VERMONT YANKEE
NUCLEAR POWER CORPORATION

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BVY 92-009

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

January 31, 1992

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

References: a) License No. DPR-28 (Docket No. 50-271)
b) Letter, USNRC to [All Licensees], NVY 85-250, dated November 15, 1985
c) Letter, VYNPC to USNRC, BVY 89-050, dated June 8, 1989
d) Letter, USNRC to [All Licensees], NVY 89-144, dated June 28, 1989 (Generic Letter 89-10)
e) Letter, VYNPC to USNRC, BVY 89-116, dated December 28, 1989
f) Letter, USNRC to VYNPC, NVY 90-109, dated June 11, 1990
g) Letter, USNRC to [All Licensees], NVY 90-13, dated June 13, 1990 (Supplement 1 to Generic Letter 89-10)
h) Letter, USNRC to [All Licensees], NVY 90-148, dated August 3, 1990 (Supplement 2 to Generic Letter 89-10)
i) Letter, USNRC to [All Licensees], NVY 90-198, dated October 25, 1990 (Supplement 3 to Generic Letter 89-10)
j) Letter, VYNPC to USNRC, BVY 90-122, dated December 14, 1990
k) Letter, VYNPC to USNRC, NVY 91-113, dated March 14, 1991
l) Letter, USNRC to VYNPC, NVY 91-113, dated June 25, 1991
m) Letter, VYNPC to USNRC, BVY 91-71, dated July 30, 1991
n) Letter, USNRC to VYBPC, NVY 91-150, dated July 30, 1991
o) Letter, VYNPC to USNRC, BVY 91-108, dated October 25, 1991

Dear Sir:

Subject: Supplemental Response to Motor-Operated Valve Inspection at Vermont Yankee Nuclear Power Station (NRC Inspection Report No. 50-271/91-80)

During an NRC team inspection conducted at the Vermont Yankee Nuclear Power Station in accordance with NRC Temporary Instruction TI 2515/109, several weaknesses and concerns were identified regarding our proposed GL 89-10 MOV Program. Reference o) provided the Vermont Yankee response to the findings identified in Reference n) by the NRC MOV Inspection Team.

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During a telephone conversation with members of the NRC staff on November 18, concerns were raised regarding the Vermont Yankee response to MOV differential pressure testing. The Vermont Yankee response stated that:

> "Vermont Yankee will review all program valves to determine if any can potentially be dp tested at design basis conditions without any impact on the safe operation of the plant in any mode of operation. Potentially testable valves will be evaluated against the completed EPRI valve performance prediction program to determine any generic program benefits of dp testing. This evaluation will be completed approximately six months after the issuance and review of the EPRI program results."

The NRC Staff expressed concern that delays in testing would not allow for confirmation of the adequacy of the Vermont Yankee switch setting methodology within the GL 89-10 required timeframe. As a result of subsequent telephone conversations, Vermont Yankee agreed to revisit our position regarding MOV differential pressure testing.

Attachment A provides our revised position on MOV differential pressure testing and is intended to replace our earlier response.

We trust that the enclosed information is satisfactory; however, should you have any questions or desire any additional information on this issue, 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

Attachment A

Revised Vermont Yankee Position
Regarding MOV Differential Pressure Testing

As discussed in Reference e), differential pressure testing (dp) was performed at Vermont Yankee to satisfy IEB 85-03 action item "c". This testing was specifically intended to achieve a differential pressure reasonably close to that calculated to be the highest maximum differential pressure the valve could be subjected to. Few valves were available to choose from that met this single requirement consistent with safe operation of the plant. Generic Letter 89-10 added additional requirements to differential pressure, such as flow, temperature, etc. further restricting valve selection.

Due to this limited test population, and concerns with standard industry valve thrust equations, Vermont Yankee has conservatively utilized a commercially available statistical database containing successful industry dp test results. We continue to believe this method meets the intent of the Generic Letter based on the conservative manner in which the maximum differential pressure is calculated, the conservatively applied statistical database thrusts and our previous differential pressure testing experiences. In order to provide additional information to support this position, a review of the feasibility of performing further differential pressure testing at the Vermont Yankee site was performed.

To determine the test population, the following valve selection criteria were developed:

1. Testing must not violate Vermont Yankee Technical Specifications,

2. Testing must not place the plant in a configuration contrary to the plant design basis,

3. Testing must not have the potential of damaging plant equipment or causing personnel injury,

4. Existing plant equipment and configuration should allow for the development of adequate differential pressures and flow rates during power operations or shutdown conditions,

5. Testing should provide a representative sample of the GL 89-10 population, including diversity of valve types, operator sizes, design basis conditions, and information of parallel train valve similarity.

Criteria 1,2 and 3 expand on the GL 89-10 statement that testing MOVs at design-basis conditions is not recommended where such testing is precluded by the existing plant configuration. Criteria 4 and 5 maximize the value of the data obtained in answering outstanding industry issues related to valve stem factors, rate of loading, correlation of static to design basis conditions, and parallel train similarity.

Using the above selection criteria, testing of ten (10) valves was determined to be feasible.

Vermont Yankee will perform differential pressure testing of these ten valves which represent twelve percent of the GL 89-10 population. Consistent with the above positions, the purpose of such testing will be to provide supporting data for the continued use of the statistical database and the existing Vermont Yankee methodology of determining MOV switch settings. The test results will be used to confirm that the Vermont Yankee valve setpoint methodology is in fact, conservative.

Testing of the ten (10) valves will commence upon completion of the required design basis reviews, development of testing procedures, and procurement of equipment. The testing will be performed during both power operations under Technical Specifications LCOs and during plant shutdowns, The testing of the ten (10) valves will be completed prior to June 28, 1994, within the 5 year schedule required by GL 89-10, Item "f".