April 29, 1996

Mr. Donald A. Reid
Vice President, Operations
Vermont Yankee Nuclear Power Corporation
RD 5, Box 169
Ferry Road
Brattleboro, Vermont 05301

SUBJECT: INSPECTION REPORT NO. 95-22 (REPLY)

Dear Mr. Reid:

This refers to your November 16, 1995, correspondence in response to our letter, dated October 20, 1995, regarding the Vermont Yankee Nuclear Power Station. This correspondence dealt with three violations of NRC requirements pertaining to inservice testing (IST) of safety-related pumps and valves, including (1) deficiencies in program scope, (2) inadequate procedures for testing check valves, and (3) untimely corrective action for self-identified noncompliance with certain requirements of Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code. The violations were identified during an inspection conducted at Vermont Yankee in September 1995 pursuant to NRC Inspection Manual Procedure 73756, "Inservice Testing of Pumps and Valves."

Your corrective actions involving addition of components to the IST program, performance of a comprehensive IST program scope review, development of a basis document to define test methods and appropriate acceptance criteria, and institution of a formal tracking process for resolving deficiencies adequately address the problems identified in the inspection, and your schedule for implementing the corrective actions is acceptable.

We concur with your root cause assessment that attributed the violations to ineffective coordination, oversight, and auditing of the IST program by the engineering and quality assurance (QA) organizations. We note that your proposed long-term corrective actions include a previously planned reorganization of the engineering department and performance of self-assessments of your QA audit program. We consider the actions you have taken to be acceptable and will review the effectiveness of these actions in a future inspection.

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We appreciate your cooperation.

Sincerely,

Michael Modes for

Eugene M. Kelly, Chief
Systems Engineering Branch
Division of Reactor Safety

Docket No. 50-271

cc:
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VERMONT YANKEE
NUCLEAR POWER CORPORATION

Ferry Road, Brattleboro, VT 05301-7002

REPLY TO
ENGINEERING OFFICE
580 MAIN STREET
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(508) 779-6711

November 16, 1995
BVY 95-124

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

References:
a) License No. DPR-28 (Docket No. 50-271)
b) Letter, USNRC to VYNPC, Vermont Yankee Inservice Test Program Inspection 95-22, dated October 20, 1995

Subject: Reply to a Notice of Violation - Inspection Report No 50-271/95-22

This letter is written in response to Reference b) which documents that certain activities within the Vermont Yankee Inservice Testing Program were not conducted in full compliance with NRC requirements. Three violations, classified as Severity Level IV (referred to as violations A, B and C) were identified as a result of an NRC inspection conducted on September 18 through September 29, 1995. Our reply to the Notice of Violation is provided herein.

VIOLATION A:

A. 10 CFR 50.55a(f) requires that inservice testing (IST) of certain ASME Code Class 1, 2, and 3 pumps and valves shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code (the Code) and applicable addenda, except where specific written relief has been requested by the licensee and granted by the Commission. Section XI of the Code (1989 Edition) incorporates by reference Part 10 (OM-10) of ASME/ANSI OMa-1988.

OM-10, Section 1.1, "Scope," requires IST of active valves required to perform a specific function in shutting down a reactor to the cold shutdown condition, in maintaining the cold shutdown condition, or in mitigating the consequences of an accident, and of the pressure-relief devices for protecting systems or portions of systems which are required to perform these functions.

Contrary to the above, since September 1, 1993, IST of certain active valves and pressure relief devices was not performed in accordance with the requirements of OM-10, Section 1.1, as evidenced by the following examples:

1. Active power-operated high pressure coolant injection system valves V23-42, V23-43 and V23-53, and reactor core isolation cooling system valves V13-32, V13-34 and V13-35 were not included within the scope of the IST program.

