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September 22, 2008
BVY 08-059

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: **Vermont Yankee Nuclear Power Station**
Docket No. 50-271, License No. DPR-28
Technical Specifications Proposed Change No. 280
Relocation of Reactor Building Crane Technical Specifications

Dear Sir or Madam,

In accordance with 10CFR50.90, Entergy Nuclear Operations, Inc. (ENO) is proposing to amend Operating License DPR-28 for Vermont Yankee Nuclear Power Station (VY). The proposed change would relocate the contents of the VY Technical Specifications (TS) relating to the Reactor Building crane to the VY Technical Requirements Manual.

ENO has reviewed the proposed amendment in accordance with 10CFR50.92 and concludes it does not involve a significant hazards consideration. In accordance with 10CFR50.91, a copy of this application, with attachments, was provided to the State of Vermont, Department of Public Service.

Attachment 1 contains an evaluation of the proposed TS changes. Attachment 2 provides the marked-up version of the appropriate pages of the current TS. Attachment 3 contains the retyped TS pages.

ENO requests review and approval of the proposed license amendment by September 1, 2009 and a 60 day implementation period from the date of the amendment approval.

There are no new regulatory commitments made in this letter.

If you have any questions on this transmittal, please contact Mr. David Mannai at (802) 451-3304.

A001
NRR

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 22, 2008.

Sincerely,

Ted A. Sullivan
Site Vice President
Vermont Yankee Nuclear Power Station

Attachments
1. Description and Evaluation of the Proposed Changes
2. Markup of the Current Technical Specifications
3. Retyped Technical Specifications

cc: Mr. Samuel J. Collins
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Attachment 1

Vermont Yankee Nuclear Power Station

Proposed Change 280

Description and Evaluation of Proposed Changes

1. Description of Proposed Change

The proposed license amendment relocates the sections of the VY TS relating to the Reactor Building crane to the VY Technical Requirements Manual (TRM).

Specifically, the changes proposed are:

1) Pages 235 and 236, TS 3/4.12.G: This TS is being relocated to the TRM.
2) Page 239, Bases for TS 3/4.12.G: This Bases is being relocated to the TRM.

2. Purpose of Proposed change

The Vermont Yankee Nuclear Power Station (VY) Technical Specification (TS) contains sections governing operation of the Reactor Building crane. The proposed change is to relocate the sections of the TS relating to the Reactor Building crane to the VY Technical Requirements Manual (TRM). The TRM is maintained in accordance with Vermont Yankee administrative processes and changes to the TRM are evaluated per the requirements of 10CFR50.59.

The Reactor Building crane is a 110 ton capacity overhead bridge crane that provides services for the reactor and refueling area. The crane handles new and spent fuel, incore detectors, a large segmented concrete plug in the refueling level floor, the drywell head, the reactor vessel head, the segmented pool plugs, and the spent fuel shipping cask.

The Reactor Building crane sections of the TS are being relocated to the TRM because the Reactor Building crane is not included in the Standard Technical Specifications (STS), NUREG-1433, nor does it meet the following criteria of 10CFR50.36(d)(2)(ii) for requiring a limiting condition of operation (LCO):

Criterion 1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

The Reactor Building crane provides lifting services for the reactor and refueling area. The Reactor Building crane is not used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

Criterion 2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

The Reactor Building crane operability and surveillance requirements do not affect a process variable, design feature, or operating restriction that is an initial condition of design basis accidents or transients described in UFSAR chapter 14. The crane operability and surveillance requirements are related to handling and movement of a spent fuel cask and ensure that the Reactor Building crane is inspected and tested prior to use. Additionally, the TS requires mechanical rail stops to be installed to prohibit movement of the cask over irradiated fuel. This is consistent with commitments made in response to NUREG 0612 to ensure that all cask handling operations are bounded by the design basis accidents and transients described in the VY UFSAR. This proposed change relocates the current requirements from the TS to the TRM and does not propose a change to any of the requirements.

