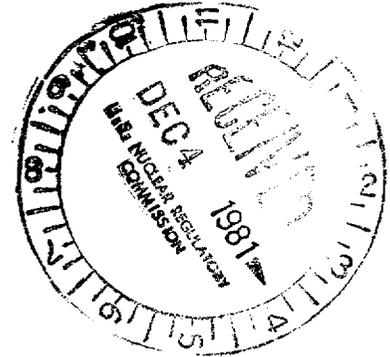


November 27, 1981

Docket No. 50-271

Mr. Robert L. Smith
Licensing Engineer
Vermont Yankee Nuclear Power
Corporation
1671 Worcester Road
Framingham, MA 01701



Dear Mr. Smith:

The Commission has issued the enclosed Amendment No. 69 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station. This amendment consists of changes to the Technical Specifications in response to your application dated October 5, 1981 as supplemented November 18, 1981 and subsequent discussions between the NRC staff and your staff.

These changes to the Technical Specifications incorporate limiting conditions for operation and surveillance requirements related to HPCI and RCIC isolation modifications (II.K.3.15) which have been implemented at your facility.

Your October 5, 1981 submittal also included a correction to Table 3.2.2, which we have made and changes related to scram discharge vent and drain valve surveillance, which we will address separately from this amendment.

Item II.K.3.15 of NUREG-0737 requires that the High Pressure Coolant Injection and Reactor Core Isolation Cooling Systems be modified to prevent inadvertent isolation due to starting steam flow transients.

By letters dated October 5, 1981 and November 18, 1981 you proposed changes in equipment and Technical Specifications to accomplish this. You proposed changes to the Technical Specifications to reflect installation of a time delay in the break detection closure circuitry for the steam supply valves to the RCIC system. You proposed changes to the governor control system such that the governor valves will be partially shut when steam is admitted to the turbine. This will eliminate the large surge of steam on turbine startup, thereby eliminating the possibility of a spurious system isolation due to the associated break detection logic.

Your proposal was reviewed to the following criteria:

1. Assurance that the pipe-break detection logic has been modified such that pressure spikes resulting from initiation of HPCI and/or RCIC do not cause spurious system isolation.

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2. Acceptability of the proposed Technical Specifications necessary to implement the modification (eg. surveillance on time delay relay setting, flow or response time set point changes, etc.).
3. No degradation of the safety function of the primary system isolation due to the modification.

Our determination that criterion 1 is met is based on confirmatory testing which you have committed to perform before resuming power operation following the 1981 refueling outage (letter of November 18, 1981).

We have reviewed the proposed Technical Specifications and found them acceptable, after changes which we made and you agreed with (criterion 2).

In your proposals you state that you have reviewed the changes with respect to their effect on the safety function of the primary system isolation. You also state that an evaluation of the proposed addition of a time delay to the RCIC isolation logic has shown that the addition of a three to seven second delay will not result in any change in the total quantity of steam to be released in accordance with the design basis.

Based on the information you have provided, we agree with your conclusion that no safety function degradation of the primary system isolation will result from this modification. (Criterion 3), consequently we find this change acceptable.

We have evaluated the potential for environmental impact of plant operation in accordance with the enclosed amendment. 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 Section 51.5(d)(4) that an environmental impact statement, negative declaration or environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

Since the amendment is an administrative action, it does not involve significant new safety information of a type not considered by a previous Commission safety review of the facility. It does not involve a significant increase in the probability or consequences of an accident, does not involve a significant decrease in a safety margin, and therefore

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does not involve a significant hazards consideration. We have also concluded that there is reasonable assurance that the health and safety of the public will not be endangered by this action.

A copy of a related Notice of Issuance is also enclosed.

