

October 1, 1999

Mr. Robert J. Wanczyk
Acting Director of Operations
Vermont Yankee Nuclear Power Corporation
185 Old Ferry Road
Brattleboro, VT 05301

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF
AMENDMENT RE: HIGH PRESSURE CORE COOLING SYSTEMS
(TAC NO. MA6151)

Dear Mr. Wanczyk:

The Commission has issued the enclosed Amendment No. 177 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated July 20, 1999, as supplemented August 17, 1999.

The amendment revises and clarifies operability and surveillance requirements of high pressure core cooling systems.

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

Sincerely,

Original signed by:

Richard P. Croteau, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures: 1. Amendment No. 177 to
License No. DPR-28
2. Safety Evaluation

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Oct 1, 1999

Mr. Robert J. Wanczyk
Acting Director of Operations
Vermont Yankee Nuclear Power Corporation
185 Old Ferry Road
Brattleboro, VT 05301

SUBJECT: VERMONT YANKEE NUCLEAR POWER PLANT
AMENDMENT RE: HIGH PRESSURE
(TAC NO. MA6151)

REACTOR STATION - ISSUANCE OF
CORE COOLING SYSTEMS

Dear Mr. Wanczyk:

The Commission has issued the enclosed Amendment No. 177 to Facility Operating License on, in response to your application dated July 20, 1999, as supplemented August 17, 1999.

Amendment No. 177 to Facility Operating License on, in response to your application dated July 20, 1999, as supplemented August 17, 1999.

The amendment revises and clarifies operability surveillance requirements of high pressure core cooling systems.

surveillance requirements of high pressure core cooling systems.

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

Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original signed by:

Richard Croteau, Project Manager, Section 2
Project Directorate I
Division Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-271

- Enclosures: 1. Amendment No. 177 to License No. DPR-28
2. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 1, 1999

Mr. Robert J. Wanczyk
Acting Director of Operations
Vermont Yankee Nuclear Power Corporation
185 Old Ferry Road
Brattleboro, VT 05301

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF
AMENDMENT RE: HIGH PRESSURE CORE COOLING SYSTEMS
(TAC NO. MA6151)

Dear Mr. Wanczyk:

The Commission has issued the enclosed Amendment No. 177 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated July 20, 1999, as supplemented August 17, 1999.

The amendment revises and clarifies operability and surveillance requirements of high pressure core cooling systems.

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

Sincerely,

A handwritten signature in black ink, appearing to read "R. Croteau".

Richard P. Croteau, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures: 1. Amendment No. 177 to
License No. DPR-28
2. Safety Evaluation

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Vermont Yankee Nuclear Power Station

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 177
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by the Vermont Yankee Nuclear Power Corporation (the licensee) dated July 20, 1999, as supplemented by letter dated August 17, 1999, 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.

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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 Appendix A, as revised through Amendment No. 177, 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 its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: October 1, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 177

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

| <u>Remove</u> | <u>Insert</u> |
|---------------|---------------|
| 105 | 105 |
| 106 | 106 |
| 107 | 107 |
| 108 | 108 |
| 111a | 111a |
| 112 | 112 |
| 113 | 113 |
| 114 | 114 |
| 120 | 120 |

3.5 LIMITING CONDITION FOR OPERATION

3. From and after the date that the Alternate Cooling Tower System is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding seven days, unless the Alternate Cooling Tower System is made operable, provided that during such seven days all active components of the Station Service Water System and both essential equipment cooling loops are operable.
4. If the requirements of Specification 3.5.D cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a cold shutdown condition within 24 hours.

E. High Pressure Cooling Injection (HPCI) System

1. Except as specified in Specification 3.5.E.2, whenever irradiated fuel is in the reactor vessel and reactor steam pressure is greater than 150 psig:
 - a. The HPCI System shall be operable.
 - b. The condensate storage tank shall contain at least 75,000 gallons of condensate water.

4.5 SURVEILLANCE REQUIREMENT

3. When the Alternate Cooling Tower System is made or found to be inoperable, all active components of the Station Service Water System and both essential equipment cooling loops shall have been or shall be demonstrated to be operable within 24 hours.

