VERMONT YANKEE
NUCLEAR POWER CORPORATION

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REPLY TO
ENGINEERING OFFICE
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June 7, 1996
BVY 96-75

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Center

References: a) License No. DPR-28 (Docket No. 50-271)
b) Licensee Event Report, LER 96-013, dated May 23, 1996

Subject: **Vermont Yankee Special Report, Fire Protection System Out of Service Greater Than 14 Days**

The purpose of this letter is to report the inoperability of part of the Vermont Yankee Fire Protection System in accordance with Vermont Yankee Technical Specification 3.13.F.

Originally installed and tested as a result of the Fire Hazards Survey recommendation in response to NUREG 75/87, the Vermont Yankee Reactor Building elevation 252' suppression system was modified in 1984 to provide extended coverage above the cable trays and to provide protection for the elevation 232' corner room.

In 1995, Vermont Yankee formed the Fire Protection Improvement Project (FPIP) to review existing fire protection systems and equipment to verify bases and continued compliance with the requirements of 10CFR50, Appendix R. During the review of the Reactor Building 252'/232' suppression system bases, the FPIP Assessment Team determined that the hydraulic calculations for the system may not accurately reflect the pressure loss through the 4 inch feed main located in the Turbine building. This omission changes the amount of water calculated for delivery by each system sprinkler, resulting in the systems failing to meet its design requirements.

As a conservative precaution, the suppression system was declared inoperable on April 24, 1996. At that time the Control Room Shift Engineer was notified, the Technical Specification compensatory measure hourly fire watch was established within one hour, and the NRC resident inspector was advised. This fire watch will be maintained until modifications and confirmatory calculations are made such that the system can be declared operable.

This system is installed at the Reactor Building cable penetration area from the Cable Vault at elevation 252', providing protection for the safety related cable trays in the area where they enter the Reactor Building. Two layers of sprinkler heads are provided, one to suppress a fire at the floor level, the other above the trays to suppress a fire in the trays. The calculation assumes that all 46 of the sprinkler heads are fully open. In an actual fire situation not all of the heads would be expected to open. The existing water supply can meet the minimum design flow per sprinkler if most, but not all of the sprinklers are

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open. Since the postulated fire(s) are not expected to open all sprinkler heads at once, an adequate water supply exists to suppress or retard the growth of a fire.

Modifications are currently being developed for implementation and acceptance testing no later than the end of the 1996 refuel outage in order to reestablish confidence that the system will provide and maintain the design required discharge.

We trust you will find this submittal satisfactory. However, should you desire additional information, please feel free to contact us.

Very Truly Yours,

Vermont Yankee Nuclear Power Corporation

Robert J. Wanczyk
Plant Manager

RJW/dm
cc: USNRC Region 1 Administrator
USNRC Resident Inspector, VYNPS
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