Sincerely,

ORIGINAL SIGNED BY

Vernon L. Rooney, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:

- 1. Amendment No. 69 to DPR-28
- 2. Notice

cc: w/enclosures
See next page

Distribution:

Docket File	NRC PDR	Local PDR	ORB#2 Rdg	D. Eisenhut
S. Norris	V. Rooney	OELD	OI&E(4)	G. Deegan(4)
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M. Williams				

L. Schneider

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SURNAME	S. Norris	Rooney: pob	Tippolito	WHodges	MWTTams	Novak	R. Bachmann
DATE	11/24/81	11/24/81	11/24/81	11/24/81	11/24/81	11/24/81	11/25/81

*Amendment
A FC Notice*

Mr. Robert L. Smith

cc:

Mr. W. F. Conway
President & Chief Operating Officer
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New England Coalition on Nuclear
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Mr. Raymond H. Puffer
Chairman
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Region I Office
Regional Radiation Representative
JFK Federal Building
Boston, Massachusetts 02203

Public Service Board
State of Vermont
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Montpelier, Vermont 05602

Vermont Yankee Decommissioning
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Resident Inspector
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Vernon, Vermont 05453

Vermont Public Interest Research
Group, Inc.
43 State Street
Montpelier, VT 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. 69
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 5, 1981 as supplemented November 18, 1981 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:

2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 69 are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 27, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 69

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 pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove

43
44
56
64

Insert

43
44
56
64

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TABLE 3.2.2 (CONT'D)

REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION INSTRUMENTATION

<u>Minimum Number of Operable Instrument Channels per Trip System</u>	<u>Trip Function</u>	<u>Trip Setting</u>	<u>Required Action When Minimum Conditions for Operation are not Met (Note 2)</u>
2	Main Steam Line Tunnel Temperature	$\leq 212^{\circ}\text{F}$	Note 3
1	Time Delay (13A-K41) (13A-K42)	≤ 35 minutes	Note 3
2 per set of 4	High Steam Line Space Temperature	$\leq 212^{\circ}\text{F}$	Note 3
1	High Steam Line d/p (Steam Line Break)	≤ 195 inches of water	Note 3
2 (Note 4)	High Reactor Water Level	Same as HPCI	Note 3
4 (Note 5)	Low Steam Supply Pressure	≥ 50 psig	Note 3
1	Bus Power Monitor	--	Note 3
1	Trip System Logic	--	Note 3
1	Time Delay (13A-K7) (13A-K31)	$3 \leq t \leq 7$ secs.	Note 3

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TABLE 3.2.2 NOTES

1. The main steam line low pressure need be available only in the "Run" mode.
2. If the minimum number of operable instrument channels is not available for one trip system, that trip system shall be tripped. If the minimum number of operable instrument channels is not available for both trip systems, the appropriate actions listed below shall be taken:
 - A. Initiate an orderly shutdown and have reactor in the cold shutdown condition in 24 hours.
 - B. Initiate an orderly load reduction and have reactor in "Hot Standby" within 8 hours.
3. Close isolation valves in system and comply with Specification 3.5.
4. One trip system arranged in a two-out-of-two logic.
5. One trip system arranged in a one-out-of-two twice logic.
6. The main steam line high flow is available only in the "Refuel", "Shutdown", and "Startup" modes.
7. This signal also automatically closes the mechanical vacuum pump suction line isolation valves.
8. Channel shared by the Reactor Protection and Primary Containment Isolation Systems.
9. An alarm setting of 1.5 times normal background at rated power shall be established to alert the operator to abnormal radiation levels in the primary coolant.
10. A key lock switch is provided to permit the bypass of this trip function to enable plant startup and shutdown when the condenser vacuum is greater than 12 inches Hg absolute provided that both turbine stop and bypass valves are closed.

