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

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER AND LIGHT COMPANY

PENNSYLVANIA ELECTRIC COMPANY

DOCKET NO. 50-289

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 19
License No. DPR-50

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Metropolitan Edison Company, Jersey Central Power and Light Company, and Pennsylvania Electric Company (the licensees) dated July 12, 1976, 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.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 23, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. 19

FACILITY OPERATING LICENSE NO. DPR-50

DOCKET NO. 50-289

Revise Appendix A as follows:

Remove Pages	Insert Pages
3-21 & 3-22	3-21 & 3-22
4-41 & 4-42	4-41 & 4-42

Changes on the revised pages are indicated by marginal lines. Pages 3-21 and 4-42 are unchanged and are included for convenience only.

3.3 EMERGENCY CORE COOLING, REACTOR BUILDING EMERGENCY COOLING AND REACTOR BUILDING SPRAY SYSTEMS

Applicability

Applies to the operating status of the emergency core cooling, reactor building emergency cooling, and reactor building spray systems.

Objective

To define the conditions necessary to assure immediate availability of the emergency core cooling, reactor building emergency cooling and reactor building spray systems.

Specification

3.3.1 The reactor shall not be made critical unless the following conditions are met:

3.3.1.1 Injection Systems

a. The borated water storage tank shall contain a minimum of 350,000 gallons of water having a minimum concentration of 2,270 ppm boron at a temperature not less than 40 F. The manual valve on the discharge of the BWST shall be locked open.

b. Two makeup pumps are operable in the engineered safeguards mode powered from independent essential busses.

c. Two decay heat removal pumps are operable.

d. Two decay heat removal coolers and their cooling water supplies are operable. (See Specification 3.3.1.4)

e. Two BWST level instrument channels are operable.

f. The two reactor building sump isolation valves (DHV6A/B) shall be either manually or remote-manually operable.

3.3.1.2 Core Flooding System

a. Two core flooding tanks each containing 1040 ± 30 ft^3 of borated water at 600 ± 25 psig shall be available.

b. Core flooding tank boron concentration shall not be less than 2,270 ppm boron.

c. The electrically operated discharge valves from the core flood tank will be assured open by administrative control and position indication lamps on the engineered safeguards status panel. Respective breakers for these valves shall be open and conspicuously marked.

d. One core flood tank pressure instrumentation channel and one core flood tank level instrumentation channel per tank shall be operable.

e. Core flood tank (CFT) vent valves CF-V3A and CF-V3B shall be closed and the breakers to the CFT vent valve motor operators shall be tagged open, except when adjusting core flood tank level and/or pressure.

3.3.1.3 Reactor Building Spray System and Reactor Building Emergency Cooling System

The following components must be operable:

a. Two reactor building spray pumps and their associated spray nozzles headers and two reactor building emergency cooling fans and associated cooling units (one in each train).

b. The sodium thiosulfate tank shall contain not less than 34,000 pounds of sodium thiosulfate and not more than 36,000 pounds of sodium thiosulfate. The sodium thiosulfate will be stored at a nominal 30 weight percent solution with nominal 1.5 weight percent boric acid-sodium hydroxide buffer at a pH of approximately 9 to 10. The sodium hydroxide tank shall contain not less than 16,000 pounds of sodium hydroxide and not more than 17,000 pounds of sodium hydroxide. The sodium hydroxide will be stored at a nominal 20 weight percent solution.

c. All manual valves in the discharge lines of the sodium thiosulfate and sodium hydroxide tanks shall be locked open.

3.3.1.4 Cooling Water Systems

a. Two nuclear service closed cycle cooling water pumps must be operable.

b. Two nuclear service river water pumps must be operable.

c. Two decay heat closed cycle cooling water pumps must be operable.

d. Two decay heat river water pumps must be operable.

e. Two reactor building emergency cooling river water pumps must be operable.

3.3.1.5 Engineered Safeguards Valves and Interlocks Associated with the Systems in Specifications 3.3.1.1, 3.3.1.2, 3.3.1.3, 3.3.1.4 are operable.

3.3.2 Maintenance shall be allowed during power operation on any component(s) in the makeup and purification, decay heat, RB emergency cooling water, RB spray, CFT pressure instrumentation, CFT level instrumentation, BWST level instrumentation, or cooling water systems which will not remove more than one train of each system from service. Components shall not be removed from service so that the affected system train is inoperable for more than 48 consecutive hours. If the system is not restored to meet the requirements of Specifications 3.3.1 within 48 hours, the reactor shall be placed in a cold shutdown condition within twelve hours.

4.5.2 EMERGENCY CORE COOLING SYSTEM

Applicability

Applies to periodic testing requirement for emergency core cooling systems.

Objective

To verify that the emergency core cooling systems are operable.

Specification

4.5.2.1 High Pressure Injection

a. During each refueling interval, system pumps and system high point vents shall be vented, and a system test shall be conducted to demonstrate that the system is operable.

   After a satisfactory test of the Emergency loading sequence (4.5.1), the M. U. Pump and its required supporting auxiliaries will be started manually by the operator and a test signal will be applied to the High Pressure injection valves to demonstrate actuation of the high pressure injection system for emergency core cooling operation.

b. The test will be considered satisfactory if the valves have completed their travel and the M.U. pumps are running as evidenced by the control board component operating lights, and either the station computer or pressure/flow indication.

4.5.2.2 Low Pressure Injection

a. During each refueling period, system pumps and high point vents shall be vented, and a system test shall be conducted to demonstrate that the system is operable. The auxiliaries required for low pressure injection are all included in the emergency loading sequence specified in 4.5.1.

b. The test will be considered satisfactory if the decay heat pumps listed in 4.5.1.1b have been successfully started and the decay heat injection valves and the decay heat supply valves have completed their travel as evidenced by the control board component operating lights, and either the station computer or pressure/flow indication.

4.5.2.3 Core Flooding

a. During each refueling period, a system test shall be conducted to demonstrate proper operation of the system. During depressurization of the Reactor Coolant System, verification shall be made that the check and isolation valves in the core flooding tank discharge lines operate properly.

b. The test will be considered satisfactory if control board indication of core flood tank level verifies that all valves have opened.

4.5.2.4 Component Tests

a. At intervals not to exceed 3 months, the components required for emergency core cooling will be tested.

b. The test will be considered satisfactory if the pumps and fans have been successfully started and the valves have completed their travel as evidenced by the control board component operating lights, and either the station computer or pressure/flow indication.

Bases

The emergency core cooling systems are the principal reactor safety features in the event of a loss of coolant accident. The removal of heat from the core provided by these systems is designed to limit core damage.

The low pressure injection pumps are tested singularly for operability by opening the borated water storage tank outlet valves and the bypass valves in the borated water storage tank fill line. This allows water to be pumped from the borated water storage tank through each of the injection lines and back to the tank.

With the reactor shutdown, the valves in each core flooding line are checked for operability by reducing the reactor coolant system pressure until the indicated level in the core flood tanks verify that the check and isolation valves have opened.

REFERENCE

(1) FSAR, Section 6.