2. **High pressure coolant injection system pump suction relief valve SR-23-24, reactor core isolation cooling system pump suction relief valve SR-13-25, and residual heat removal pump suction relief valves SR-10-72A, SR-10-72B, SR-10-72C and SR-10-72D, were not included within the scope of the IST program.**

This is a Severity Level IV violation.

RESPONSE TO VIOLATION A:

Reason for the Violation:

Vermont Yankee does not contest this violation. Vermont Yankee believes that the High Pressure Coolant Injection (HPCI) system pump suction relief valve identified by the NRC as SR-23-24 in this violation, should be SR-23-34.

Vermont Yankee has determined that the reason for not including the subject valves in the IST program was due to an inadequate technical review of the IST Program Plan during a program update in 1993. Vermont Yankee has also determined that an additional cause which contributed to the identified IST program scope deficiencies was that the IST program basis document which was used as an aid in determining program scope during the third interval update, received no formal review and was not maintained up-to-date during subsequent IST program revisions.

Short Term Corrective Actions:

1. Vermont Yankee will perform a focussed and comprehensive review of the IST program scope with a dedicated engneering team to verify compliance with ASME/ANSI OMa-1988 Parts 1, 6 and 10. This action is expected to be completed by 12/31/95.

2. Vermont Yankee will add V-23-42, V-23-43, V-23-53, V-13-34, V-13-35 and V-13-32 (HPCI and RCIC Steam Line Condensate Pot Flow and Level Control Valves) to the IST program and begin testing in accordance with the requirements of the code. This corrrective action was discussed during the inspection and anticipated to be complete by 10/31/95. Upon further review, this work is now expected to be completed by 12/31/95.

3. As a result of the identified IST program scope deficiencies, an operability assessment was performed for the subject systems. This assessment concluded that the plant could continue to operate safely until corrective actions were complete.

Long Term Corrective Actions:

1. Vermont Yankee will upgrade the existing IST program basis document to describe the methodology used for preparing the IST program, to provide a basis for including components in the IST program or excluding components from the IST program and to define the basis for the testing performed, and acceptance criteria applied, for each component. This action is expected to be completed by 10/01/96.

2. Vermont Yankee will add SR-13-25, SR-23-34, SR-10-72A, SR-10-72B, SR-10-72C and SR-10-72D (RCIC, HPCI and RHR Pump Suction Relief Valves) to the IST program and begin testing in accordance with the requirements of the code. This action is expected to be completed prior to the end of the 1996 refueling outage.

VIOLATION B:

B. 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances, and shall be accomplished in accordance with these procedures. Procedures shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

OM-10, Section 4.3.2.2, requires that check valves be full-stroke exercised or examined in a manner which verifies obturator travel to the position required to fulfill its function during plant operation. If full-stroke exercising during power operation is not practical, check valve full-stroke exercising frequency may be limited to cold shutdowns or refueling outages.

Contrary to the above, since September 1, 1993, procedures for IST of minimum flow line check valves in the high pressure coolant injection system (V23-62), reactor core isolation cooling system (V13-29), and the residual heat removal system (V10-19A, V10-19B, V10-19C and V10-19D) did not include appropriate quantitative or qualitative acceptance criteria for determining that the valves were full-stroke exercised during power operation, and the valves were not examined or full-stroke exercised during cold shutdowns or refueling outages.

This is a Severity Level IV violation.

RESPONSE TO VIOLATION B:

Reason for the Violation:

Vermont Yankee does not contest this violation. Vermont Yankee concurs that the acceptance criteria in the surveillance procedures for the identified valves does not conclusively verify a full-stroke exercise in the opening direction for the subject minimum flow check valves. The acceptance criteria for the subject valves in the surveillance procedures verifies only a partial stroke exercise which does not meet the requirement of OM-10 section 4.3.2.2. Vermont Yankee has determined that the cause of this violation is due to inadequate surveillance procedure acceptance criteria for these valves. This information should have been included in the IST program basis document.

