

December 4, 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. 97 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 August 28, 1986, with clarifying information provided by letter dated November 3, 1986.

The amendment changes the Technical Specifications to revise on a one time basis, the length of time any one of the RHR pumps may be inoperable from 7 days to 14 days, for the purpose of inspection/repair of impeller wear rings during the 1986-87 operating cycle.

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

Sincerely,

Original Signed By
Harvey Abelson For

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

Enclosures:

1. Amendment No. 97 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

cc:

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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. 97
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 October 28, 1986 as supplemented November 3, 1986, 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. 97, 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: December 4, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 97

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

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

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3.5 LIMITING CONDITION FOR OPERATION

4.5 SURVEILLANCE REQUIREMENT

2. From and after the date that one of the Core Spray Subsystems is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such subsystem is sooner made operable, provided that during such seven days, all active components of the other Core Spray Subsystem, the LPCI Subsystems, and the diesel generators required for operation of such components if no external source of power were available, shall be operable.
3. From and after the date that one of the LPCI pumps is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless such pump is sooner made operable, provided that during such seven days, the remaining active components of the LPCI Containment Cooling Subsystem and all active components of both Core Spray Subsystems and the diesel generators required for operation of such components if no external source of power were available, shall be operable.

For the purpose of performing inspection/repair of the impeller wear rings on each LPCI pump during the 1986-1987 operating cycle, reactor operation is permissible only during the succeeding 14 days from the time each pump is made inoperable unless such pump is sooner made operable. Additionally, during the out-of-service time, the remaining active components of the LPCI Containment Cooling Subsystem and all active components of both Core Spray Subsystems and the diesel generators required for operation of such components if no external source of power were available, shall be operable.

- | <u>Item</u> | <u>Frequency</u> |
|---|------------------|
| c. Pump and Motor-Operated Valve Operability except Recirculation Pump discharge valves. | once/month |
| 2. When it is determined that one Core Spray Subsystem is inoperable, the operable Core Spray Subsystem, both LPCI Subsystems (except the Recirculation System discharge valves) and the diesel generators required for operation of such components if no external source of power were available, shall be demonstrated to be operable immediately. The operable Core Spray Subsystem shall be demonstrated to be operable daily thereafter. | |
| 3. When it is determined that one of the LPCI pumps is inoperable, the remaining active components of the LPCI (except the Recirculation System discharge valves) and the Containment Cooling Subsystems, both Core Spray Subsystems, and the diesel generators required for operation of such components if no external source of power were available, shall be demonstrated to be operable immediately and the operable LPCI pumps daily thereafter. | |

During the inspection/repair of the impeller wear rings on each LPCI pump during the 1986-1987 operating cycle, the remaining active components of the LPCI Subsystem (except Recirculation System discharge valves), the Containment Cooling Subsystems, both Core Spray Subsystems, and the diesel generators required for operation of such components if no external source of power were available, shall continue to be demonstrated operable on a monthly basis as specified in Technical Specifications 4.5.A.1 and 4.10.A.1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 97 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

Recently, the staff (Ref. 1) identified a potential generic problem with wear rings for Bingham-Willamette Model 16 x 18 x 26 CVIC pumps. These pumps are used in the RHR system at Vermont Yankee. By letter dated July 11, 1986 (Ref. 2), Vermont Yankee outlined its enhanced monitoring program for the four RHR pumps, including a plan to inspect/repair these pumps during the 1986-1987 operating cycle. Vermont Yankee had planned to perform this work during the 1987 refueling outage; however, in response to staff concerns, this schedule was accelerated to commence during the 1986-1987 operating cycle. Due to the scope of the work associated with the on-line inspection/repair, it is anticipated that a pump could be inoperable for more than the seven days currently allowed by Technical Specifications. Therefore, an extension of the current Limiting Condition of Operation and a modified Surveillance Requirement has been requested by the licensee. By letter from W. Murphy, Vermont Yankee Nuclear Power Corporation, to H. Denton, Nuclear Regulatory Commission (Ref. 3), Technical Specification (TS) changes were proposed for Vermont Yankee Nuclear Power Station to permit an RHR pump to be inoperable for up to 14 days instead of the 7 days currently allowed by Technical Specifications. The licensee also proposed changes in testing of the RHR pumps during the inspection period. According to the present technical specifications, if one RHR pump is inoperable, the remaining RHR pumps are to be tested daily to demonstrate their operability. The licensee is proposing to test the remaining operable pumps only on a monthly basis.

2.0 EVALUATION

The Emergency Core Cooling System (ECCS) for Vermont Yankee Nuclear Power Station (VYNPS) consists of the following systems:

- (a) High Pressure Coolant Injection System
- (b) Automatic Depressurization System
- (c) Core Spray System [Two loops, each loop consists of one 100% capacity pump, each pump getting emergency power from a different diesel]
- (d) Low Pressure Coolant Injection (LPCI) Mode of RHR. [Two loops, each loop consists of two 33 1/3% capacity pumps, each pump in the loop getting the emergency power from a different diesel]

The licensee is proposing to take the RHR pumps out for inspection one at a time, each for a period of up to 14 days. The staff required additional assurance of a reliable power supply to the ECCS during the RHR pump inspection/repair period.

The licensee in Reference 4 stated the availability of an additional off-site power source. The Vernon Hydro-Plant is used for providing an alternate source of off-site power.

According to the licensee, power transfer from the hydro-plant to the station power can be done in a matter of seconds from the VYNPS control room. Also, the licensee has committed to advise the plant operators of the need for the switching action to ensure power supply for the ECCS. The staff judges that these features provide additional assurance of the availability of power for the ECCS components.

The elimination of alternate testing which the licensee has proposed is consistent with the staff current practice for ECCS Surveillance Testing as indicated in BWR Standard Technical Specifications. If the existing test requirement is left intact, this would result in daily challenges to the system for up to 14 days. The testing outage time and the repeated tests will reduce the overall reliability of the systems. This would, in effect, reduce the margin of safety for these systems. For these reasons, the staff agrees that no alternate testing should be required. The remaining active components will be tested monthly, and demonstrated operable in accordance with Technical Specifications. This is acceptable.

The proposed Technical Specification change is an addition to Sections 3.5.A.3 and 4.5.A.3. This change is requested only during the RHR pump impeller wear ring inspection/repair to be conducted during the 1986-1987 operating cycle. Only one RHR pump is to be taken out for inspection at any time. The licensee has an additional off-site power source immediately available and accessible from the control room and has committed to alerting the operators to the importance and use of the power supply. On this basis we find the proposed changes acceptable.

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 the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the 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 the 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 REFERENCES

- (1) NRC IE Information Notice No. 86-39 Dated May 20, 1986, "Failures of RHR Pump Motors and Pump Internals."
- (2) Letter, VYNPC to USNRC, FVY 86-62 Dated July 11, 1986 "RHR Pump Impeller Wear Rings."
- (3) Letter, VYNPC to USNRC, FVY 86-78 dated August 28, 1986 "Changes to Technical Specifications for the 1986/1987 Operating Cycle Inspection/Repair of the RHR Pump Impeller Wear Rings."
- (4) Letter VYNPC to USNRC, FVY-86-102 dated November 3, 1986 .
"Response to Request for Information - Vermont Yankee Proposed Change No. 135."

Principal Contributor: G. Thomas

Dated: December 4, 1986