E. High Pressure Coolant Injection (HPCI) System

Surveillance of HPCI System shall be performed as follows:

1. Testing
 - a. A simulated automatic actuation test of the HPCI System shall be performed during each refueling outage.
 - b. Operability testing of the pump and valves shall be in accordance with Specification 4.6.E.
 - c. Upon reactor startup, HPCI operability testing shall be performed as required by Specification 4.6.E within 24 hours after exceeding 150 psig reactor steam pressure.

3.5 LIMITING CONDITION FOR OPERATION

2. From and after the date that the HPCI Subsystem 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 Automatic Depressurization Subsystems, the Core Spray Subsystems, the LPCI Subsystems, and the RCIC System are operable.
3. If the requirements of either Specification 3.5.E or Specification 4.5.E.1.c cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to ≤ 150 psig within 24 hours.

F. Automatic Depressurization System

1. Except as specified in Specification 3.5.F.2 below, the entire Automatic Depressurization Relief System shall be operable at any time the reactor steam pressure is above 150 psig and irradiated fuel is in the reactor vessel.
2. From and after the date that one of the four relief valves of the Automatic Depressurization Subsystem are made or found to be inoperable due to malfunction of the electrical portion of the valve when the

4.5 SURVEILLANCE REQUIREMENT

- d. The HPCI System shall deliver at least 4250 gpm at normal reactor operating pressure when recirculating to the Condensate Storage Tank.
2. When the HPCI Subsystem is made or found to be inoperable, the Automatic Depressurization System shall have been or shall be demonstrated to be operable within 24 hours.

NOTE: Automatic Depressurization System operability shall be demonstrated by performing a functional test of the trip system logic.

F. Automatic Depressurization System

Surveillance of the Automatic Depressurization System shall be performed as follows:

1. Operability testing of the relief valves shall be in accordance with Specification 4.6.E.
2. When one relief valve of the Automatic Pressure Relief Subsystem is made or found to be inoperable, the HPCI Subsystem shall have been or shall be demonstrated to be operable within 24 hours.

3.5 LIMITING CONDITION FOR OPERATION

reactor is pressurized above 150 psig with irradiated fuel in the reactor vessel, continued reactor operation is permissible only during the succeeding seven days unless such a valve is sooner made operable, provided that during such seven days both the remaining Automatic Relief System valves and the HPCI System are operable.

3. If the requirements of Specification 3.5.F cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to ≤ 150 psig within 24 hours.

G. Reactor Core Isolation Cooling System (RCIC)

1. Except as specified in Specification 3.5.G.2 below, the RCIC System shall be operable whenever the reactor steam pressure is greater than 150 psig and irradiated fuel is in the reactor vessel.
2. From and after the date that the RCIC System is made or found to be inoperable for any reason, reactor operation is permissible only during the succeeding 7 days unless such system is sooner made operable, provided that during such 7 days all active components of the HPCI System are operable.

4.5 SURVEILLANCE REQUIREMENT

G. Reactor Core Isolation Cooling System (RCIC)

Surveillance of the RCIC System shall be performed as follows:

1. Testing
 - a. A simulated automatic actuation test (testing valve operability) of the RCIC System shall be performed during each refueling outage.
 - b. Operability testing of the pump and valves shall be in accordance with Specification 4.6.E.
 - c. Upon reactor startup, RCIC operability testing shall be performed as required by Specification 4.6.E within 24 hours after exceeding 150 psig reactor steam pressure.

3.5 LIMITING CONDITION FOR OPERATION

3. If the requirements of either Specification 3.5.G or Specification 4.5.G.1.c cannot be met, an orderly shutdown shall be initiated and the reactor pressure shall be reduced to ≤ 150 psig within 24 hours.