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TABLE 4.2.2 (CONT'D)

MINIMUM TEST & CALIBRATION FREQUENCIES

REACTOR CORE ISOLATION COOLING SYSTEM ISOLATION INSTRUMENTATION

<u>Trip Function</u>	<u>Functional Test (8)</u>	<u>Calibration (8)</u>	<u>Instrument Check</u>
Main Steam Line Tunnel Temperature	(Note 1)	each refueling outage	---
High Steam Line Space Temperature	(Note 1)	each refueling outage	---
High Steam Line d/p including time delay relays (Steam Line Break)	(Note 1)	every 3 months	---
High Reactor Water Level	(Note 1)	once/operating cycle	---
Low RCIC Steam Supply Pressure	(Note 1)	every 3 months	---
Bus Power Monitor	(Note 1)	none	once each day
Trip System Logic	every 5 months (Note 2)	every 6 months (Note 3)	---

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3.2 (Continued)

High radiation monitors in the main steam line tunnel have been provided to detect gross fuel failure resulting from a control rod drop accident. This instrumentation causes closure of Group 1 valves, the only valves required to close for this accident. With the established setting of 3 times normal background and main steam line isolation valve closure, fission product release is limited so that 10 CFR 100 limits are not exceeded for the control rod drop accident and 10 CFR 20 limits are not exceeded for gross fuel failure during reactor operations. With an alarm setting of 1.5 times normal background, the operator is alerted to possible gross fuel failure or abnormal fission product releases from failed fuel due to transient reactor operation.

Pressure instrumentation is provided which trips when reactor pressure drops below 850 psig. A trip of this instrumentation results in closure of Group 1 isolation valves. In the refuel, shutdown, and startup modes, this trip function is provided when main steam line flow exceeds 40% of rated capacity. This function is provided primarily to provide protection against a pressure regulator malfunction which would cause the control and/or bypass valves to open. With the trip set at 850 psig, inventory loss is limited so that fuel is not uncovered and peak clad temperatures are much less than 1295°F; thus, there is no release of fission products other than those in the reactor water.

Low condenser vacuum has been added as a trip of the Group 1 isolation valves to prevent release of radioactive gases from the primary coolant through condenser. The set point of 12 inches of mercury absolute was selected to provide sufficient margin to assure retention capability in the condenser when gas flow is stopped and sufficient margin below normal operating values.

The HPCI and/or RCIC high flow, steam supply pressure, and temperature instrumentation is provided to detect a break in the HPCI and/or RCIC piping. Tripping of this instrumentation results in actuation of HPCI and/or RCIC isolation valves; i.e., Group 6 valves. A time delay has been incorporated into the RCIC steam flow trip logic to prevent the system from inadvertently isolating due to pressure spikes which may occur on startup. The trip settings are such that core uncovering is prevented and fission product release is within limits.

The instrumentation which initiates ECCS action is arranged in a dual channel system. As for other vital instrumentation arranged in this fashion, the specification preserves the effectiveness of the system even during periods when maintenance or testing is being performed. Permanently installed circuits and equipment may be used to trip instrument channels. In the non-fail safe systems which require energizing the circuitry, tripping an instrument channel may take the form of providing the required relay function by use of permanently installed circuits. This is accomplished in some cases by closing logic circuits with the aid of the permanently installed test jacks or other circuitry which would be installed for this purpose.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-271VERMONT YANKEE NUCLEAR POWER CORPORATIONNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 69 to Facility Operating License No. DPR-28 issued to Vermont Yankee Nuclear Power Corporation which revises the Technical Specifications for operation of the Vermont Yankee Nuclear Power Station located in Windham County, Vermont. The amendment is effective as of the date of its issuance.

The amendment revises the Technical Specifications to incorporate limiting conditions for operation and surveillance requirements related to HPCI and RCIC system isolation modifications, performed as a result of NUREG-0737.

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 Section 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.

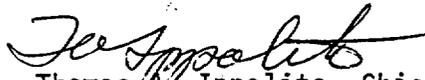
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For further details with respect to this action, see (1) the application for amendment dated October 5, 1981 as supplemented November 18, 1981, (2) Amendment No. 69 to License No. DPR-28, and (3) the Commission's letter to the licensee dated November 27, 1981 . 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 05301. 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 Licensing.

Dated at Bethesda, Maryland, this 27th day of November 1981.

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing