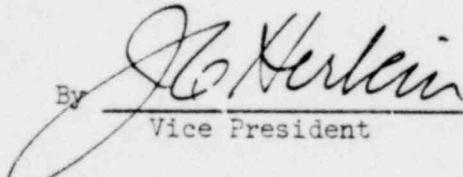
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Operating License No. DPR-50  
Docket No. 50-289  
Technical Specification Change Request No. 83

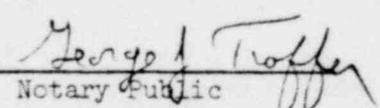
This Technical Specification Change Request is submitted in support of Licensee's request to change Appendix A to Operating License No. DPR-50 for Three Mile Island Nuclear Station Unit 1. As a part of this request, proposed replacement pages for Appendix A are also included.

METROPOLITAN EDISON COMPANY

By

  
Vice President

Sworn and subscribed to me this 23rd day of June, 1978.

  
Notary Public

GEORGE J. TROFFER  
Notary Public, Reading, Berks Co.  
My Commission Expires Jan. 25, 1982

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Three Mile Island Nuclear Station, Unit 1  
Operating License No. DPR-50  
Docket No. 50-289

Proposed Technical Specification Change No. 83

The license requests that the attached changed pages replace pages 3-88, 3-89, 3-90, 3-91, and 4-73b of the existing Technical Specification.

Reasons for Change Request

1. Page 3-88 has been changed to clarify Specification 3.18.2.2.b.
2. Page 3-89 has been changed to delete the need for a continuous fire watch and replace it with a fire patrol to conserve manpower.
3. Page 3-90 has been changed to permit operation with a pressure below the low alarm setting pressure.
4. Page 3-91 has been changed to permit maintenance and testing without the Air Intake Tunnel Deluge System operable.
5. Page 4-73b has been changed to permit inspection of the diesel generator during operations.

Safety Analysis Justifying Change

1. This change only clarifies Section 3.18.2.2.b and does not change any Limiting Conditions for Operation, therefore, an unreviewed safety question has not been proposed.
2. This change provides for the establishment of a backup fire suppression water system in the zone where the deluge and/or sprinkler system is inoperable, and the establishment of a fire patrol which would inspect the affected area once per hour. The establishment of a backup fire suppression water system and a fire patrol provides reasonable assurance that adequate detection and subsequent suppression capabilities are available in the event a fire occurs when the suppression or detection system is inoperable. The detection and subsequent suppression of a fire are equally important. As the Technical Specifications now read, should the instrumentation to detect a fire fail to operate, a fire patrol is deemed adequate. Therefore, in a situation where the deluge and/or sprinkler system are inoperable, and a backup fire suppression system is established to provide suppression protection, a fire patrol provides adequate detection capability and does not represent an unreviewed safety question.
3. The specification now requires a minimum pressure of 300 psig in the CO<sub>2</sub> system storage tank(s). The normal operating pressure varies between 295 and 305 psig. Although 275 psig is the low pressure alarm setpoint, the system will still supply the required amount of CO<sub>2</sub> to the relay room at a pressure as low as 220 psig. The revised specification of 250 psig will provide a margin to allow time to respond to the low pressure alarm while maintaining sufficient margin to the 220 psig pressure. Therefore, the proposed change does not involve an unreviewed safety question.

4. This change permits the Air Intake Deluge System to be taken out of service for up to 48 hours for maintenance and testing when the Halon system is inoperable. The specification now requires the deluge system to be in service unless the tunnel is occupied. The probability that the system would be out of service under the new specification and an aircraft would strike the unit during this time is not significantly greater than was calculated for such an event occurring under the present specification. Therefore, this change does not involve an unreviewed safety question.
5. The Specification now reads that inspection is only permitted when the reactor is shut down. This change permits inspection of the fire pump diesels when the reactor is in operation. Only one fire pump diesel shall be inspected at a time, and the other diesel would be ready for operation. Therefore, this change does not represent an unreviewed safety question.

Amendment Class (10 CFR 170)

The licensee has determined that, because this requested Amendment is a similar Amendment for an essentially identical unit, at the same site, this is a Class I Amendment (per CFR 170.22). The appropriate remittance therefore is \$400.00.