Criterion 3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

The Reactor Building crane is not a part of the primary success path and does not function or actuate to mitigate design basis accidents or transients described in the VY UFSAR Chapter 14. The Reactor Building crane is used for lifting of objects within the Reactor Building. The Reactor Building crane satisfies VY commitments made in response to NUREG 0612 which include redundancy requirements and use of safe load path evaluations. The Reactor Building crane is not the initiator of any accident or transient described in VY UFSAR chapter 14 and is not used to mitigate the consequences of any design basis accident or transient. This proposed change relocates the crane operability requirements from the TS to the TRM and does not propose a change to any of the requirements.

Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

The Reactor Building crane is not modeled in the VY probabilistic risk assessment due to its low significance to public health and safety.

3. Safety Implications of the Proposed Change

The Reactor Building crane is a 110 ton capacity overhead bridge crane that provides services for the reactor and refueling area. The crane handles new and spent fuel, in-core detectors, a large segmented concrete plug in the refueling level floor, the drywell head, the reactor vessel head, the segmented pool plugs, and the spent fuel shipping cask.

Following implementation of the proposed change, the VY TRM will contain all of the requirements and information related to the Reactor Building crane that had previously been contained in the VY TS. The TRM is maintained in accordance with Vermont Yankee administrative processes and changes to the TRM are evaluated per the requirements of 10CFR50.59. These controls are adequate to ensure the Reactor Building crane is operable and capable of performing its intended functions.

The proposed amendment does not change any existing requirements and does not adversely affect existing plant safety margins or the reliability of the equipment assumed to operate in the safety analysis. As such, there are no changes being made to safety analysis assumptions, safety limits or safety system settings that would adversely affect plant safety as a result of the proposed amendment.

4. Evaluation of Significant Hazards Consideration

The proposed license amendment relocates the sections of the Vermont Yankee Nuclear Power Station Technical Specifications relating to the operability of the Reactor Building crane to the Vermont Yankee Nuclear Power Station Technical Requirements Manual.

Pursuant to 10CFR50.92, Entergy Nuclear Operations, Inc. (ENO) has reviewed the proposed change and concludes that the change does not involve a significant hazards consideration since the proposed change satisfies the criteria in 10CFR50.92(c). These criteria require that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. The discussion below addresses each of these criteria and demonstrates that the proposed amendment does not constitute a significant hazard.

The proposed change does not involve a significant hazards consideration because:

1) The operation of Vermont Yankee Nuclear Power Station (VY) in accordance with the proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

   This proposed change relocates the VY TS and associated Bases related to the Reactor Building crane to the VY TRM. The proposed amendment does not impact the operability of any structure, system or component that affects the probability of an accident or that supports mitigation of an accident previously evaluated. The proposed amendment does not affect reactor operations or accident analysis and has no radiological consequences. The operability requirements for accident mitigation systems remain consistent with the licensing and design basis. Therefore, the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) The operation of Vermont Yankee Nuclear Power Station (VY) in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

   This proposed change relocates the VY TS and associated Bases related to the Reactor Building crane to the VY TRM. The proposed amendment does not change the design or function of any component or system. No new modes of failure or initiating events are being introduced. Therefore, operation of VY in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) The operation of Vermont Yankee Nuclear Power Station (VY) in accordance with the proposed amendment will not involve a significant reduction in a margin of safety.

   This proposed change relocates the VY TS and associated Bases related to the Reactor Building crane to the VY TRM. The proposed amendment does not change the design or function of any component or system. The proposed amendment does not involve any safety limits, safety settings or safety margins. The ability of the Reactor Building crane to perform its intended functions will continue to be required in accordance with the VY TRM.

Since the proposed controls are adequate to ensure the operability of the Reactor Building crane, there will still be high assurance that the components are operable and capable of performing their respective functions. Therefore, operation of VY in accordance with the proposed amendment will not involve a significant reduction in the margin to safety.

5. Environmental Consideration

This amendment request meets the eligibility criteria for categorical exclusion from environmental review set forth in 10CFR51.22(c)(9) as follows:

(i) The amendment involves no significant hazards determination.

