

March 27, 1986

Docket No. 50-271

Mr. R. W. Capstick
Licensing Engineer
Vermont Yankee Nuclear Power Corporation
1671 Worcester Road
Framingham, Massachusetts 01701

Dear Mr. Capstick:

The Commission has issued the enclosed Amendment No. 92 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station. The amendment consists of changes to the Technical Specifications in response to your application dated November 15, 1985.

The amendment revises the Technical Specifications to delete Technical Specifications pertaining to the recirculation system equalizer valves, which have been removed.

A copy of the Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's Biweekly Federal Register Notice.

Sincerely,

Vernon L. Rooney, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

Enclosures:

- 1. Amendment No. 92 to License No. DPR-28
- 2. Safety Evaluation

cc w/enclosure:
See next page

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Mr. R. W. Capstick
Vermont Yankee Nuclear Power Corporation
Vermont Yankee Nuclear Power Station

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

VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 92
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Vermont Yankee Nuclear Power Corporation (the licensee) dated November 15, 1985, 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-28 is hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 92, 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



Daniel R. Muller, Project Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 27, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 92

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised area are indicated by marginal lines.

Pages

109

110

124

3.6 LIMITING CONDITION FOR OPERATION

E. Structural Integrity

The structural integrity of the primary system boundary shall be maintained at the level required by the original acceptance standards throughout the life of the plant.

F. Jet Pumps

1. Whenever the reactor is in the startup/hot standby or run modes, all jet pumps shall be intact and all operating jet pumps shall be operable. If it is determined that a jet pump is inoperable, an orderly shutdown shall be initiated and the reactor shall be in a cold situation condition within 24 hours.
2. Flow indication from each of the twenty jet pumps shall be verified prior to initiation of reactor startup from a cold shutdown condition.
3. The indicated core flow is the sum of the flow indication from each of the twenty jet pumps. If flow indication failure occurs for two or more jet pumps, immediate corrective action shall be taken. If flow indication for all but one jet pump cannot be obtained within 12 hours an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.

4.6 SURVEILLANCE REQUIREMENT

E. Structural Integrity

The nondestructive inspections listed in Table 4.6.1 shall be performed per the requirements of the 1974 edition of ASME, Section XI, up to and including the 1975 Summer Addenda except piping examinations (Cat. F & J) shall be per the requirements of ASME Section XI, 1974 edition, 1976 Summer Addenda, Appendix III.

Recording levels shall be at 50% of the reference level.

F. Jet Pumps

1. Whenever there is recirculation flow with the reactor in the startup/hot standby or run modes, jet pump integrity and operability shall be checked daily by verifying that the following two conditions do not occur simultaneously:
 - a. The recirculations pump flow differs by more than 10% from the established speed-flow characteristics.
 - b. The indicated total core flow is more than 10% greater than the core flow value derived from established power-core flow relationship.
2. Additionally, when operating with one recirculation pump, the diffuser to lower plenum differential pressure shall be checked daily, and the differential pressure of any jet pump in the idle loop shall not vary by more than 10% from established patterns.

3.6 LIMITING CONDITION FOR OPERATION

4.6 SURVEILLANCE REQUIREMENT

G. Single Loop Operation

1. Operation with a single recirculation loop is permitted for 24 hours unless the recirculation loop is sooner made operable. If the loop cannot be made operable, the reactor shall be in cold shutdown within 24 hours.

H. Recirculation System

1. This section deleted.

3. The baseline data required to evaluate the conditions in Specifications 4.6.F.1 and 4.6.F.2 shall be acquired each operating cycle.

3.6 & 4.6 (cont'd)

The following factors form the basis for the surveillance requirements:

A break in a jet pump decreases the flow resistance characteristic of the external piping loop causing the recirculation pump to operate at a higher flow condition when compared to previous operation.

The change in flow rate of the failed jet pump produces a change in the indicated flow rate of that pump relative to the other pumps in that loop. Comparison of the data with a normal relationship or pattern provides the indication necessary to detect a failed jet pump.

The jet pump flow deviation pattern derived from the diffuser to lower plenum differential pressure readings will be used to further evaluate jet pump operability in the event that the jet pumps fail the test in Specifications 4.6.F.1 and 2.

Agreement of indicated core flow with established power-core flow relationships provides the most assurance that recirculation flow is not bypassing the core through inactive or broken jet pumps. This bypass flow is reverse with respect to normal jet pump flow. The indicated total core flow is summation of the flow indications for the twenty individual jet pumps. The total core flow measuring instrumentation sums reverse jet pump flow as though it were forwarded flow. Thus, the indicated flow is higher than actual core flow by at least twice the normal flow through any backflowing pump. Reactivity inventory is known to a high degree of confidence so that even if a jet pump failure occurred during a shutdown period, subsequent power ascension would promptly demonstrate abnormal control rod withdrawal for any power-flow operating map point.

A nozzle-riser system failure could also generate the coincident failure of a jet pump body; however, the converse is not true. The lack of any substantial stress in the jet pump body makes failure impossible without an initial nozzle-riser system failure.

G. Single Loop Operation

An evaluation was not provided for ECCS performance during reactor operation with one recirculation loop out of service. Therefore, reactor operation for more than 24 hours under such conditions will not be authorized until the necessary analyses have been performed, evaluated and deemed acceptable.

H. Recirculation System

This section deleted.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated November 15, 1985, Vermont Yankee Nuclear Power Corporation (the licensee/VYNPC) proposed a change to Sections 3.6 and 4.6 of the Technical Specifications (TS) for the Vermont Yankee Nuclear Power Station. The proposed change would delete TS pertaining to the valves in the recirculation system equalizer lines. The Vermont Yankee plant is presently in a refueling outage which began September 21, 1985, and during which, recirculation system piping will be totally replaced. The replacement piping will not include equalizer lines between recirculation loops nor equalizer line valves. Therefore references to equalizer line valve position are no longer appropriate.

2.0 EVALUATION

Presently TS require that equalizer valves be shut during both normal operation and single loop operation. These requirements were added to the TS in order to isolate the A and B recirculation loops, thereby achieving the piping configuration assured to exist in the currently applicable emergency core cooling system (ECCS) analysis. TS requiring these valves to be closed are necessary to assure the validity of the ECCS analysis.

During the present outage, the piping configuration will be changed so that the connecting lines between the A and B recirculation lines do not exist, thereby accomplishing the desired isolation in a more positive manner. Consequently, TS requiring that equalizer valves remain closed are no longer needed. There is no safety requirement that equalizer valves and lines remain. The proposed change is acceptable to the staff.

3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there

has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: V. Rooney

Dated: March 27, 1986