H. Minimum Core and Containment Cooling System Availability

1. During any period when one of the emergency diesel generators is inoperable, continued reactor operation is permissible only during the succeeding seven days, provided that all of the LPCI, Core Spray and Containment Cooling Subsystems connecting to the operable diesel generator shall be operable. If this requirement cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.
2. Any combination of inoperable components in the Core and Containment Cooling Systems shall not defeat the capability of the remaining operable components to fulfill the core and containment cooling functions.
3. When irradiated fuel is in the reactor vessel and the reactor is in the cold shutdown condition, all Core and Containment Cooling Subsystems may be inoperable provided no work is permitted which has the potential for draining the reactor vessel.

4.5 SURVEILLANCE REQUIREMENT

- d. The RCIC System shall deliver at least 400 gpm at normal reactor operating pressure when recirculating to the Condensate Storage Tank.

H. Minimum Core and Containment Cooling System Availability

1. When one of the emergency diesel generators is made or found to be inoperable, the remaining diesel generator shall have been or shall be demonstrated to be operable within 24 hours.

BASES: 3.5 (Cont'd)

SSW pump, SSW valve, etc.), then reactor operation is limited to 15 days provided that during this time both the normal and emergency power supplies for the remaining operable equipment are also operable, in addition to demonstrating the operability of all remaining active components of the SSW system which perform a safety function and the alternate cooling tower fan.

If the SSW System would not be capable of performing its safety function for any reason, even without assuming a worst case single active failure, then the reactor must be placed in the cold shutdown condition within 24 hours.

E. High Pressure Coolant Injection System

The High Pressure Coolant Injection System (HPCIs) is provided to adequately cool the core for all pipe breaks smaller than those for which the LPCI or Core Spray Cooling Subsystems can protect the core.

The HPCIs meets this requirement without the use of outside power. For the pipe breaks for which the HPCIs is intended to function the core never uncovers and is continuously cooled; thus, no clad damage occurs and clad temperatures remain near normal throughout the transient. Reference: Subsection 6.5.2.2 of the FSAR.

F. Automatic Depressurization System

The Automatic Depressurization System (ADS) consists of the four safety-relief valves and serves as a backup to the High Pressure Coolant Injection System (HPCI). ADS is designed to provide depressurization of the reactor coolant system during a small break loss-of-coolant accident if HPCI fails or is unable to maintain sufficient reactor water level. Since HPCI operability is required above 150 psig, ADS operability is also required above this pressure.

ADS operation reduces the reactor pressure to within the operating pressure range of the low pressure coolant injection and core spray systems, so that these systems can provide reactor coolant inventory makeup.

G. Reactor Core Isolation Cooling System

The Reactor Core Isolation Cooling System (RCIC) is provided to maintain the water inventory of the reactor vessel in the event of a main steam line isolation and complete loss of outside power without the use of the emergency core cooling systems. The RCIC meets this requirement. Reference Section 14.5.4.4 FSAR. The HPCIS provides an incidental backup to the RCIC system such that in the event the RCIC should be inoperable no loss of function would occur if the HPCIS is operable.

H. Minimum Core and Containment Cooling System Availability

The core cooling and the containment cooling subsystems provide a method of transferring the residual heat following a shutdown or accident to a heat sink. Based on analyses, this specification assures that adequate cooling capacity is available by precluding any combination of inoperable components from fulfilling the core and containment cooling function. It is permissible, based upon the low heat load and other methods available to remove the residual heat, to disable all core and containment cooling systems for maintenance if the reactor is cold and shutdown and there is

BASES: 3.5 (Cont'd)

no potential for draining the reactor vessel. However, if refueling operations are in progress, one coolant injection system, one diesel and a residual of at least 300,000 gallons is required to assure core flooding capability.

I. Maintenance of Filled Discharge Pipe

Full discharge lines are required when the core spray subsystems, HPCI and RCIC are required to be operable to preclude the possibility of damage to the discharge piping due to water hammer action upon a pump start.

BASES:4.5 CORE AND CONTAINMENT COOLANT SYSTEMSA. Core Spray and LPCI

During normal plant operation, manual tests of operable pumps and valves shall be conducted in accordance with Specification 4.6.E to demonstrate operability.