As described in Section IV of this evaluation, the proposed change involves no significant hazards consideration.

(ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

The proposed amendment does not involve any physical alterations to the plant configuration. The proposed change does not affect the operation of the Reactor Building crane in a way that could change the types or significantly increase the amounts of any effluent that may be released offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed amendment does not involve any physical alterations of the plant configuration. The proposed change does not affect the safety function of the Reactor Building crane. The relocation of the Reactor Building crane TS and associated Bases to the TRM will not increase individual or cumulative occupational radiation exposure.

Based on the above, VY concludes that the proposed change meets the eligibility criteria for categorical exclusion as set forth in 10CFR51.22(c)(9). Pursuant to 10CFR51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

6. References

a) NUREG-1433, Revision 3, "Standard Technical Specifications General Electric Plants, BWR/4," dated March 2004.

<u>Attachment 2</u>

Vermont Yankee Nuclear Power Station

Proposed Change 280

Markup of the Current Technical Specifications and Bases Pages

3.12 LIMITING CONDITIONS FOR OPERATION

F. Fuel Movement

The reactor shall be shut down for a minimum of 24 hours prior to fuel movement within the reactor core.

G. DELETED

~~Crane Operability~~

~~1. The Reactor Building crane shall be operable when the crane is used for handling of a spent fuel cask.~~

4.12 SURVEILLANCE REQUIREMENTS

F. Fuel Movement

Prior to any fuel handling or movement in the reactor core, the licensed operator shall verify that the reactor has been shut down for a minimum of 24 hours.

G. DELETED

~~Crane Operability~~

~~1. a. Within one month prior to spent fuel cask handling operations, an inspection of crane cables, sheaves, hook, yoke, and cask lifting trunnions will be made in accordance with the applicable ANSI Standard. A crane rope shall be replaced if any of the replacement criteria are met.~~

~~b. No-load mechanical and electrical tests will be conducted prior to lifting the empty cask from its transport vehicle to verify proper operation of crane controls, brakes and lifting speeds. A functional test of the crane brakes will be conducted each time an empty cask is lifted clear of its transport vehicle.~~

3.12 LIMITING CONDITIONS FOR OPERATION

~~2. Crane Travel~~

~~Spent fuel casks shall be prohibited from travel over irradiated fuel assemblies.~~

H. Spent Fuel Pool Water Temperature

Whenever irradiated fuel is stored in the spent fuel pool, the pool water temperature shall be maintained below 150°F.

4.12 SURVEILLANCE REQUIREMENTS

~~2. Crane Travel~~

~~Crane travel limiting mechanical stops shall be installed on the crane trolley rails prior to cask handling operations to prohibit cask travel over irradiated fuel assemblies.~~

H. Spent Fuel Pool Water Temperature

Whenever irradiated fuel is in the spent fuel pool, the pool water temperature shall be recorded daily. If the pool water temperature reaches 150°F, all refueling operations tending to raise the pool water temperature shall cease and measures taken immediately to reduce the pool water temperature below 150°F.

BASES: 3.12 & 4.12 (Cont'd)

E. The intent of this specification is to permit the unloading of a portion of the reactor core for such purposes as inservice inspection requirements, examination of the core support plate, control rod, control rod drive maintenance, etc. This specification provides assurance that inadvertent criticality does not occur during such operation.

This operation is performed with the mode switch in the "Refuel" position to provide the refueling interlocks normally available during refueling as explained in the Bases for Specification 3.12.A. In order to withdraw more than one control rod, it is necessary to bypass the refueling interlock on each withdrawn control rod which prevents more than one control rod from being withdrawn at a time. The requirement that the fuel assemblies in the cell controlled by the control rod be removed from the reactor core before the interlock can be bypassed ensures that withdrawal of another control rod does not result in inadvertent criticality. Each control rod essentially provides reactivity control for the fuel assemblies in the cell associated with that control rod. Thus, removal of an entire cell (fuel assemblies plus control rod) results in a lower reactivity potential of the core.

