VERMONT YANKEE
NUCLEAR POWER CORPORATION

185 Old Ferry Road, Brattleboro, VT 05301-7002
(802) 257-5271

December 7, 1998
BVY 98-162

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

References: (a) Vermont Yankee Nuclear Power Station (VYNPS) Technical Specifications Section 1.0, "Definitions", Subsection N, "Primary Containment Integrity", Paragraph 1.

(b) VYNPS Technical Specifications Section 3.7.A, "Primary Containment", Subsections 2, 3 and 8.

Subject: **Vermont Yankee Nuclear Power Station**
License No. DPR-28 (Docket No. 50-271)
Technical Specifications Proposed Change No. 209
Intermittent Opening of Manual Primary Containment Isolation Valves

In accordance with the provisions of 10CFR50.4 and 50.90, Vermont Yankee (VY) requests an amendment to License No. DPR-28 to change the VYNPS Technical Specifications. The proposed change resolves an emergent concern regarding potential operation outside of the Limiting Conditions for Operation (LCO) contained in the current Technical Specifications, and, hence, a potential unreviewed safety question (USQ) with respect to opening of manual primary containment isolation valves during plant operation.

The current Technical Specifications stipulate that manual containment isolation valves shall remain closed unless they are required to be open during accident conditions. This definition, which has existed since issuance of the VYNPS Operating License in 1971, precludes the intermittent opening of manual containment isolation valves necessary to conduct normal plant operations, even though other sections of Technical Specifications and/or plant operating procedures require opening and closing of these valves to perform routine evolutions such as surveillances, sampling and venting/draining of plant systems. The ability to manipulate these valves in support of operational objectives is consistent with industry practice, and was permitted by the definition of Primary Containment Integrity contained in the original VYNPS Final Safety Analysis Report.

By the definition of Primary Containment Integrity presented in Reference (a), a manual primary containment isolation valve opened during non-accident conditions that is required to be closed during accident conditions is considered to render primary containment inoperable while that valve is open. Technical Specification 3.7.A.8 (Reference [b]) requires, for a failure to maintain primary containment integrity, that "an orderly shutdown shall be initiated immediately and the reactor shall be in the cold shutdown condition within 24 hours." The proposed change eliminates the hardship associated with having to undertake an LCO action by immediately initiating a reactor shutdown whenever a manual containment isolation valve is opened for short periods during normal operation in accordance with current operating procedures. These normal operating activities occur on a frequency that would place a significant burden on plant operators and unnecessarily challenge plant systems.

A001

Vermont Yankee proposes to change the wording of the Primary Containment Integrity definition to state that manual primary containment isolation valves which are not required to be opened during plant operation shall remain closed. The purpose of this proposed change is to provide an allowance to open these isolation valves intermittently under administrative controls without entering LCO actions for the following reasons, as augmented by Attachment 1:

(1) Compliance with this Technical Specification LCO places a significant and potentially distracting administrative burden on the plant operators.

(2) The required shutdown activities unnecessarily increase the probability that safety systems will be challenged.

VY believes that exigent circumstances exist, warranting expedited NRC consideration pursuant to 10CFR50.91(a)(6), in that this emergent issue has an immediate adverse impact on day-to-day plant operations, requiring frequent initiation of plant shutdown actions that unnecessarily distract the operating staff and could challenge plant equipment.

Therefore, VY requests approval of this change on an exigent basis since observance of the routine amendment approval process would not provide sufficiently prompt resolution, given the frequency with which the LCO provisions would have to be invoked during the interim required for routine review and approval. This exigency is unavoidable in that VY is required by its Technical Specifications to conduct an ongoing, scheduled surveillance program, perform periodic sampling and operate plant systems within defined parameters that in some cases can only be achieved through manipulation of the valves in question; in all cases, inability to do so without commencing a plant shutdown presents an increased opportunity for equipment failure or operator error that would not otherwise exist.

Attachment 1 to this letter contains supporting information and the basis for the exigent request. Attachment 2 contains the determination of no significant hazards consideration. Attachment 3 provides the marked-up version of the current Technical Specification page. Attachment 4 is the retyped Technical Specification page. Due to formatting changes, the entire text of the "Definitions" section was affected by addition of the changes, and has been included here; the amendment number should only appear on the page containing the current changes.

VY has reviewed the proposed change in accordance with 10CFR50.92 and concludes that it does not involve a significant hazards consideration.