During each refueling shutdown, tests (as summarized below) shall be conducted to demonstrate proper automatic operation and system performance.

Periodic testing as described in Specification 4.6.E will demonstrate that all components which do not operate during normal conditions will operate properly if required.

The automatic actuation test will be performed by simulation of high drywell pressure or low-low water level. The starting of the pump and actuation of valves will be checked. The normal power supply will be used during the test. Testing of the sequencing of the pumps when the diesel generator is the source of power will be checked during the testing of the diesel. Following the automatic actuation test, the flow rate will be checked by recirculation to the suppression chamber. The pump and valve operability checks will be performed by manually starting the pump or activating the valve. For the pumps, the pump motors will be run long enough for them to reach operating temperatures.

B. and C. Containment Spray Cooling Capability and RHR Service Water Systems

The periodic testing requirements specified in Specifications 4.5.B and C will demonstrate that all components will operate properly if required. Since this is a manually actuated system, no automatic actuation test is required. The system will be activated manually and the flow checked by an indicator in the control room.

Once every five years air tests will be performed to assure that the containment spray header nozzles are operable.

D., E., and F. Station Service Water and Alternate Cooling Tower Systems and High Pressure Coolant Injection and Automatic Depressurization System

HPCI system testing demonstrates operational readiness of equipment and detects degradations which may affect reliable operation. Testing is conducted during each reactor startup if maintenance that affects operability was performed on the HPCI system. Periodic testing is also performed in accordance with Specification 4.6.E and the inservice testing program.

Sufficient steam flow must be available prior to HPCI testing to avoid inducing an operational transient when steam is diverted to the HPCI system. Reactor startup is allowed prior to performing the required surveillance testing in order to achieve adequate steam pressure and flow. However, a 24-hour limitation is imposed for performing operability testing once reactor steam pressure exceeds 150 psig. The short duration before full functional testing is performed is considered acceptable.

BASES: 4.5 (Cont'd)

The Automatic Depressurization System is tested during refueling outages to avoid an undesirable blowdown of the Reactor Coolant System.

The HPCI Automatic Actuation Test will be performed by simulation of the accident signal. The test is normally performed in conjunction with the automatic actuation of all Core Standby Cooling Systems.

G. Reactor Core Isolation Cooling System

The frequency and conditions for testing of the RCIC system are the same as for the HPCI system. Testing is conducted in accordance with Specification 4.6.E and provides assurance that the system will function as intended.

H. Minimum Core and Containment Cooling System Availability

Assurance that the diesels will perform their intended function is obtained by the periodic surveillance test and the results obtained from the pump and valve testing performed in accordance with ASME Section XI requirements described in Specification 4.6.E. Whenever a diesel is inoperable, the potential for extended operation with two diesels inoperable is reduced by requiring that the redundant diesel be tested within 24 hours.

I. Maintenance of Filled Discharge Pipe

Observation of water flowing from the discharge line high point vent as discussed in Section I assures that the Core Cooling Subsystems will not experience water hammer damage when any of the pumps are started. Core Spray Subsystems and LPCI Subsystems will also be vented through the discharge line high point vent following a return from an inoperable status to assure that the system is "solid" and ready for operation.

3.6 LIMITING CONDITIONS FOR OPERATION

D. Safety and Relief Valves

1. During reactor power operating conditions and whenever the reactor coolant pressure is greater than 150 psig and temperature greater than 350°F, both safety valves and at least three of the four relief valves shall be operable.
2. If Specification 3.6.D.1 is not met, initiate an orderly shutdown and the reactor coolant pressure shall be below 150 psig and 350°F within 24 hours.

E. Structural Integrity and Operability Testing

The structural integrity and the operability of the safety-related systems and components shall be maintained at the level required by the original acceptance standards throughout the life of the plant.

4.6 SURVEILLANCE REQUIREMENTS

D. Safety and Relief Valves

1. Operability testing of Safety and Relief Valves shall be in accordance with Specification 4.6.E. The lift point of the safety and relief valves shall be set as specified in Specification 2.2.B.

