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

MAINE YANKEE ATOMIC POWER COMPANY

DOCKET NO. 50-309

MAINE YANKEE ATOMIC POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 45
License No. DPR-36

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

A. The application for amendment by Maine Yankee Atomic Power Company (the licensee) dated September 16, 1977, 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.B.(6)(b) of Facility Operating License No. DPR- 36 is hereby amended to read as follows:

(b) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 45, 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.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert W. Reid

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: September 27, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 45

FACILITY OPERATING LICENSE NO. DPR-36

DOCKET NO. 50-309

Revise Appendix A as follows:

Remove Pages	Insert New Pages
4.6-1 - 4.6-3	4.6-1 - 4.6-3

4.6 PERIODIC TESTING

SAFETY INJECTION AND CONTAINMENT SPRAY SYSTEMS
STEAM GENERATOR AUXILIARY FEED PUMPS
MAIN STEAM EXCESS FLOW CHECK VALVES

Applicability: Applies to the safety injection system, the containment spray system, chemical injection system, the containment cooling system, the auxiliary feedwater system, and the main steam excess flow check valves.

Objective: To verify that the subject systems will respond promptly and perform their intended functions, if required.

Specification:

A. SAFETY INJECTION AND CONTAINMENT SPRAY SYSTEMS

1. The following tests will be performed monthly whenever plant conditions are as defined in Section 3.6.A of these Specifications.

   a. Emergency Core Cooling System (ECCS) pumps:

      Both operable high pressure safety injection (HPSI) pumps shall be tested by operating in the charging mode.

      Both operable low pressure safety injection (LPSI) pumps and both operable containment spray (CS) pumps shall be tested by operating in the recirculation mode.

      Acceptable performance shall be that pumps attain rated heads, operate for at least 15 minutes, and that the associated instrumentation and controls function properly.

   b. ECCS Valves:

      All automatically operated valves that are required to operate to assure core flooding, or containment spray shall be exercised. The volume control tank (VCT) outlet to charging pump suction valves shall be exercised through part travel and all other valves shall be visually checked to verify proper operating position.

2. The following tests will be performed at each refueling interval:

   a. ECCS Pumps:

      One HPSI pump shall be flow tested at 1000 psig discharge head.

      One LPSI pump and one CS pump shall be flow tested at 100 psi discharge head.

      During these tests flow distribution thru the HPSI and LPSI flow orifices will be checked.

      Acceptable performance shall be that the pumps and orifices attain flow values used in the safety analysis.

      Alternate pumps will be tested at each refueling interval, so that all pumps will be tested within any five year period.

b. ECCS Valves:

All automatically operated valves and the motor operated fill header root valves shall be exercised through their full travel in conjunction with the actuation signal testing set forth in Table 4.1-2 of Technical Specifications.

c. Safety Injection Tanks:

Each safety injection tank will be flow tested by opening the tank isolation valve sufficient to verify check valve operation.

d. The correct position of each electrical and mechanical position stop for the following throttle valves shall be verified:

1) Within 4 hours following completion of maintenance on the valve when the HPSI system is required to be operable.

2) At least once per 4 months

Valve Numbers

HSI-M-11
HSI-M-12
HSI-M-21
HSI-M-22
HSI-M-31
HSI-M-32

e. A flow balance test, as described in 4.6.A.2 above, shall be performed during shutdown to confirm the injection flow rates assumed in the Safety Analysis following completion of HPSI or LPSI system modifications that alter system flow characteristics.

3. Containment Spray Headers:

The containment spray flow nozzles will be tested every five years. The test will consist of pressurizing the headers with air and verifying that the nozzles are free of obstruction.

4. Containment Isolation Valves:

Where practicable, each containment isolation valve shall be stroked to the position required to fulfill its safety function every three months. Those valves that cannot be tested without possible adverse effects during plant operation shall be tested during each cold shutdown if not tested during the previous three months.

B. STEAM GENERATOR AUXILIARY FEED PUMPS

During normal plant operation, each auxiliary feed pump shall be tested at quarterly intervals to demonstrate operability of pumps, system valves and instrumentation.

C. MAIN STEAM EXCESS FLOW CHECK VALVES

The main steam excess flow check valves shall be tested once every 6 weeks for movement of the valve disc through a distance of approximately one and one-half

inches. These valves will be tested through full travel distance during each refueling interval.

Basis

The safety injection system and the containment spray system are principal plant safeguards systems that are normally operable during reactor operation.

Complete system tests cannot be performed when the reactor is operating because of their inter-relation with operating systems. The method of assuring operability of these systems is a combination of complete system tests performed during refueling shutdowns and monthly tests of active system components (pumps and valves) which can be performed during reactor operation. The test interval is based on the judgment that more frequent testing would not significantly increase the reliability (i.e., the probability that the component would operate when required), yet more frequent tests would result in increased wear over a long period of time.

The monthly part travel exercising of the VCT outlet to charging pump suction valves, in lieu of the full travel exercise, is conducted to preclude an interruption of normal plant operations. Redundant valves have been used to assure proper lineup in the event of ECCS actuation. Other ECCS valves whose operation is not required to assure core flooding or containment spray shall be tested during each refueling shutdown period in accordance with 2.b.

Verification that the spray piping and nozzles are open will be made initially by a suitably sensitive method, and at least every five years thereafter. Since all piping material is all stainless steel, normally in a dry condition, and with no plugging mechanism available, the retest every five years is considered to be more than adequate.

Other systems that are important to the emergency cooling function are the SI tanks, the component cooling system and the service water system. The SI tanks are a passive safety feature. In accordance with the Specification 4.1 (Table 4.1-2, Item 11), the water volume and pressure in the SI tanks are checked periodically. The component cooling and service water systems operate when the reactor is in operation and are continuously monitored for satisfactory performance.

The three month testing interval of the steam generator auxiliary feed pumps verifies their operability by recirculating water to the demineralized water tank.

Proper functioning of the steam turbine admission valve and starting of the auxiliary feed pump will demonstrate the operability of the steam driven pump. Verification of correct operation will be made both from instrumentation with the main control room and direct visual observation of the pumps.

The main steam, excess flow check valves serve to limit an excessive reactor coolant system cooldown rate and resultant reactivity insertion following a main steam break incident. Their freedom to move will be verified periodically.