The Plant Operations Review Committee and the Nuclear Safety Audit and Review Committee have reviewed the proposed Technical Specifications change and concur with the above determinations. Pursuant to 10CFR50.91(b)(1), we have provided a copy of this proposed change and the associated no significant hazards consideration to the appropriate State of Vermont representative.

If you have any questions regarding this submittal, please contact Mr. Wayne M. Limberger at (802) 258-4237.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

Gregory A. Maret
Director of Operations

STATE OF VERMONT)
) SS
WINDHAM COUNTY)

Then personally appeared before me, Gregory A. Maret, who, being duly sworn, did state that he is Director of Operations of Vermont Yankee Nuclear Power Corporation, that he is authorized to execute and file the foregoing document in the name and on behalf of Vermont Yankee Nuclear Power Corporation and that the statements therein are true to the best of his knowledge and belief.

Sally A. Sandstrum Notary Public
My Commission Expires February 10, 1999

SALLY A. SANDSTRUM NOTARY PUBLIC WINDHAM COUNTY VERMONT

Attachments
cc: USNRC Region 1 Administrator
USNRC Resident Inspector – VYNPS
USNRC Project Manager – VYNPS
Vermont Department of Public Service

ATTACHMENT 1

Vermont Yankee Nuclear Power Station
Proposed Technical Specification Change No. 209:
Intermittent Opening of Primary
Containment Isolation Valves

Supporting Information and Basis for
Exigent Amendment

December 1998

Vermont Yankee Nuclear Power Station
Proposed Technical Specification Change No. 209:
Intermittent Opening of Manual Primary Containment Isolation Valves
Supporting Information and Basis for Exigent Amendment

SUPPORTING INFORMATION

The Vermont Yankee Nuclear Power Station (VYNPS) Technical Specifications (TS) definition for Primary Containment Integrity is as follows:

"Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:

1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.
2. At least one door in each airlock is closed and sealed.
3. All automatic containment isolation valves are operable or deactivated in the isolated position.
4. All blind flanges and manways are closed."

TS LCO 3.7.A, Primary Containment, subsection 2 states: "Primary containment integrity shall be maintained at all times when the reactor is critical or when the reactor water temperature is above 212° and fuel is in the reactor vessel except while performing low power physics tests at power levels not to exceed 5 Mw(t)."

TS LCO 3.7.A, subsection 3 states: "If a portion of the system that is considered to be an extension of primary containment is to be opened, isolate the affected penetration flow path by use of at least one closed and deactivated automatic valve, closed manual valve or blind flange."

TS LCO 3.7.A, subsection 8 states: "If specification 3.7.A.1 through 3.7.A.7 cannot be met, an orderly shutdown shall be initiated immediately and the reactor shall be in a cold shutdown condition within 24 hours."

Opening of primary containment manual isolation valves is necessary during normal plant operation to perform routine evolutions such as surveillances, sampling, and venting/draining of plant systems. The TS definitions and requirements stated above conclude that opening a manual primary containment isolation valve causes primary containment to be considered inoperable. Furthermore, since opening of any such valve is required to perform an evolution requiring flow, the option of isolating the line provided by TS 3.7.A.3 is not available. This results in immediate initiation of a plant shutdown whenever a manual primary containment isolation valve is opened. Entering this action involves, at a minimum: (1) recording the entry into a shutdown action per plant administrative procedures, (2) increased attention and preparations for plant shutdown by the operators, (3) notification of the NRC upon reducing power for the TS required shutdown, and (4) an increased probability of challenging plant systems during power reduction activities.

Industry precedent supports the ability to manipulate the subject valves in support of plant operation, as observed in the Technical Specifications for Nine Mile Point Unit 1 and Pilgrim Station. In addition, the original Vermont Yankee Final Safety Analysis Report, Section 1.2, included the following partial definition for Primary Containment Integrity:

> "39. Primary containment integrity means that the drywell and absorption chamber are closed and all of the following conditions are satisfied:
>
> a. All nonautomatic primary containment isolation valves which are not required for plant operation are closed."