E. Structural Integrity and Operability Testing

1. Inservice inspection of safety-related components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda as required by 10 CFR 50, Section 50.55a(g), except where specific written relief has been granted by the NRC. Inservice inspection of piping, identified in NRC Generic Letter 88-01, shall be performed in accordance with the staff positions on schedule, methods, and personnel and sample expansion included in the Generic Letter, except that sample selection for the scope of Category A welds may be in accordance with ASME Code Case N-560.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 177 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 July 20, 1999, as supplemented by letter dated August 17, 1999, the Vermont Yankee Nuclear Power Corporation (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station (Vermont Yankee) Technical Specifications (TSs). The proposed amendment would revise and clarify the operability and surveillance requirements of the high pressure core cooling systems TSs.

2.0 BACKGROUND

The proposed changes involve the high pressure coolant injection (HPCI) system, reactor core isolation cooling (RCIC) system, and automatic depressurization (AD) system. The HPCI system ensures that the reactor core is adequately cooled in the event of a postulated small break loss-of-coolant accident (LOCA). The RCIC system provides makeup water to the reactor vessel following a reactor vessel isolation when normal sources of feedwater are not available. While not designed or credited as an emergency core cooling system (ECCS), RCIC functions similarly to the HPCI system. Both the HPCI and RCIC systems use a steam-driven turbine-pump to provide water to the reactor vessel. The steam supply for these pumps is the reactor.

The AD system serves as a backup to the HPCI system in the event of a small break LOCA. The AD system can reduce the reactor system pressure to allow the low pressure cooling systems to provide water to cool the core.

Since the HPCI, RCIC, and AD systems are high pressure systems, certain tests on these systems require high pressure steam. The current TSs state that these systems must be operable before exceeding certain pressures; however, all required testing cannot be performed before these pressures are exceeded. The proposed TSs correct this condition.

3.0 EVALUATION

3.1 Clarification of Reactor Steam Pressure

The licensee proposed revising TSs 3.5.E.1, 3.5.F.1, and 3.5.G.1 by changing "reactor pressure" to "reactor steam pressure" to indicate that these TSs that are associated with HPCI, RCIC, and AD systems apply when reactor steam pressure is above the specified values. The

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licensee stated that this was necessary to clarify the applicability since hydrostatic or leakage testing could result in reactor pressure exceeding the specified limits; however, these systems cannot operate without adequate steam flow and steam pressure. The staff agrees with this clarification since these systems cannot operate, and are not necessary without steam. Therefore, the proposed change is acceptable.

In addition, the licensee proposed changing the HPCI TS 3.5.E.1 which currently reads "Except as specified in Specification 3.5.E.2, whenever irradiated fuel is in the reactor vessel and reactor pressure is greater than 150 psig and prior to reactor startup from a cold condition:" by deleting the statement "and prior to reactor startup from a cold condition:." The effect of this change is to remove the requirements that HPCI be operable and the condensate storage tank (CST) shall contain at least 75,000 gallons of condensate water prior to reactor startup. The licensee stated that HPCI is not needed below 150 psig reactor steam pressure. The CST has a reserve volume of 75,000 gallons for HPCI and RCIC purposes only and these two systems are not needed below 150 psig reactor steam pressure. Therefore, the licensee stated that it is not necessary to require these items prior to reactor startup from a cold condition. At and below 150 psig reactor steam pressure the low pressure ECCS are adequate to maintain core cooling. The staff finds the proposed change to be acceptable because requiring these items when reactor steam pressure is above 150 psig is adequate to ensure adequate core cooling during design basis events.

3.2 HPCI and RCIC Testing Requirements

The licensee proposed replacing the HPCI testing requirement of TS 4.5.E.1 with the following:

1. Testing
 - a. A simulated automatic actuation test of the HPCI System shall be performed during each refueling outage.
 - b. Operability testing of the pump and valves shall be in accordance with Specification 4.6.E.
 - c. Upon reactor startup, HPCI operability testing shall be performed as required by Specification 4.6.E within 24 hours after exceeding 150 psig reactor steam pressure.
 - d. The HPCI System shall deliver at least 4250 gpm at normal reactor operating pressure when recirculating to the Condensate Storage Tank.

