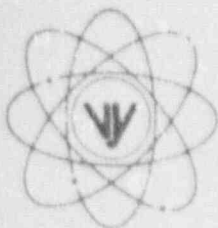


VERMONT YANKEE NUCLEAR POWER CORPORATION



Ferry Road, Brattleboro, VT 05301-7002

BVY 92-004

REPLY TO
ENGINEERING OFFICE
680 MAIN STREET
BOLTON, MA 01740
(508) 779-6711

January 17, 1992

U.S. 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, dated 12/17/91, and Inspection
Report No. 50-271/91-26

Dear Sir:

Subject: Response to NRC Emergency Preparedness Exercise Inspection
Report 91-26

This letter is written to respond to discrepancies identified during the 1991 full participation Emergency Preparedness Exercise at the Vermont Yankee Nuclear Power Station. Although the NRC inspection team concluded that the exercise satisfactorily demonstrated our ability to successfully implement our emergency plan and implementing procedures, Reference b) requested our response to two specific items.

EXERCISE WEAKNESS

"Reactor water level was not promptly restored when it dropped below the prescribed level. This was classified as an exercise weakness."

RESPONSE

As part of the Emergency Preparedness Exercise, the Vermont Yankee training simulator was utilized to model the plant's response to a challenging, severe accident scenario. Coincident with multiple component failures, a reactor scram signal was generated, the control rods were prevented from inserting and both subsystems of Standby Liquid Control (SLC) were prevented from injecting during conditions

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U.S. Nuclear Regulatory Commission
January 17, 1992
Page 2

requiring primary containment isolation. This resulted in plant conditions which required reactor water level reduction in order to minimize the heat addition to the suppression pool.

In addition to the use of our simulator during this exercise, temporary modifications were made to the Emergency Response Facility Information System (ERFIS) to permit the Technical Support Center (TSC) and the Emergency Operations Facility (EOF) to receive information from the training simulator computer.

Expected operator actions in response to the emergency conditions described above are contained in the Emergency Operating Procedures (EOPs). Specifically, OE-3102 required operators to lower reactor water level until one of several conditions occurs, but to prevent water level from decreasing more than -31" below top of active fuel (TAF). However, due to a combination of operator error and procedural weakness, reactor water level was lowered and controlled below this low water level limit (see attached Figure 1). Also during this time frame, the ERFIS display information was lost to the TSC.

Due to the loss of ERFIS (SPDS) display in the TSC, the TSC requested a status update from the Simulator Control Room (SCR) relative to reactor water level and the level control band. Once informed by the SCR that water level was being controlled between -30" and -40", the TSC (i.e., the Operations Supervisor) discussed with the Shift Supervisor the water level control band selected. Based on this discussion, the TSC determined that the Shift Supervisor had misinterpreted the procedural direction. The TSC corrected the Shift Supervisor, and directed that the water level be restored to above -31" and maintained between -31" below TAF, and TAF. In consultation, it was decided that water level should be restored slowly using the CRD pumps to prevent a rapid high power excursion from occurring due to cold water injection. This strategy was immediately implemented as seen on the attached Figure 1.

The procedural weakness referred to above had been previously identified and a correction had been made in a new revision of the EOPs. However, due to the potential impact the assumed operator actions would have on the planned course for the Emergency Preparedness Exercise, the issuance of this new EOP revision was delayed until after the November 6, 1991 exercise. The revised EOPs were subsequently issued November 19, 1991.

U.S. Nuclear Regulatory Commission
January 17, 1992
Page 3

The operating crew involved in the exercise received prompt remedial training with regard to procedural direction involving power/level control. Interviews conducted by the Operations Supervisor of the other operating crews did not identify this to be a generic training deficiency.

Contrary to the statement in Ref. b), it is Vermont Yankee's opinion that, based on observers' logs and interviews of the Simulator Shift Supervisor and Operations Supervisor, the Shift Supervisor was responsive to the direction given him by the TSC. We believe that the corrective actions taken in regard to the procedural violation adequately address the identified weakness.

An area in need of improvement is the communication of information to staff personnel at both the TSC and the SCR concerning important decisions/discussions occurring via the emergency communication links between the Emergency Response Facilities (for example: an announcement should have been made by the Shift Supervisor to the operating crew that a change in the level control band to between -31" and TAF had been made as a result of consultation with the TSC, and including the basis for raising water level slowly). In addition, the lack of maintaining an adequately detailed log at the SCR was identified as an area needing improvement. These improvements will be addressed via Vermont Yankee's normal exercise critique process.

IMPROVEMENT AREA

"The Chemistry Technician assigned as Control Room Communicator was not properly familiar with his duties. This was classified as an area for improvement."

RESPONSE

As noted in the Inspection Report, the Control Room Communicator (CRC) notification of State authorities was timely. However, when required to perform the ENS communication, the CRC called the plant instead of the NRC. This error was due to the misconception by the CRC that for the purpose of this exercise, the ENS communication could be simulated, and that the Shift Supervisor did not provide clear direction regarding what, if any, notifications should be simulated. In the event of an actual emergency, we are confident that he would have utilized the ENS communications link (i.e., red phone). Satisfactory performance of the CRCs has been demonstrated and observed during LOR simulator exercises.

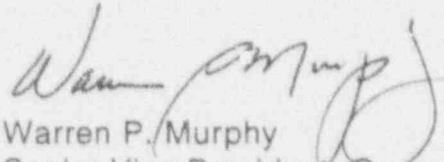
U.S. Nuclear Regulatory Commission
January 17, 1992
Page 4

This incident and sequence of events has been reviewed with other CRCs to prevent a similar occurrence in the future. In addition, all Chemistry Technicians have been provided training relative to the role of the CRC during E-Plan implementation.

We trust the additional information provided above adequately addresses these issues, however, should you have any questions or desire additional information, please do not hesitate to contact us.

Very truly yours,

Vermont Yankee Nuclear Power Corporation

A handwritten signature in dark ink, appearing to read "Warren P. Murphy", is written over the typed name and title.

Warren P. Murphy
Senior Vice President, Operations

cc: USNRC Regional Administrator, Region I
USNRC Resident Inspector, VYNPC
USNRC Project Manager, VYNPC

Figure 1

E-PLAN EXERCISE 11/6/91

NOTES:

- (1) - estimated time
- (2) - level changes due to manual cycling of SRVs to control reactor pressure

