UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 26, 2010

Site Vice President
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
P.O. Box 250
Governor Hunt Road
Vernon, VT 05354

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF AMENDMENT RE: REVISION TO REQUIREMENTS FOR INOPERABLE CONTAINMENT ISOLATION VALVES (TAC NO. ME2267)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 242 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated September 16, 2009, as supplemented by letter dated November 16, 2009.

The proposed amendment would modify Technical Specification (TS) Sections 3.7.D.2 and 4.7.D.2, "Primary Containment Isolation Valves," to incorporate requirements that are consistent with Section 3.6.1.3 of the Improved Standard Technical Specifications (STS), NUREG-1433 Revision 3.0.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

James Kim

James Kim, Project Manager
Plant Licensing Branch 1-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:
1. Amendment No. 242 to License No. DPR-28
2. Safety Evaluation

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

ENTERGY NUCLEAR VERMONT YANKEE, LLC

AND ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 242
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (the licensee) dated September 16, 2009, as supplemented by letter dated November 16, 2009, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-28 is hereby amended to read as follows:

   (B) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 242 , are hereby incorporated in the license. Entergy Nuclear Operations, Inc. shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Nancy L. Salgado

Nancy L. Salgado, Chief
Plant Licensing Branch 1-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: January 26, 2010

ATTACHMENT TO LICENSE AMENDMENT NO. 242

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
3	3

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
158	158

E. Entergy Nuclear Operations, Inc., pursuant to the Act and 10 CFR Parts .30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility.

3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20. Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Section 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

A. Maximum Power Level

Entergy Nuclear Operations, Inc. is authorized to operate the facility at reactor core power levels not to exceed 1912 megawatts thermal in accordance with the Technical Specifications (Appendix A) appended hereto.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 242 are hereby incorporated in the license. Entergy Nuclear Operations, Inc. shall operate the facility in accordance with the Technical Specifications.

C. Reports

Entergy Nuclear Operations, Inc. shall make reports in accordance with the requirements of the Technical Specifications.

D. This paragraph deleted by Amendment No. 226.

E. Environmental Conditions

Pursuant to the Initial Decision of the presiding Atomic Safety and Licensing Board issued February 27, 1973, the following conditions for the protection of the environment are incorporated herein:

3.7 LIMITING CONDITIONS FOR OPERATION

D. Primary Containment Isolation Valves

1. During reactor power operating conditions all containment isolation valves and all instrument line flow check valves shall be operable except as specified in Specification 3.7.D.2.

2. In the event any containment isolation valve becomes inoperable, reactor power operation may continue provided the affected penetration flow path is isolated by the use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.

3. If Specifications 3.7.D.1 and 3.7.D.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.

4.7 SURVEILLANCE REQUIREMENTS

D. Primary Containment Isolation Valves

1. Surveillance of the primary containment isolation valves should be performed as follows:

   a. The operable isolation valves that are power operated and automatically initiated shall be tested for automatic initiation and closure time at least once per operating cycle.

   b. Operability testing of the primary containment isolation valves shall be performed in accordance with Specification 4.6.E.

   c. Deleted

2. Whenever a containment isolation valve is inoperable, verify the affected penetration flow path is isolated once per 31 days.

UNITED STATES
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WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 242 TO FACILITY OPERATING LICENSE NO. DPR-28

ENTERGY NUCLEAR VERMONT YANKEE, LLC

AND ENTERGY NUCLEAR OPERATIONS, INC.

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By letter dated September 16, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML092650189 and), as supplemented by letter dated November 16, 2009 (ML093240081), Entergy Nuclear Operations, Inc. (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station (VY) Technical Specification (TS). The proposed amendment would modify TS Sections 3.7.D.2 and 4.7.D.2, "Primary Containment Isolation Valves," to incorporate requirements that are consistent with Section 3.6.1.3 of the Improved Standard Technical Specifications (STS), NUREG-1433 Revision 3.0.

The supplemental letter dated November 16, 2009, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on November 3, 2009 (74 FR 56886).

The current Vermont Yankee TS 3.7.D.2 states:

> In the event any containment isolation valve becomes inoperable, reactor power operation may continue provided at least one containment isolation valve in each line having an inoperable valve is in the mode corresponding to the isolated condition.

The proposed Vermont Yankee TS 3.7.D.2 would state:

> In the event any containment isolation valve becomes inoperable, reactor power operation may continue provided the affected penetration flow path is isolated by the use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange.

The current Vermont Yankee TS 4.7.D.2 states:

> Whenever a containment isolation valve is inoperable, the position of at least one other valve in each line having an inoperable valve shall be logged daily.

The proposed Vermont Yankee TS 3.7.D.2 would state:

> Whenever a containment isolation valve is inoperable, verify the affected penetration flow path is isolated once per 31 days.