### 3.18.2 FIRE SUPPRESSION WATER SYSTEM

Applicability: All operating conditions

Objective: To ensure adequate fire suppression capability

Specification:

3.18.2.1 The Fire Suppression Water System shall be operable with:

- a. Two (2) high pressure pumps of the following four (4), shall be operable with their discharge aligned to the fire suppression header and automatic initiation logic operable. Any two of the pumps provide combined capacity greater than 3575 gal/min:
  1. Circulating Water Flume Diesel Fire Pump
  2. River Water Diesel Fire Pump, Unit 1
  3. River Water Diesel Fire Pump, Unit 2
  4. River Water Motor Fire Pump, Unit 1
- b. Two (2) separate water supplies of the following four (4) each containing a minimum of 90,000 gallons:
  1. Altitude Tank
  2. Circulating Water Flume
  3. Unit 1 River Water Intake
  4. Unit 2 River Water Intake
- c. An operable flow path capable of taking suction from two of the operable sources listed in b. above, and transferring the water through distribution piping with operable sectionalizing control or isolation valves to the yard hydrant curb valves and the front valve ahead of the water flow alarm device on each sprinkler, hose standpipe or spray system riser.

3.18.2.2

- a. With less than the above required equipment, restore the inoperable equipment to OPERABLE status within 7 days or prepare and submit a Special Report to the commission within the next 14 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.
- b. With the FIRE SUPPRESSION WATER SYSTEM INOPERABLE:
  1. Return the Fire Suppression Water System to OPERABLE status or establish a backup FIRE SUPPRESSION WATER SYSTEM within 24 hours, and provide Prompt Notification with Written Followup pursuant to Specification 6.9.2.A outlining the actions taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status, or
  2. be in hot shutdown within an additional 1 hour and cold shutdown within the next 30 hours.

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3.18.3 DELUGE/SPRINKLER SYSTEMS

Applicability: At all times when equipment in the area is required to be operable.

Objective: To assure adequate fire suppression capability.

Specification:

3.18.3.1 The Deluge and/or Sprinkler Systems located in the following areas shall be operable.

- a. Diesel Generator and Radiator Rooms
- b. Diesel Generator Combustion Air Intakes
- c. Diesel Generator Cooling Air Intake
- d. Control Building Filter (AH-F3A, AH-F3B) Rooms
- e. Air Intake Tunnel (3 zones)
- f. Charcoal Filter (AH-F10, AH-F11)
- g. Intake Screen Pump House
- h. Diesel driven fire pump areas
- i. Control Building at elevation 306'

3.18.3.2 With any of the above deluge and/or sprinkler systems in any room or zone inoperable:

- a. Establish backup fire suppression equipment for the affected room or zone above, within one hour.
- b. Within one hour, establish a fire watch patrol to inspect the affected room or zone at least once per hour, except that no Fire Watch is required in the air intake tunnel.
- c. Restore the system to OPERABLE status within 14 days or prepare and submit a special report to the Commission within the next 30 days outlining the action taken, the cause of inoperability and the plans and schedule for restoring the system to OPERABLE status.

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### 3.18.4 CO<sub>2</sub> SYSTEM

Applicability: At all times when the equipment in the area is required to be operable.

Objective: To ensure adequate fire suppression capability.

Specification:

- 3.18.4.1 The CO<sub>2</sub> system for the Cable Spreading Room shall be operable with a minimum level corresponding to 8500 lbm and a minimum pressure of 250 psig in the associated storage tank .
- 3.18.4.2 With the CO<sub>2</sub> system for the Cable Spreading Room inoperable:
- a. Establish a patrolling fire watch<sup>\*</sup> with backup fire suppression equipment for the unprotected area within one hour.
  - b. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the action taken, the cause of inoperability and the plans and schedule for restoring the system to OPERABLE status.

\*To inspect the Cable Spreading Room at least once per hour.

3.18.5 HALON SYSTEM

Applicability: At all times except when the Control Building ventilation is on recirculation.

Objective: To assure adequate fire suppression for the Air Intake Tunnel.

Specification:

- 3.18.5.1 The Halon Systems for the air intake tunnel shall be operable except for testing or maintenance not to exceed 48 hours that requires the air tunnel to be occupied. The Halon storage tanks shall have at least 90% of full charge pressure and 95% full charge weight.
- 3.18.5.2 If the Halon system in any zone is inoperable:
- a. The Air Intake Tunnel Deluge system shall be operable except that removal for up to 48 hours is permitted for maintenance or testing.
  - b. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to operable status.

4.18.2.2 The fire pump diesel engines shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying;
  1. The fuel storage tanks contain at least 250 gallons of fuel, and
  2. The diesels start from ambient conditions and operate for at least 20 minutes.
- b. At least once per 92 days by verifying that a sample of diesel fuel from each fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM-D975-74 with respect to viscosity, water content and sediment for the type of fuel specified for the diesels.
- c. At least once per 18 months, by:
  1. Subjecting each diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and
  2. Verifying each diesel starts from ambient conditions on the auto-start signal and operates for  $\geq 20$  minutes while loaded with the fire pump.

4.18.2.3 Each fire pump diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by verifying that:
  1. The electrolyte level of each battery is above the plates, and
  2. The overall battery voltage is  $\geq 24$  volts.