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

CONNECTICUT YANKEE ATOMIC POWER COMPANY

DOCKET NO. 50-213

HADDAM NECK PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 34
License No. DPR-61

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

   A. The application by Connecticut Yankee Atomic Power Company (the licensee) dated June 1, 1979, 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.C.(2) of Facility Operating License No. DPR-45 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 34 , 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

Dennis L. Ziemann, Chief
Operating Reactors Branch #2
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 14, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 34

FACILITY LICENSE NO. DPR-61

DOCKET NO. 50-213

Revise the Appendix A Technical Specifications by deleting the following pages and inserting the enclosed pages. The revised pages contain the captioned amendment number and vertical lines reflecting the area of change.

Pages

3-12
3-13
4-17

3.8 TURBINE CYCLE

Applicability: Applies to the operating status of turbine cycle components for removal of reactor core decay heat.

Objective: To specify conditions of the turbine cycle equipment necessary to insure the capability to remove decay heat from the reactor core.

Specification:

A. The reactor shall not be critical (except for determination of "just critical" rod position and low power physics tests at or below 10 percent of full power) unless the following conditions are met:

1. A minimum turbine cycle steam relieving capability of 7,000,000 lb/hr.

2. Two steam-driven auxiliary feedwater pumps operable.

3. The demineralized water storage tank (DWST) shall be OPERABLE with a minimum contained volume of 50,000 gallons of water and the primary water storage tank (PWST) shall be OPERABLE with a minimum contained volume of 80,000 gallons of water.

4. System piping and valves directly associated with the above components operable.

B. With one auxiliary feedwater pump inoperable, restore the inoperable auxiliary feedwater pump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

C. 1. With the DWST inoperable, restore the DWST to OPERABLE status within 4 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

2. With the PWST inoperable, within 4 hours:

a. Restore the PWST to OPERABLE status, or

b. Provide an equivalent supply from an alternate source, or

c. Be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

D. At power levels in excess of 1473 MWt a minimum turbine cycle steam relieving capability of 9,504,000 lbs-per-hour shall be available.

Basis:

A reactor trip from power requires subsequent removal of core decay heat. Immediate decay heat removal requirements are normally satisfied by the steam bypass to the condensers. Thereafter, core decay heat can be continuously dissipated via the steam bypass to the condenser as feedwater in the steam generator is converted to steam by heat absorption. Normally, the capability to return feedwater flow to the steam generators is provided by operation of the turbine cycle feedwater system.

In the unlikely event of complete loss of electrical power to the station, decay heat removal would continue to be assured by the availability of a steam-driven, auxiliary steam generator feedwater pump, and steam discharge to atmosphere via the main steam safety valves and atmospheric dump line. In this case, feedwater is available from the demineralized water storage tank by gravity feed to the auxiliary feedwater pump. The specified 50,000 gallons of water in the demineralized water storage tank is adequate for decay heat removal for a period of at least two hours. Within this period, decay heat removal demands are reduced to approximately 150 gpm. Makeup water is available during this period from the primary water storage tank which contains a minimum volume of 80,000 gallons. The primary water transfer pumps can transfer 200 gpm from the primary water tank to the demineralized water tank. An alternate supply can be provided from the 100,000 gallon capacity Recycled Primary Water Storage Tank.

A steam relieving capability of 7,000,000 lbs-per-hour is required at power levels up to and including 1473 Mwt to maintain the pressure in turbine cycle components within ASME code allowable values in the event of a full load rejection at 1473 Mwt without a reactor trip or other control action and without feedwater flow to the steam generators. Similarly, at 1825 Mwt, a steam relieving capacity of 9,504,000 lbs-per-hour is required to maintain the pressure in turbine cycle components within code values in the event of a full load rejection at 1825 Mwt.

Reference:

(1) FDSA Section 8.1

(2) FDSA Section 8.3

4.8 AUXILIARY STEAM GENERATOR FEED PUMPS

Applicability: Applies to periodic testing requirements of the steam-driven auxiliary steam generator feed pumps.

Objective: To verify the operability of the auxiliary steam generator feed pumps and their ability to respond properly when required.

Specification:

1. The auxiliary feedwater system shall be demonstrated OPERABLE at least once per 31 days by:

   a. Verifying that each steam turbine driven pump develops a discharge pressure of greater than or equal to 800 psig at a steam supply pressure of 300 psig.

   b. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

2. The DWST and PWST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water volume is within its limits.

3. At refueling intervals the capability of each pump to attain rated flow of 450 gpm shall be verified.

Basis: The monthly testing program will verify the operability of the auxiliary steam generator feed pump. The refueling interval test will verify the capability of the turbine drive and pump to attain rated flow. A flow rate of 450 gpm is sufficient to prevent the steam generators from boiling dry during a period of coincident loss of off-site power and maximum decay heat removal requirements. This piece of equipment has sufficiently demonstrated itself throughout the power industry to be a most rugged and reliable component. Montly testing of similar equipment at the Yankee-Rowe power reactor has shown that the equipment has never failed to start.

Proper functioning of the steam admission valve and subsequent pump start will demonstrate the integrity of the system. Verification of correct operation will be made both from instrumentation within the main control room and direct visual observation of the pump.

Reference: (1) FDSA - Section 8.3