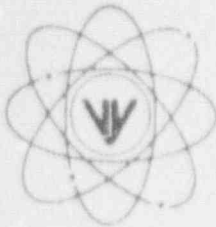


VERMONT YANKEE NUCLEAR POWER CORPORATION



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BVY 91-68

REFLECT
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July 15, 1991

U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attention: Document Control Desk

References:

- (a) License No. DPR-28 (Docket No. 50-271)
- (b) Letter, USNRC to VYNPC, NRC Region 1 Augmented Inspection Team (AIT) Inspection (50-271/91-13) of the Loss of Offsite Power Event of April 23, 1991 at Vermont Yankee
- (c) Letter, VYNPC to USNRC (VYV 91-135), dated 6/6/91, (LER 91-09)
- (d) Letter, VYNPC to USNRC (VYV 91-136), dated 6/6/91, (LER 91-12)

Dear Sir:

Subject: Vermont Yankee Response to Report No. 50-271/91-13, Additional Information Regarding Loss of Normal Power Event of April 23, 1991

As a result of the Augmented Inspection Team (AIT) review conducted at our facility during the period of April 25-29, 1991, we committed to provide you with additional information regarding the important activities included in our long term corrective action program.

During the AIT exit meeting held in King of Prussia on May 14, 1991, we presented our preliminary root cause determination and our immediate and short term corrective actions. We have subsequently completed the root cause evaluation and have developed long term corrective action plans. Two corrective action reports have been prepared which address short and long term corrective actions for the service water and switchyard problems associated with the April 23, 1991 event. Except where specifically noted, our corrective actions are scheduled for completion by December 31, 1991.

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The following important, long term corrective actions were developed through our Corrective Action Process.

1. The service water hydraulic flow model which is used in the design modification process, will be revised to account for corrosion and tuberculation effects by June 30, 1992.
2. The alternatives for providing deep basin deicing and makeup have been identified. An appropriate method will be selected and implemented by November 30, 1991.
3. Our design change and procedure change programs will be revised to emphasize the need to review the FSAR when making operational and design changes to plant equipment. This corrective action will be completed by December 31, 1991.
4. Training will be provided to Operations, Engineering, and other appropriate personnel on the April 23, 1991 event to emphasize that the "minimum" equipment response is not necessarily the "worst case" scenario. Enhancements will be made to the applicable surveillance and operating procedures and additional guidance will be incorporated in the Procedure Writer's Guide. This corrective action will be completed by September 31, 1991.
5. The SW surveillance tests have been reviewed and alternative requirements have been identified which confirm the operability of vital plant equipment during a LOOP and other design basis conditions. The alternative requirements are currently being evaluated to determine the most appropriate parameters and equipment configuration for incorporation in our ongoing SW surveillance testing program. Specific SW surveillance test procedures will be revised by December 31, 1991.
6. The Calibration/Preventive Maintenance (PM) frequencies of Safety Class-3 SW flow and pressure control valves will be reviewed and the necessary changes made by December 31, 1991.
7. Representatives of Vermont Yankee and REMVEC met on June 10, 1991 and discussed the communication problems which occurred during the April 23, 1991 LOOP event. At this meeting, several communication improvements were discussed, including the identification of a single point of contact for switching operations at Vermont Yankee, the establishment of clear priorities for switching, a more thorough understanding of organizational responsibilities and restoration of offsite power. Both parties agreed to continue to meet periodically to ensure that effective communications are maintained.

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8. Vermont Yankee has developed an alternate source of offsite relay technician assistance to improve availability and response time. Switchyard relay technicians are now available from two utility affiliates (NEPSCO and VELCO) in the event of switchyard emergencies.
9. Vermont Yankee will establish the resources and conduct the training necessary to optimize time required for backfeeding the normal station service busses through an auxiliary transformer. These corrective actions will be completed by December 31, 1991.
10. Procurement of new switchyard breaker failure relays (BFR) has been initiated. Installation is scheduled to be completed during the March 1992 Refueling Outage.
11. Administrative controls for switchyard activities, which are important to safety or plant reliability, will require additional management review, including PORC review, as determined by the Maintenance Supervisor. This enhancement is effective immediately and ongoing.
12. Vermont Yankee will evaluate the potential for voltage transients when any station DC bus is operated without its battery and will implement the changes necessary to preclude such transients. This corrective action will be completed by December 31, 1991.
13. Breaker failure relay (BFR) power supply assignments and assignments for common mode failure mechanisms will be reviewed to determine if other improvements to reliability can be made. Additionally, other static protective relays installed at Vermont Yankee will be similarly reviewed to determine if the original manufacturer has recommended design enhancements to increase surge withstand capabilities. These corrective actions will be completed by April 30, 1992.
14. All switchyard PM programs will be reviewed to develop an effective battery charger PM and surveillance test procedure. This corrective action will be completed by December 31, 1991.
15. Removal of Zener diodes from the BFRs and use of incorrect fuses is being evaluated for potential reportability. This review will be completed by December 31, 1991.
16. A review of the FSAR statements regarding availability of offsite power has been completed and has identified the need for revisions to Appendix F, "Conformance to AEC General Design Criteria." The FSAR will be revised during the next scheduled update in June, 1992.

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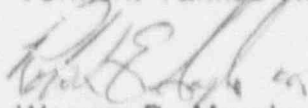
17. An evaluation of the adequacy of maintenance and surveillance programs for non-nuclear safety (NNS) technical specification equipment will be performed to ensure that other switchyard and plant components similar to the battery chargers meet the appropriate reliability requirements. This evaluation will be completed by December 31, 1991.
18. A review of the inventory requirements for the switchyard will be conducted by December 31, 1991.

We are confident that the actions we have taken to date, in addition to the further corrective actions discussed above will prevent recurrence of any similar events.

We trust that you will find this information satisfactory; 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



Warren P. Murphy
Senior Vice President, Operations

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