

MAR 22 1977

March 22, 1977

Docket No.: 50-271 ✓

Yankee Atomic Electric Company  
ATTN: Mr. Robert H. Groce  
Licensing Engineer  
20 Turnpike Road  
Westboro, Massachusetts 01581

Gentlemen:

The Commission has issued the enclosed Amendment No. 32 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 September 2, 1976, and staff discussions.

This amendment modifies the Technical Specifications to require periodic surveillance on the recirculation pump discharge valves and, where appropriate, the associated bypass valves.

Copies of the Safety Evaluation and the Federal Register Notice are also enclosed.

Sincerely,

Original signature

Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Enclosures:

1. Amendment No. 32
2. Safety Evaluation
3. Federal Register Notice

cc w/enclosure:  
See next page

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DATE ▶	3/4/77	3/4/77	3/7/77	3/27/77	3/4/77	3/17/77

Yankee Atomic Electric Company

cc w/enclosure(s):

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Chief, Energy Systems  
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Yankee Atomic Electric  
Company

U. S. Environmental Protection  
Agency  
Region I Office  
ATTN: EIS COORDINATOR  
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cc w/enclosures and cy of VY's  
filing dtd.: 9/2/76  
Public Service Board  
State of Vermont  
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Montpelier, Vermont 05602



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. 32  
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 September 2, 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.

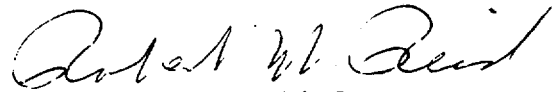
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-28 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 32, 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



Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 22, 1977

ATTACHMENT TO LICENSE AMENDMENT NO. 32

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Revise Appendix A Technical Specifications as follows:

Remove Pages

Insert Pages

86 & 87

86 & 87

The changed areas on the revised pages are shown by marginal lines.

## 3.5 LIMITING CONDITION FOR OPERATION

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.

## 4.5 SURVEILLANCE REQUIREMENT

<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.	

## 3.5 LIMITING CONDITION FOR OPERATION

4. From and after the date that a LPCI subsystem is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days unless it is sooner made operable, provided that during such seven days all active components of the other LPCI and the Containment Cooling subsystem, the Core Spray subsystems and the diesel generators required for operation of such components if no external source of power were available, shall be operable.
5. All recirculation pump discharge valves and bypass valves shall be operable or closed prior to reactor startup.
6. If the requirements of Specification 3.5.A cannot be met, an orderly shutdown of the reactor shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.

B. Containment Spray Cooling Capability

1. Both containment cooling spray loops are required to be operable when the reactor water temperature is greater than 212°F except that a Containment

## 4.5 SURVEILLANCE REQUIREMENT

4. When it is determined that a LPCI subsystem is inoperable, both Core Spray subsystems, the remaining LPCI (except the recirculation discharge valves) and Containment Cooling 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 daily thereafter.
5.
  - a. All recirculation pump discharge and bypass valves shall be tested for operability during any period of reactor cold shutdown exceeding 48 hours, if operability tests have not been performed during the preceding 31 days.
  - b. Recirculation Pump discharge valves shall be tested to verify full open to full closed in  $27 \leq t \leq 33$  seconds each refueling outage.

B. Containment Spray Cooling Capability

1. Surveillance of the drywell spray loops shall be performed as follows, during each five year period, an air test shall be performed on the drywell spray headers and nozzles.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 32 TO FACILITY OPERATING LICENSE NO. DPR-28

VERMONT YANKEE NUCLEAR POWER CORPORATION

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

INTRODUCTION

By letter dated September 2, 1976, Vermont Yankee Nuclear Power Corporation (VYNPC) requested an amendment to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station (VYNPS). The amendment would modify the Technical Specifications to require periodic surveillance on the recirculation pump discharge valves (RPDV) and, where appropriate, the associated bypass valves (BV). The amendment application is in response to our letter dated July 30, 1976. Certain changes to the wording proposed by VYNPC were necessary; consequently, these changes have been discussed with and are agreeable to the licensee.

EVALUATION

Vermont Yankee Nuclear Power Station is one of several boiling water reactors on which the low pressure coolant injection system (LPCIS) modification has been completed. This modification included the removal of the loop selection logic feature of the original design and instituted instead the simultaneous opening of both LPCIS injection valves. This was done to insure at least one half of the LPCIS injection capacity could be available after a postulated loss of coolant accident (LOCA) (i.e. suction line break). Another essential element of this modification involves the closure of the RPDV and BV upon LPCIS initiation following a LOCA.

The closure of the RPDV and BV is necessary to isolate a pipe rupture occurring in the recirculation loop suction line and thereby ensure that the LPCIS will not discharge makeup water back through the recirculation pump or bypass line and out of the break. The failure of a RPDV or BV to close upon LPCIS initiation has an adverse affect on core cooling similar to the failure of a LPCIS injection valve to open. The failure of a LPCIS injection valve to open is the limiting single failure in the Vermont Yankee Emergency Core Cooling System (ECCS) analysis.

Currently, the RPDV's and BV's are tested only during refueling outages which occur every 12 - 18 months. The standard interval for surveillance testing of motor operated ECCS valves is 31 days. We consider it desirable for surveillance to be performed on the RPDV and BV (if installed) in a manner, and with a surveillance frequency similar to that which is performed on the LPCIS injection valves. However, unlike the LPCIS injection valves, the RPDV's and BV's cannot be tested during power operation. We have considered the known safety effects on the plant associated with a plant shutdown and cooldown, solely for the purpose of testing these valves and have determined that the increase in reliability that might be gained does not justify an interruption in normal plant operations. Therefore, we have required that the RPDV and BV be testing during periods of reactor cold shutdown in excess of 48 hours if they have not been tested in the previous 31 days. For most operating BWR's today this cold shutdown period would occur, because of the necessity for maintenance and other planned operations, every 3 - 4 months. This expected outage frequency is consistent with the 3 month surveillance interval specified in Section XI of the ASME Boiler and Pressure Vessel Code.

On the basis of the foregoing, we consider the proposed changes to be improvements to overall plant safety and reliability; therefore, the changes are acceptable.

#### ENVIRONMENTAL CONSIDERATIONS

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §5.15(d)(4) that an

environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

#### CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Dated: March 22, 1977

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER CORPORATION

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY  
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 32 to Facility Operating License No. DPR-28, issued to Vermont Yankee Nuclear Power Corporation (the licensee), which revised Technical Specifications for operation of the Vermont Yankee Nuclear Power Station (the facility) located near Vernon, Vermont. The amendment is effective as of its date of issuance.

This amendment modifies the Technical Specifications to require periodic surveillance on the recirculation pump discharge valves and, where appropriate, the associated bypass valves.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, or negative

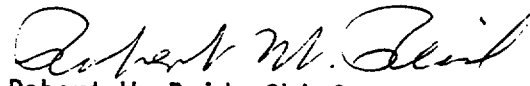
declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated September 2, 1976, (2) Amendment No. 32 to License No. DPR-28, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Brooks Memorial Library, 224 Main Street, Brattleboro, Vermont.

A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 22nd day of March 1977.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Robert W. Reid, Chief  
Operating Reactors Branch #4  
Division of Operating Reactors