BASIS FOR EXIGENT AMENDMENT

Vermont Yankee believes that exigent circumstances exist, warranting expedited Nuclear Regulatory Commission consideration pursuant to 10CFR50.91(a)(6). This issue was raised as a concern by a site NRC resident inspector. Subsequent evaluation by VY personnel determined that the appropriate actions to take when opening a manual primary containment isolation valve for routine evolutions during normal plant operation are to declare the primary containment inoperable and to initiate plant shutdown immediately as required by Technical Specifications. The increased sensitivity to the Technical Specification definition in this area results in a significant administrative burden being placed on the plant operators. These administrative requirements have the potential to distract the operators unnecessarily. Should the shutdown preparations lead to power reduction, 1) the operators' burden is further increased, 2) the probability of challenges to safety systems is increased, 3) an opportunity for equipment failure or operator error is introduced that would not otherwise exist, and 4) additional site and NRC resources are involved as reporting is required per 10CFR50.72. The significance of these concerns is magnified by the frequency of occurrence of these normal operating activities that require manual primary containment isolation valves to be intermittently opened.

ATTACHMENT 2

Vermont Yankee Nuclear Power Station
Proposed Technical Specification Change No. 209:
Intermittent Opening of Primary
Containment Isolation Valves

Determination of No Significant
Hazards Consideration

December 1998

Vermont Yankee Nuclear Power Station
Proposed Technical Specification Change No. 209:
Intermittent Opening of Manual Primary Containment Isolation Valves
Determination of No Significant Hazards Consideration

Vermont Yankee (VY) proposes to change the subject Technical Specifications to eliminate the hardship associated with the need to enter LCO conditions in order to intermittently open manual primary containment isolation valves for the purposes of performing routine evolutions such as surveillances, sampling and venting/draining of plant systems. These changes are consistent with industry practice.

The proposed change is as follow:

> Technical Specification 1.0, Subsection N, the definition of Primary Containment Integrity, states, in part: "All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed."
>
> The words "accident conditions" will be changed to read "plant operation".

In accordance with the criteria set forth in 10 CFR 50.92, VY has evaluated this proposed Technical Specification change and has determined that it does not involve a significant hazards consideration based on the following:

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   This change allows an isolated primary containment penetration to be opened as necessary to meet operational objectives defined in applicable Technical Specifications and/or approved plant procedures. Primary containment isolation is not considered an initiator of any previously analyzed accident. Therefore, these changes do not significantly increase the probability of such accidents. Although primary containment isolation is considered in the mitigation of the consequences of an accident, administrative controls provide acceptable compensatory actions to assure the penetration is isolated in the event of an accident. Therefore, the consequences of a previously analyzed event that may occur during the opening of the isolated line are not significantly increased.

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   This change allows temporary breaches of the primary containment boundary under strict administrative control, for the purposes of conducting normal operational evolutions required by other Technical Specifications and/or approved plant procedures. In the event containment isolation is required while any flow path is open under administrative control, provisions exist to isolate that flow path with a single active-failure-proof boundary as required by the primary containment Technical Specification Limiting Conditions for Operation. Therefore, this change does not create the possibility of a new or different kind of accident from any previously analyzed accident.

3. Does this change involve a significant reduction in a margin of safety?

   The margin of safety considered in determining the required compensatory action is also based on providing the single active-failure-proof boundary. Opening of primary containment penetrations on an intermittent basis is required for performance of routine evolutions as noted previously. Plant procedures administratively control the opening and closing of the affected valves.

When a manual valve is opened under these conditions, a dedicated and suitably instructed individual is stationed in the immediate vicinity of the valve. In the event primary containment must be rapidly reinstated, this individual will close the valve in an expeditious manner. Once closed, this flow path will meet the same single active-failure-proof criteria as other containment penetrations. Since the flow path will be closed promptly on a containment isolation demand, the valve will be open only slightly longer than if it had been closed by an automatic actuator. Therefore, these changes do not involve a significant reduction in a margin of safety.

Summary of No Significant Hazards Consideration

On the basis of the above, VY has determined that operation of the facility in accordance with the proposed change does not involve a significant hazards consideration as defined in 10CFR50.92(c), in that it:

(1) does not involve a significant increase in the probability or consequences of an accident previously evaluated;

(2) does not create the possibility of a new or different kind of accident from any accident previously evaluated; and

(3) does not involve a significant reduction in a margin of safety.

ATTACHMENT 3

Vermont Yankee Nuclear Power Station
Proposed Technical Specification Change No. 209:
Intermittent Opening of Primary
Containment Isolation Valves

Marked-up Version of the Current
Technical Specifications and Bases

December 1998