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. 119
License No. DPR-36

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

   A. The application for amendment filed by the Maine Yankee Atomic Power Company (the licensee) dated October 15, 1990 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 set forth in 10 CFR Chapter I;

   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:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through this Amendment (No. 119), 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 its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard Wessman, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 11, 1991

ATTACHMENT TO LICENSE AMENDMENT NO. 110

FACILITY OPERATING LICENSE NO. DPR-36

DOCKET NO. 50-309

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove	Insert
3.22-1	3.22-1
3.22-2	3.22-2

3.22 FEEDWATER TRIP SYSTEM

Applicability:

Applies to the operating status of the feedwater trip system.

Objective:

To specify conditions of the feedwater trip system necessary to ensure steam generator cooldown potential remains acceptable in the event of a main steam line break.

Specification:

The feedwater trip system shall be operable to perform the following functions whenever the reactor coolant boron concentration is less than that required for hot shutdown.

1. Automatic shutdown of all main feedwater, condensate and heater drain pumps which are operating or set for automatic start.

2. Automatic closure of all main feedwater regulating valves and main feedwater regulating bypass valves which are open or set to open automatically in the line to the low pressure SG(s).

3. Automatic closure of the emergency feedwater control and isolation valves in the EFW lines which are open or set to open automatically to the low pressure Steam Generator(s).

Exception:

1. Specifications 1 and 2 do not apply when the main feedwater lines are isolated from the steam generators.

2. While in the hot standby condition, only one means for isolating auxiliary feedwater flow is required to be operable.

Remedial Action: If the feedwater trip system is found to be inoperable, it must be restored to an operable status within the next two hours, or else the reactor must be shut down within the next six hours and the reactor coolant system borated to hot shutdown concentration within an additional six hours.

Basis:

The feedwater trip system limits the cooldown of the reactor coolant system in the event of a main steam line break by limiting the flow of cold feedwater into the steam generators. Limiting the reactor coolant system cooldown limits reactivity insertion associated with a negative reactivity temperature coefficient during a cooldown.

The feedwater trip system is actuated by signals generated by safety related circuitry associated with the reactor protective system and safety injection system. This safety related circuitry is not itself part of the feedwater trip system. The system provides signals to the controls of feedwater system pumps (main feedwater pumps, condensate pumps, and heater drain pumps), and to the controls of the feedwater regulating valves, feedwater regulating valve bypass valves, and emergency feedwater control and isolation valves.

The system valves are aligned to provide flow to each steam generator following system actuation upon low steam generator water level signal from any one of the three steam generators. However, for a steam generator depressurization event, such as a steam line break, receipt of a low steam generator pressure signal initiates closure of the control and isolation valve(s) feeding the depressurized steam generator(s). This limits excessive reactor coolant system cooldown and the resultant reactivity insertion produced by excessive feedwater flow to a depressurized steam generator. Flow will continue to steam generators remaining pressurized. Flow to a depressurized steam generator will be reestablished by reopening the control and isolation valves after repressurization e.g., by isolation from the steam line break.

Operability of the system assures that the reactivity attributable to reactor coolant system cooldown due to feedwater addition to steam generators after a main steam line break is within the limits established in the steam line break safety analysis.

If the feedwater trip system is discovered to be inoperable, the best course of action is to restore its operability promptly, thus avoiding challenges to plant systems that result from perturbing steady state operation. A two-hour time period presents low risk of a main steam line break yet allows enough time for deliberate restoration of system operability through maintenance actions.

If operability cannot be restored the reactor must be shut down. Six hours provides ample time for an orderly controlled shutdown. If operability cannot be restored by that time, the reactor coolant system must be borated to hot shutdown concentration within an additional six hours. Twelve hours permits an orderly shutdown while assuring that the risk of a main steam line break during the period is very low.

The intended function of the feedwater trip system can be accomplished under conditions of partial system inoperability provided all main feedwater system pumps and valves tripped by the system which are operating can be tripped by the operable portions of the trip system. Pumps which cannot be tripped by the trip system due to partial trip system inoperability can be shut down to assure functional capability.

When the reactor coolant system is at hot shutdown boron concentration, the steam line break cooldown cannot cause sufficient reactivity insertion to cause a return to critical, so the feed trip system is not required to function.

During plant operation in the hot standby condition, emergency feedwater flow may be warmed by aligning flow to the first stage feedwater preheaters, through the main feedwater regulating valve bypass valves and to each of the steam generators. Analysis has shown that in the hot standby condition, a single failure of a bypass valve to close during a steam line break meets applicable acceptance criteria.