Short Term Corrective Action:

1. Vermont Yankee will attempt to measure flow in these lines on a quarterly basis using ultrasonic flow instrumentation to verify full-stroke opening of the subject valves in accordance with the requirements of the code. The verification of the test method is expected to be completed by 12/31/95. In the event that the flow measurements are inconclusive, these valves shall be disassembled and inspected during refueling outages in accordance with the requirements of OM-10 section 4.3.2.4(c).

Long Term Corrective Action:

1. As described in the response to Violation A, Vermont Yankee will upgrade the existing IST program basis document to define the basis for the testing performed and the procedural acceptance criteria applied to each component included in the IST program. This action is expected to be completed by 10/01/96.

VIOLATION C:

C. 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that measures shall be established to assure that conditions adverse to quality are promptly identified and corrected.

Contrary to the above, conditions adverse to quality were not promptly corrected, as evidenced by the following examples:

1. Failure to establish limiting values of full-stroke time for safety-related power-operated valves as required by OM-10, Section 4.2.1.4(a), "Power-Operated Valve Stroke Testing" was identified during an IST program self-assessment in 1994. As of September 29, 1995, corrective actions were not taken to establish limiting values of full-stroke time for at least ten power-operated valves in the IST program.

2. Failure to verify adequately that remote position indicators of 29 solenoid-operated valves accurately indicated obturator position as required by OM-10, Section 4.1, "Valve Position Verification," was identified during an IST program self-assessment in September 1994. As of September 29, 1995, corrective actions were not implemented to adequately verify the accuracy of the remote valve position indicators.

This is a Severity IV violation.

RESPONSE TO VIOLATION C:

Reason for the Violation:

Vermont Yankee does not contest this violation. The conditions adverse to quality described in this violation were not adequately tracked to ensure timely completion. Vermont Yankee has determined that the cause of this violation was due to not using a formal tracking process for resolving IST program deficiencies at the time the deficiencies were discovered.

Short Term Corrective Actions:

1. In early 1995, Vermont Yankee initiated a comprehensive event reporting process which is used to provide management adequate assurance that the appropriate corrective actions are taken in a timely manner to prevent recurrence. The identified events occurred prior to the implementation of this process. The IST program deficiencies identified in this inspection report as well as others identified by Vermont Yankee personnel have been entered into a formal tracking system to ensure closure. This action is complete.

2. Limiting values of full-stroke time for all safety-related power operated valves will be established as required by OM-10 section 4.2.1.4(a). This action is currently underway and is expected to be completed by 12/31/95.

Long Term Corrective Action:

1. Remote position indication of all solenoid valves will be verified as required by OM-10 section 4.1. This observation will be supplemented by other indications such as the use of flow meters or other suitable instrumentation to verify valve obturator position. This action is expected to be completed prior to the end of the 1996 refueling outage.

Additional Actions:

Vermont Yankee believes that these violations indicate the need to assess the organizational structure and management oversight of Vermont Yankee engineering programs. Due to this, the following actions are planned:

1. A re-organization of the Vermont Yankee Engineering Department is currently in progress. As part of this re-organization, Vermont Yankee is assuring that engineering program coordination and oversight are appropriately defined. This action is expected to be completed by 12/31/95.

2. A self assessment of the Quality Assurance Audit and Engineering Self Assessment programs has been completed. These reviews provided recommendations which will be used to improve the effectiveness of future program assessments and audits. Additional self assessments aimed at measuring the effectiveness of the Engineering re-organization and the effectiveness of major engineering programs will be performed during 1996.

It is expected that the Vermont Yankee IST program will be in full compliance with NRC regulations by 10/01/96.

We trust that the enclosed information is satisfactory; however, should you have any questions or desire additional information, please do not hesitate to contact us.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Jay K. Thayer

Jay K. Thayer
Vice President, Engineering

cc: USNRC Regional Administrator, Region 1
USNRC Resident Inspector, VYNPS
USNRC Project Manager, VYNPS