2.0 REGULATORY EVALUATION

NUREG-1433 contains the improved STS for General Electric (GE) BWR/4 plants. The improved STS were developed based on the criteria in the Final Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132), which was subsequently codified by changes to Section 36 of Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR 50.36) (60 FR 36953).

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36, TS are required to include items in the following eight specific categories related to station operation: (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation (LCOs); (3) Surveillance Requirements (SRs); (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notifications; and (8) written reports. The rule does not specify the particular requirements to be included in a plant's TS.

SR in 10 CFR 50.36 are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

3.0 TECHNICAL EVALUATION

NUREG-1433 contains the STS for GE BWR/4 plants. Revision 3 incorporates the cumulative changes to Revision 1 and 2, which was published in April 1995 and April 2001, respectively. The changes reflected in Revision 3 resulted from the experience gained from license amendment applications to convert to these improved STS or to adopt partial improvements to existing TSs. NUREG-1433 Revision 3 is the result of extensive public technical meetings and discussions among the NRC staff and various nuclear power plant licensees, Nuclear Steam Supply System (NSSS) Owners Groups, and the Nuclear Energy Institute (NEI). The improved STS were developed based on the criteria in the Final Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132), which was subsequently codified by changes to 10 CFR 50.36. Licensees are encouraged to upgrade their TSs consistent with those criteria and conforming, to the practical extent, to Revision 3 to the improved STS. Licensees adopting portions of the improved STS to existing TSs should adopt all related requirements, as applicable, to achieve a high degree of standardization and consistency. The licensee has proposed changes to VY TS that are consistent with NUREG-1433 Revision 3.

Currently, TS 3.7.D.2 allows continued reactor power operation in the event any primary containment isolation valve (PCIV) becomes inoperable, provided that at least one PCIV in each line having an inoperable valve is in the position corresponding to the isolated condition. Since VY has primary containment penetrations with only one PCIV, they would have to place the plant

in cold shutdown within 24 hours as required by TS 3.7.D.3 should the one PCIV in a line become inoperable. The proposed change to TS 3.7.D.2 will allow reactor power operation to continue provided the affected penetration flow path is immediately isolated by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange. This change allows greater flexibility to isolate the affected penetration flow path and provides the licensee with time to diagnose and repair the PCIV prior to plant shutdown. The proposed change would be applicable if any PCIV becomes inoperable.

The function of the PCIVs, in combination with other accident mitigation systems, is to limit fission product release during and following postulated design-basis accidents (DBAs) to within the limits of 10 CFR 50.67. PCIVs form a part of the primary containment boundary. The PCIV safety function is related to minimizing the loss of reactor coolant inventory and establishing the primary containment boundary during a DBA. In the accident analysis, it is assumed that PCIVs are either closed (passive device) or close within the required isolation times (active device) following event initiation. Isolating the affected penetration by use of at least one closed and de-activated automatic valve, closed manual valve, or blind flange ensures the penetration is isolated should a DBA occur, which minimizes the potential paths to the environment. The proposed change is considered a passive means of isolating the affected penetration and preserves the single active failure assumption that forms VY licensing basis relative to DBA mitigation. If the affected primary containment penetration cannot be isolated by at least one closed and de-activated automatic valve, closed manual valve, or blind flange then TS 3.7.D.3 is entered and the plant is required to be in cold shutdown within 24 hours. The proposed change provides assurance that the affected line will be isolated, and that the PCIV designed safety function to minimize the loss of reactor coolant inventory and establish the primary containment boundary during accidents will be met.

The proposed change to VY TS 4.7.D.2 is also consistent with NUREG-1433 Revision 3. The position of at least one other valve in each line having an inoperable containment isolation valve must be logged daily in accordance with TS 4.7.D.2. The proposed change to TS 4.7.D.2 would require verifying the affected penetration flow path is isolated once per 31 days. VY's administrative controls include, logging the LCO entry in the control room log and discussing the outstanding LCOs at shift briefs. Once per 31 days is considered adequate because the devices are operated under administrative controls and the probability of misalignment is low. Verifying the affected penetration flow path is isolated every 31 days ensures the required primary containment penetration, no longer capable of being automatically isolated following an accident, will be in the isolation position should an event occur.

The device used to isolate the affected penetration must support a determination that the leakage requirements stated in TS 6.7.C.4 are met.

After reviewing the licensee's application, the NRC staff has determined that the proposed changes to the requirements specified in TS Sections 3.7.D.2 and 4.7.D.2 for primary containment isolation valves would provide an adequate level of safety, and are consistent with NUREG-1433. Therefore, the proposed changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Vermont State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes SRs. The NRC staff has determined that the amendment involves no significant increase in amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (74 FR 56886). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Kristy Bucholtz

Date: January 26, 2010

Site Vice President
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
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Sincerely,

/RA/

James Kim, Project Manager
Plant Licensing Branch 1-1
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