One method available for unloading or reloading the core is the spiral unload/reload. Spiral reloading and unloading encompass reloading or unloading a cell on the edge of a continuous fueled region (the cell can be reloaded or unloaded in any sequence.) The pattern begins (for reloading) and ends (for unloading) around a single SRM. The spiral reloading pattern is the reverse of the unloading pattern, with the exception that two diagonally adjacent bundles, which have previously accumulated exposure in-core, and placed next to each of the four SRMs before the actual spiral reloading begins. The spiral reload can be to either the original configuration or a different configuration.

Additionally, at least 50% of the fuel assemblies to be reloaded into the core shall have previously accumulated a minimum exposure of 1000 Mwd/T to ensure the presence of a minimum neutron flux as described in Bases Section 3.12.B.

F. The intent of this specification is to assure that the reactor core has been shut down for at least 24 hours following power operation and prior to fuel handling or movement. The safety analysis for the postulated refueling accident assumed that the reactor had been shut down for 24 hours for fission product decay prior to any fuel handling which could result in dropping of a fuel assembly.

DELETED

G. ~~The operability requirements of the reactor building crane ensures that the redundant features of the crane have been adequately inspected just prior to using it for handling of a spent fuel cask. The redundant hoist system ensures that a load will not be dropped for any postulated credible single component failures. Crane inspections and crane rope replacement criteria shall meet the requirements of ANSI Standard B30.2-1976. Details of the design of the redundant features of the crane and specific testing requirements for the crane are delineated in the Vermont Yankee document entitled "Reactor Building Crane Modification" (December 1975).~~

H. The Spent Fuel Pool Cooling System is designed to maintain the pool water temperature below 125°F during normal refueling operations. If the reactor core is completely discharged, the temperature of the pool water may increase to greater than 125°F. The RHR System supplemental fuel pool cooling may be used under these conditions to maintain the pool water temperature less than 150°F.

Attachment 3

Vermont Yankee Nuclear Power Station

Proposed Change 280

Retyped Technical Specification and Bases Pages

3.12 LIMITING CONDITIONS FOR OPERATION

F. Fuel Movement

The reactor shall be shut down for a minimum of 24 hours prior to fuel movement within the reactor core.

G. Deleted

4.12 SURVEILLANCE REQUIREMENTS

F. Fuel Movement

Prior to any fuel handling or movement in the reactor core, the licensed operator shall verify that the reactor has been shut down for a minimum of 24 hours.

G. Deleted

3.12 LIMITING CONDITIONS FOR OPERATION

H. Spent Fuel Pool Water Temperature

Whenever irradiated fuel is stored in the spent fuel pool, the pool water temperature shall be maintained below 150°F.

4.12 SURVEILLANCE REQUIREMENTS

H. Spent Fuel Pool Water Temperature

Whenever irradiated fuel is in the spent fuel pool, the pool water temperature shall be recorded daily. If the pool water temperature reaches 150°F, all refueling operations tending to raise the pool water temperature shall cease and measures taken immediately to reduce the pool water temperature below 150°F.

BASES: 3.12 & 4.12 (Cont'd)

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Additionally, at least 50% of the fuel assemblies to be reloaded into the core shall have previously accumulated a minimum exposure of 1000 Mwd/T to ensure the presence of a minimum neutron flux as described in Bases Section 3.12.B.

F. The intent of this specification is to assure that the reactor core has been shut down for at least 24 hours following power operation and prior to fuel handling or movement. The safety analysis for the postulated refueling accident assumed that the reactor had been shut down for 24 hours for fission product decay prior to any fuel handling which could result in dropping of a fuel assembly.

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H. The Spent Fuel Pool Cooling System is designed to maintain the pool water temperature below 125°F during normal refueling operations. If the reactor core is completely discharged, the temperature of the pool water may increase to greater than 125°F. The RHR System supplemental fuel pool cooling may be used under these conditions to maintain the pool water temperature less than 150°F.