Similarly, the licensee proposed replacing the RCIC testing requirement of TS 4.5.G.1 with the following:

1. Testing
 - a. A simulated automatic actuation test (testing valve operability) of the RCIC System shall be performed during each refueling outage.

- b. Operability testing of the pump and valves shall be in accordance with Specification 4.6.E.
- c. Upon reactor startup, RCIC operability testing shall be performed as required by Specification 4.6.E within 24 hours after exceeding 150 psig reactor steam pressure.
- d. The RCIC System shall deliver at least 400 gpm at normal reactor operating pressure when recirculating to the Condensate Storage Tank.

Items a, b, and d above are equivalent to the current TS for testing of HPCI and RCIC. These changes are administrative since only the formatting has changed from the current TS. Because these changes do not constitute a change in technical meaning of the TS, proposed changes a, b, and d above for testing HPCI and RCIC are acceptable to the staff.

Proposed TSs 4.5.E.1.c and 4.5.G.1.c for testing of HPCI and RCIC do not exist in the current TS. At and below 150 psig reactor steam pressure the low pressure ECCSs are adequate to maintain core cooling; HPCI and RCIC are not necessary. Adequate steam pressure and flow are not available to perform the specified surveillance testing of HPCI and RCIC when reactor steam pressure is less than 150 psig. The staff considers that reactor startup is allowable prior to performing the surveillance tests because the time allowed to satisfactorily perform the surveillance test is short (24 hours) and the systems should be functional even though the surveillance test has not been completed. The 24-hour limit is consistent with the actions required by TSs to reduce reactor steam pressure below 150 psig if HPCI or RCIC are inoperable and certain other conditions are not met. The staff considers the proposed changes to be acceptable because the testing cannot be performed below 150 psig, the systems should be functional before the surveillance test is performed, and the time to perform the surveillance after exceeding 150 psig is short and consistent with the action statements for system inoperability.

3.3 Additional Allowance in HPCI and RCIC Action Statements

The licensee proposed changing HPCI TS 3.5.E.3 to add the following italicized items:

"If the requirements of either Specification 3.5.E or Specification 4.5.E.1.c cannot be met, an orderly shutdown shall be initiated....."

Similarly, the licensee proposed changing RCIC TS 3.5.G.3 to add the following italicized items:

"If the requirements of either Specification 3.5.G or Specification 4.5.G.1.c cannot be met, an orderly shutdown shall be initiated....."

These changes incorporate into the TS required actions the allowance of 24 hours, after exceeding 150 psig reactor steam pressure, to perform HPCI and RCIC operability testing as discussed in section 3.2 of this evaluation. The staff considers these changes to be acceptable because it is not necessary to perform the actions specified (reactor shutdown and reactor pressure reduction) provided the operability testing of the HPCI and RCIC systems is performed as specified in the TS and discussed in section 3.2 of this evaluation.

3.4 Specification of 150 psig Reactor Pressure for HPCI, RCIC, and AD systems Requirements

The licensee proposed changes to TS sections 3.5.E, 3.5.F, 3.5.G, and 3.6.D to reflect that the appropriate reactor pressure associated with HPCI, RCIC, and AD systems requirements is 150 psig. The current TS was inconsistent and specified pressures of 100 psig, 120 psig, and 150 psig. As previously stated, at and below 150 psig reactor steam pressure the low pressure ECCSs are adequate to maintain core cooling. HPCI, RCIC, and AD systems are not necessary to meet the Vermont Yankee licensing basis or satisfy emergency core cooling needs at and below 150 psig reactor steam pressure. Therefore, the proposed changes are acceptable.

3.5 Basis Changes

The licensee proposed TS bases changes to reflect the TS changes discussed in this evaluation. The staff has reviewed these changes and has no objection to the proposed TS bases changes.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Vermont State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The 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 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in 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 (64 FR 47537). 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.

6.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: October 1, 1999