

July 18, 2000

Mr. Samuel L. Newton
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SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF
AMENDMENT RE: REACTOR COOLANT CHEMISTRY - CONDUCTIVITY AND
CHLORIDES (TAC NO. MA9058)

Dear Mr. Newton:

The Commission has issued the enclosed Amendment No. 190 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated May 23, 2000.

The amendment revises Technical Specifications (TSs) Section 3.6.B/4.6.B, "Reactor Coolant System - Coolant Chemistry", and the associated bases to relocate the specifications on reactor coolant conductivity and chloride concentration from the TSs to the Technical Requirements Manual.

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,

/RA/

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. 190 to
License No. DPR-28
2. Safety Evaluation

cc w/encls: See next page

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VERMONT YANKEE NUCLEAR POWER CORPORATION

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 190

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 May 23, 2000, 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 Appendix A, as revised through Amendment No. 190 , 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 60 days. Implementation of this amendment shall include the relocation of certain technical specification requirements to the appropriate licensee-controlled documents as described in the Licensee's application dated May 23, 2000, and evaluated in the staff's Safety Evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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: July 18, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 190

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 vertical lines in the margin indicating the area of change.

<u>Remove</u>	<u>Insert</u>
118	118
119	119
119a*	---
141	141
142	142

* - Note, existing page 119a is being re-numbered as page 119. No other changes are being made to page 119a.

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 190 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 May 23, 2000, the Vermont Yankee Nuclear Power Corporation (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station (VY) Technical Specifications (TSs). The amendment proposed changes to the technical specification (TS) for reactor coolant chemistry specifications, as follows:

- a. Relocate the reactor coolant conductivity and chloride concentration specifications from TS Sections 3.6.B and 4.6.B to the Technical Requirements Manual (TRM), which is controlled by the 10 CFR 50.59 process.
- b. Revise the TS to incorporate various editorial and administrative changes.
- c. Corresponding TS Bases changes were proposed.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act of 1954, as amended (the Act) requires applicants for nuclear power plant operating licenses to include the TSs as part of the license. The Commission's regulatory requirements related to the content of the TSs are set forth in 10 CFR 50.36. That regulation requires that the TSs include items in eight specific categories. The categories are (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notification; and (8) written reports. However, the regulation does not specify the particular requirements to be included in a plant's TSs.

The Commission amended 10 CFR 50.36 (60 FR 36593, July 19, 1995), and codified four criteria to be used in determining whether a particular matter is required to be included in a limiting condition for operation (LCO), as follows: (1) Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier; (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of, or presents a

challenge to, the integrity of a fission product barrier; or (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety. LCOs and related requirements that fall within or satisfy any of the criteria in the regulation must be retained in the TSs, while those requirements that do not fall within or satisfy these criteria may be relocated to licensee-controlled documents. Vermont Yankee's TRM is one such licensee-controlled document.

3.0 EVALUATION

The licensee has proposed relocating the specifications on reactor coolant conductivity and chloride concentration from the TSs to the TRM, and to make minor editorial and administrative changes to the TSs. The four criteria of 10 CFR 50.36 are addressed below:

- (1) The reactor coolant conductivity and chloride concentration limits as specified in TS 3.6.B and 4.6.B are not used to detect and indicate in the control room a significant abnormal degradation of the reactor coolant pressure boundary. The TS provides limits on particular chemical properties of the primary coolant, and surveillance requirements to monitor these properties to ensure that degradation of the reactor coolant pressure boundary is not exacerbated by poor chemistry condition. However, degradation of the reactor coolant pressure boundary is a long-term process. Other regulations and TSs provide direct means to monitor and correct the degradation of the reactor coolant pressure boundary; for example, in-service inspection and primary coolant leakage limits.
- (2) Chemistry parameters are not used as an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier.
- (3) Reactor coolant conductivity and chloride concentration are not used as part of the primary success path which functions or actuates to mitigate a Design Basis Accident or Transient.
- (4) Operating experiences or probabilistic safety assessments have not shown chemistry parameters to be significant to public health and safety.

The licensee has stated that the reactor coolant conductivity and chloride concentration requirements will be relocated to the TRM, which has been incorporated into the Updated Final Safety Analysis Report (UFSAR) by reference. Therefore, any changes to these requirements will be controlled by the provisions of 10 CFR 50.59. The licensee must obtain Nuclear Regulatory Commission (NRC) review and approval for any unreviewed safety questions.

Vermont Yankee's letter of May 23, 2000, described the licensee's plans to use Noble Metal Chemical Addition (NMCA) to the reactor coolant to ameliorate the potential for crack initiation and to mitigate crack growth in the reactor vessel surfaces, internal components and piping because of intergranular stress corrosion cracking. Coolant conductivity should temporarily increase during the injection of noble metal solutions. This may necessitate changes to the conductivity limits, which will have been relocated to the TRM. Any change to the TRM will be strictly controlled in accordance with the provisions of 10 CFR 50.59. The licensee stated that

the increase in conductivity should only occur for a relatively short period until the reactor water cleanup system reduces conductivity to pre-application levels.

The relocation of the specifications for reactor coolant conductivity and chloride concentration from the TSs to the TRM will continue to provide adequate assurance that concentrations in excess of the limits will be detected and addressed. The proposed TS is consistent with NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4".

In conclusion, the above relocated requirements are not required to be in the TS under 10 CFR 50.36 or §182a of the Atomic Energy Act, and are not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. In addition, the NRC staff finds that sufficient regulatory controls exist under 10 CFR 50.59 to assure continued protection of public health and safety.

Accordingly, the NRC staff has concluded that these requirements may be relocated from the TSs to the licensee's TRM and the proposed changes to TS 3.6.B and 4.6.B are acceptable.

The licensee has also proposed minor editorial and administrative changes. These changes do not change the meaning of the existing TS and are, therefore, acceptable to the NRC staff.

The licensee proposed that the associated TS Bases be relocated to the TRM, and that Bases Section 3/4.6.C be reworded to state "The removal capacity from the drywell floor drain sump and the equipment drain sump is 50 gpm each" rather than "... the equivalent drain sump..." The NRC staff does not object to the proposed 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 comment.

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 (65 FR 37430). 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: July 18, 2000

Vermont Yankee Nuclear Power Station

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