



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

YANKEE ATOMIC ELECTRIC COMPANY

DOCKET NO. 50-29

YANKEE NUCLEAR POWER STATION (YANKEE-ROWE)

AMENDMENT TO FACILITY OPERATING LICENSE

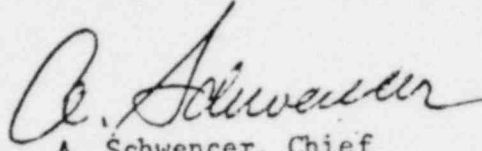
Amendment No. 28  
License No. DPR-3

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Yankee Atomic Electric Company (the licensee) dated April 21, 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief  
Operating Reactors Branch #1  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: July 15, 1976

ATTACHMENT TO LICENSE AMENDMENT NO. \_\_\_\_\_

FACILITY LICENSE NO. DPR-3

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Revise the Technical Specifications as follows:

Remove page 203:1 and drawing 646-J-421 from the Final Hazards Summary Report and replace with revised pages 203:1 and 203:1A and revised drawing 646-J-421.

203 CHARGING AND VOLUME CONTROL SYSTEMGeneral

The charging and volume control system is an auxiliary system in the primary plant and is designed to accomplish the following major functions:

- Water charging to the main coolant system
- Water removal from the main coolant system
- Boric acid addition and removal for control purposes
- Quenching of relief and safety valve discharge
- Pressurizer vessel cooling and decontamination
- Noncondensable gas removal
- Chemical addition
- Water charging to auxiliary system and equipment

The arrangement of the charging and volume control system is shown on drawing No. 646-J-430, Revision 12, dated March 23, 1976. It contains the following major items of equipment, designed in accordance with the following codes:

- Equipment - ASME Section VIII - 1956 - Unfired Pressure Vessels
- Piping - ASA 31.1 - 1955 - Code for Pressure Piping, Sections 1 and 6
- Valves, Fittings - ASA B16.5 - 1953 - Code for Steel Piping and Flanged Fittings

High Pressure Charging Pumps

Three motor driven positive displacement charging pumps are provided in the charging and volume control system. The capacity of each pump is approximately 33 gpm, when operating against a discharge head of 2,100 psi gage. Two of the pumps serve as a spare for the other, and they can be operated singly or simultaneously, if required. Any pump can be isolated from the system for repairs. Two of the pumps are driven through variable speed fluid couplings, so that their flow can be controlled between 11 and 33 gpm. Pump No. 3 may be used in conjunction with the loop fill and chemical injection line to accomplish charging to any isolated loop while one or both of the other charging pumps is servicing the reactor vessel portion of the main coolant system. All of the high pressure charging pumps are provided with a pressure relief valve.

Pulsation Dampener

A homogeneous chrome moly pulsation dampener is installed on the discharge of Number 3 charging pump. It serves to reduce the pressure variation created by the variable speed pump and is employed to reduce fatigue stressing. The dampener basic operation consists of absorbing the potential energy of the pressure shock by the compression of a bladder precharged with nitrogen.

**POOR ORIGINAL**

Feed and Bleed Heat Exchanger

The feed and bleed heat exchanger consists of a set of four small individual heat exchangers connected in series, which cool the bleed before it is reduced in pressure. Multiple exchangers are employed in order to reduce the size of metal parts and the corresponding high thermal stresses that may occur during severe thermal transient operation. The bleed flows through the tubes while the feed is passed through the shell side, thus recovering some of the heat otherwise lost in a bleeding process.