VERMONT YANKEE
NUCLEAR POWER CORPORATION

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FVY 86-43

REPLY TO:
ENGINEERING OFFICE
1671 WORCESTER ROAD
FRAMINGHAM, MASSACHUSETTS 01701
TELEPHONE 617-872-8100

May 22, 1986

U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

Attn: Thomas E. Murley
Regional Administrator

References:
a) License No. DPR-28 (Docket No. 50-271)
b) Letter, USNRC to VYNPC, NVY 86-43, Inspection Report No. 50-271/86-05, dated 3/11/86
c) Letter, USNRC to VYNPC, NVY 86-70, Enforcement Conference for Inspection Report No. 50-271/86-05, dated 4/15/86
d) Letter, USNRC to VYNPC, NVY 86-74, Notice of Violation, dated 4/22/86

Dear Sir:

Subject: Response to Inspection Report 86-05 Notice of Violation

This letter is written in response to your Notice of Violation, dated April 22, 1986 [Reference b)].

VIOLATION

During the performance of a test on February 8, 1986, the licensee identified a violation of NRC requirements involving the inoperability of the Standby Liquid Control System. On February 9-27, 1986, an NRC inspection was conducted to review the circumstances associated with this violation. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1985), the violation is set forth below:

> Technical Specification Limiting Condition for Operation (LCO) 3.4.A requires the Standby Liquid Control System (SLCS) to be operable whenever fuel is in the reactor and the reactor mode switch is not in the shutdown position. Technical Specification LCO 3.4.B permits operation to continue in the existing mode for seven days if a redundant component of the SLCS is inoperable. Unless Technical Specification LCOs 3.4.A or 3.4.B are met, the reactor shall be in the cold shutdown condition within 24 hours.

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Contrary to the above, from July 14, 1984 until October 3, 1985, while fuel was in the reactor and the reactor mode switch was not in the shutdown position, both redundant components of the Standby Liquid Control System were inoperable in that the explosive squib valves would not actuate, if required, to provide a flow path from the Standby Liquid Control System Storage tank to the reactor vessel. The reactor was not placed in the cold shutdown condition within 24 hours.

This is a Severity Level III violation (Supplement I)

Pursuant to the provisions of 10 CFR 2.201, Vermont Yankee Nuclear Power Corporation is hereby required to submit to this office, within 30 days of the date of this Notice, a written statement or explanation, including (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, (3) the corrective steps which have been taken and the results achieved, (4) the corrective steps which will be taken to avoid further violations, and (5) the date when full compliance will be achieved. Consideration may be given to extending the response time for good cause shown.

RESPONSE

1. Admission or Denial of the Alleged Violation

The alleged violation did occur as described above. The violation was reported to the NRC by telephone within four hours of discovery.

2. Reason for the Violation

The violation was the result of a wiring error by the manufacturer (Conax Corporation) of the primer chambers. The wiring error was not realized by Vermont Yankee prior to installing the primer chambers into the explosive squib valves.

3. Corrective Actions Which Have Been Taken and Results Achieved

As a result of the problems found during the SLC system surveillance test, several additional measures have been instituted to preclude repetition of the event. For clarity, these new measures are discussed in the sequence in which they will occur.

When purchasing new charges, we will specifically request a copy of the corresponding drawing. This drawing will be compared against the copy on file at the plant. Specifically, the reviewer will look for any changes that may exist between the new drawings and the file drawings; accuracy; traceability to the purchase order; and traceability to the assemblies to

be used. If this review is satisfactory, three (3) new assemblies, all manufactured from the same batch, will be removed from Stores after confirming they will not exceed their shelf life during the next cycle and tested for pin-to-pin continuity. At this point, in accordance with Vermont Yankee's surveillance procedure requirements, operability of SLC System is demonstrated, in part by demonstrating detonation of both installed trigger assemblies. Subsequently, one of the three new assemblies is installed in the firing circuit and test fired to demonstrate acceptability of the batch. The remaining two new assemblies are then installed in the SLC squib valves to render the system operable for the next operating cycle.

Successful completion of the reviews, checks and surveillances discussed above will result in the new assemblies being installed to the squib valves and the SLC system being delcared operable.

The additional administrative controls discussed above have been incorporated into the appropriate procedures. On May 12, 1986, and prior to declaring the SLC system operable, the procedures were implemented and no discrepancies were identified.

In addition to the previously described corrective actions, Vermont Yankee has identified and taken action on several other related issues that were discovered during our troubleshooting process. The first pertains to the updating of the SLC system wiring diagrams to more accurately illustrate the "as is" configuration. These drawing changes have been made and are presently awaiting final drafting review and approval. Secondly, we reviewed our design control procedures to ensure that they contain sufficient direction and drawings regarding field changes, design revisions and the updating of drawings to reflect the installed condition of equipment. These procedures have been updated over the past few years and, as presently written, provide sufficient controls to ensure that any future changes are properly documented and that discrepancies are brought to management's attention.

As part of the procedural and system review, an evaluation of the SLC system continuity circuit was performed to see if there would be any benefit to revising the circuit so that wiring problems internal to the changes could be identified. This evaluation has been completed with no changes to the existing circuit recommended on the basis that with the enhancements discussed above in place, the current continuity circuit will adequately perform its intended function.

A 10 CFR 21 report was filed with the NRC on March 10, 1986 and the faulty primers have been returned to the vendor.

As discussed in our March 19, 1986 meeting with members of your staff, we will consider making a revision to our Technical Specification pertaining to specific requirements concerning testing/surveillance of the Standby Liquid Control System. If we determine that Technical Specification changes are required, they will be provided in time to support the next demonstration of SLC System operability, which is scheduled for our 1987 refueling outage (Cycle 13).

4. Corrective Steps Which Will Be Taken To Avoid Future Violations

We believe that the corrective steps previously described in Section 3 will avoid any future violations. Additionally, we have reviewed other procedures to identify similar instances where preoperational testing performed prior to declaring a component or system operable may not demonstrate that, in fact, the component or system will operate as required. The only similar instance identified relates to the TIP shear valves, which also are explosive actuated. In this instance, we have revised our surveillance procedures for TIP shear valve operability to contain provisions similar to those noted for the SLC squib valves.

5. Date When Full Compliance Will Be Achieved

Full compliance of all corrective actions was achieved during the current outage while the SLC system was not required to be operable. Further, Vermont Yankee did not rely on the SLC system to be operable until all surveillance procedures were updated and system operability checks were successfully completed. Vermont Yankee is now in full compliance.

We trust that this information is satisfactory; however, should you have any questions or desire additional information, please contact us.

Very truly yours,

VERMONT YANKEE NUCLEAR POWER CORORATION

Waren P. Murphy

Waren P. Murphy
Vice President and
Manager of Operations

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