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EM

Christopher J. Wamser
Site Vice President

BVY 12-030

May 8, 2012

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

SUBJECT: Technical Specifications Proposed Change No. 298
Response to Request for Additional Information
Vermont Yankee Nuclear Power Station
Docket No. 50-271
License No. DPR-28

2012 MAY 10 A 9:11
STATE OF VERMONT
DEPT OF PUBLIC SERVICE
MONTPELIER, VT
05520-2601

REFERENCE: 1. Letter, Entergy to USNRC, "Technical Specifications Proposed Change No. 298 Rod Worth Minimizer Bypass Allowance," BVY 12-006, dated February 1, 2012

Dear Sir or Madam:

In Reference 1, Entergy Nuclear Operations, Inc. (Entergy) proposed to amend Operating License DPR-28 for Vermont Yankee Nuclear Power Station (VY) to revise VY Technical Specification (TS) 3.3.B.3 allowances for bypassing the Rod Worth Minimizer consistent with the allowances recommended in the Standard Technical Specifications (NUREG-1433, Revision 3). During the review, NRC staff requested additional information in order to process the request. Attachment 1 provides the requested information. Attachment 2 provides revised TS and TS Bases pages to reflect the required changes.

This supplement to the original license amendment request does not change the scope or conclusions of the original application, nor does it change Entergy's determination of no significant hazards consideration

There are no new regulatory commitments made in this letter.

If you have any questions on this transmittal, please contact Mr. Robert Wanczyk at 802-451-3166.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 8, 2012.

Sincerely,

A handwritten signature in black ink, appearing to be 'CJW/JMD', with a long horizontal line extending to the right.

[CJW/JMD]

Attachments

1. Response to Request for Additional Information
2. Retyped Technical Specifications and Bases Pages

cc: Mr. William M. Dean
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406-1415

Mr. Richard V. Guzman
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
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Washington, DC 20555

USNRC Resident Inspector
Entergy Nuclear Vermont Yankee, LLC
320 Governor Hunt Rd
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Ms. Elizabeth Miller, Commissioner
VT Department of Public Service
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Attachment 1
Vermont Yankee Nuclear Power Station
Proposed Change 298
Response to Request for Additional Information

Request for Additional Information

Entergy Nuclear Operations, Inc. proposed to revise TS 3.3.B.3 allowances for bypassing the RWM consistent with the allowances provided in NUREG-1433, volume 1, revision 3. However, the proposed required action 2.1.b in TS 3.3.B.3 is not consistent with NUREG-1433, volume 1, revision 3 and is also non-conservative.

Provide a technical evaluation that addresses the non-conservative phrase, "in the last 12 months" in proposed required action 2.1.b or provide technical specifications that are consistent with NUREG-1433, volume 1, revision 3.

Response:

Attachment 2 provides revised TS and TS bases pages updated to use the wording from NUREG-1433, volume 1, revision 3.

Attachment 2
Vermont Yankee Nuclear Power Station
Proposed Change 298
Retyped Technical Specifications and Bases Pages

3.3 LIMITING CONDITIONS FOR OPERATION

2. The Control Rod Drive Housing Support System shall be in place when the Reactor Coolant System is pressurized above atmospheric pressure with fuel in the reactor vessel unless all operable control rods are fully inserted.
3. While the reactor is below 17% power, the Rod Worth Minimizer (RWM) shall be operable while moving control rods except that:
 - (a) If the RWM is inoperable during a reactor startup.
 1. Immediately suspend control rod movement except by scram.

OR

 - 2.1.a Immediately verify ≥ 12 rods withdrawn,

OR

 - 2.1.b Immediately verify by administrative measures that startup with the RWM inoperable has not been performed in the last calendar year.

AND

 - 2.2 During control rod movement, verify movement of control rods is in compliance with banked position withdrawal sequence (BPWS) by a second licensed operator or other qualified member of the technical staff.

4.3 SURVEILLANCE REQUIREMENTS

2. The Control Rod Drive Housing Support System shall be inspected after reassembly.
3. Prior to control rod withdrawal for startup the Rod Worth Minimizer (RWM) shall be verified as operable by performing the following:
 - (a) Verify that the control rod withdrawal sequence for the Rod Worth Minimizer computer is correct.
 - (b) The Rod Worth Minimizer diagnostic test shall be performed.

BASES: 3.3 & 4.3 (Cont'd)

2. The control rod housing support restricts the outward movement of a control rod to less than 3 inches in the extremely remote event of a housing failure. The amount of reactivity which could be added by this small amount of rod withdrawal, which is less than a normal single withdrawal increment, will not contribute to any damage of the primary coolant system. The design basis is given in Subsection 3.5.2 of the FSAR, and the design evaluation is given in Subsection 3.5.4. This support is not required if the reactor coolant system is at atmospheric pressure since there would then be no driving force to rapidly eject a drive housing.
3. In the course of performing normal startup and shutdown procedures, a pre-specified sequence for the withdrawal or insertion of control rods is followed. Control rod dropout accidents which might lead to significant core damage, cannot occur if this sequence of rod withdrawals or insertions is followed. The Rod Worth Minimizer (RWM) restricts withdrawals and insertions to those listed in the pre-specified sequence and provides an additional check that the reactor operator is following prescribed sequence. With the RWM inoperable during a reactor startup or shutdown, the operator is still capable of enforcing the prescribed control rod sequence. However, the defense in depth is reduced since a single operator error can result in violating the control rod sequence. Therefore, control rod movement must be immediately suspended except by scram. Alternatively, startup may continue if at least 12 control rods have already been withdrawn or a reactor startup with an inoperable RWM was not performed in the last calendar year. Once these conditions have been verified by either control room indication or control room logs, the RWM function can be performed manually following a second check of compliance with the prescribed rod sequence by a second licensed operator or other qualified member of the technical staff. The RWM may be bypassed under these conditions to allow continued operation or shutdown. Continuing the startup increases core power, reduces the rod worth and reduces the consequences of dropping any rod. Withdrawal of rods for testing is permitted with the RWM inoperable, if the reactor is subcritical and all other rods are fully inserted. Above 17% power, the RWM is not needed since even with a single error an operator cannot withdraw a rod with sufficient worth, which if dropped, would result in anything but minor consequences.
4. Refer to the "General Electric Standard Application for Reactor Fuel (GESTAR II)," NEDE-24011-P-A, (the latest NRC-approved version will be listed in the COLR).
5. The Source Range Monitor (SRM) system provides a scram function in noncoincident configuration. It does provide the operator with a visual indication of neutron level. The consequences of reactivity accidents are a function of the initial neutron flux. The requirement of at least three counts per second assures that any transient, should it occur, begins at or above the initial value of 10^{-8} of rated power used in the analyses of transients from cold conditions. One operable SRM channel is adequate to monitor the approach to criticality, therefore, two operable SRM's are specified for added conservatism.