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January 28, 2009
BVY 09-007

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

Reference: (a) Letter, Entergy to USNRC, "Technical Specifications Proposed Change No. 279 Sale or Lease of Property within the Exclusion Boundary", BVY 08-053, dated September 4, 2008

**Subject: Vermont Yankee Nuclear Power Station
License No. DPR-28 (Docket No. 50-271)
Technical Specifications Proposed Change No. 279, Supplement 1,
Response to Request for Additional Information**

Dear Sir or Madam,

In Reference (a), Entergy Nuclear Operations, Inc. (ENO) submitted a proposed revision to Section 5.1 of the Vermont Yankee Technical Specifications (TS) to change requirements related to site design features. Attachment 1 to this letter provides ENO's response to questions provided by NRC Staff and discussed with the NRC on a telecom held on January 21, 2009. Attachment 2 provides a revised TS page and associated Bases page. The Bases page is provided for information only.

This supplement to the original license amendment request does not change the intent or conclusions in the original application, nor does it change ENO'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. David Mannai at (802) 451-3304.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on January 28, 2009.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael J. Colomb", written over a horizontal line.

Michael J. Colomb
Site Vice President
Vermont Yankee Nuclear Power Station

Attachments (2)
cc: (next page)

A001
NRC

cc: Mr. Samuel J. Collins
Regional Administrator, Region 1
U.S. Nuclear Regulatory Commission
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Mr. James S. Kim, Project Manager
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
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Mr. David O'Brien, Commissioner
VT Department of Public Service
112 State Street – Drawer 20
Montpelier, Vermont 05620-2601

Attachment 1

Vermont Yankee Nuclear Power Station

Proposed Change 279, Supplement 1

Response to Request for Additional Information

Vermont Yankee Nuclear Power Station
Proposed Change 279, Supplement 1
Response to Request for Additional Information

RAI No. 1

Vermont Yankee Nuclear Power Station's current radiological dose consequences analyses for design basis accidents were approved by the NRC in License Amendment No. 223 issued March 29, 2005 (ADAMS Accession No. ML041280599). In this amendment, the licensee adopted the alternative source term (AST) methodology in accordance with Title 10 of the *Code of Federal Regulation* (10 CFR) Part 50.67 "Accident Source Term." The Vermont Yankee AST submittal dated, July 31, 2003, (ADAMS Accession No. ML032190646) contains the following statement in Attachment 1, Table 6:

With the implementation of AST, the accident dose guidelines of 10CFR100 are superseded by the dose criteria of 10CFR50.67. The whole body and thyroid doses of 10CFR100 are replaced by the total effective dose equivalent (TEDE) criteria of 10CFR50.67."

In the September 4, 2008 submittal, there are several references to 10 CFR Part 100, "Reactor Site Criteria," regarding radiological limits. Please provide additional information to explain the reference to 10 CFR Part 100 in light of the AST amendment cited above.

Response to RAI No. 1

The subject statements referring to 10CFR100 radiological limits should have referred to 10CFR50.67 radiological limits and are changed accordingly by this submittal.

RAI No. 2

The U.S. Nuclear Regulatory Commission (NRC) Standard Review Plan (SRP) 2.1.2, "Exclusion Area Authority and Control," Revision 3, Section III.3, "Proposed and Permitted Activities" states:

If activities unrelated to plant operation are to be permitted within the exclusion area, it will be necessary to determine that the potential radiation exposures to persons engaged in these activities resulting from the design-basis accidents postulated and evaluated in SAR Chapter 14 do not exceed the guidelines of 10 CFR Part 100 and 10 CFR 50.34(a)(1). The review should include the type of activity, its specific location within the exclusion area, the number and kinds of persons engaged in the activity, and the frequency and length of time the activities are to be permitted.

Regarding any proposed activities unrelated to plant operation which would be permitted by this license amendment to take place within the exclusion area, please provide additional information describing the type of activity, its specific location within the exclusion area, the number and kinds of persons engaged in the activity, and the frequency and length of time the activities are to be permitted.

Response to RAI No. 2

Entergy is not planning to perform any activity within the exclusion area that is unrelated to plant operation. The proposed change was developed to allow sale or lease of property within the exclusion area for activities that support plant operation and establishes the required level of licensee control over all activities in the exclusion area.

Entergy proposes to revise the Technical Specifications (TS) to note that only activities related to plant operation are permitted in the exclusion area. Proposed changes to the TS and associated Bases are provided in Attachment 2.

Attachment 2

Vermont Yankee Nuclear Power Station

Proposed Change 279, Supplement 1

Revised Technical Specifications and Bases Pages

5.0 DESIGN FEATURES5.1 Site

The station is located on the property on the west bank of the Connecticut River in the Town of Vernon, Vermont, which Entergy Nuclear Vermont Yankee, LLC either owns or to which it has perpetual rights and easements. The site plan showing the exclusion area boundary, boundary for gaseous effluents, boundary for liquid effluents, as well as areas defined per 10CFR20 as "controlled areas" and "unrestricted areas" are on plant drawing 5920-6245. The minimum distance to the boundary of the exclusion area as defined in 10CFR100.3 is 910 feet.

The licensee will at all times retain the complete authority to determine and maintain sufficient control of all activities through ownership, easement, contract and/or other legal instruments on property which is closer to the reactor center line than 910 feet. This includes the authority to exclude or remove personnel and property within the exclusion area. Only activities related to plant operation are permitted in the exclusion area.

5.2 Reactor

- A. The core shall consist of not more than 368 fuel assemblies.
- B. The reactor core shall contain 89 cruciform-shaped control rods. The control material shall be boron carbide powder (B_4C) or hafnium, or a combination of the two.

5.3 Reactor Vessel

The reactor vessel and applicable design codes shall be as described in Section 4 of the FSAR.

5.4 Containment

- A. The principal design parameters and applicable design codes for the primary containment shall be as given in Table 5.2.1 of the FSAR.
- B. The secondary containment shall be as described in subsection 5.3 of the FSAR and the applicable codes shall be as described in Section 12.0 of the FSAR.
- C. Penetrations to the primary containment and piping passing through such penetrations shall be designed in accordance with standards set forth in subsection 5.2 of the FSAR.

5.5 Spent and New Fuel Storage

- A. The new fuel storage facility shall be such that the effective multiplication factor (K_{eff}) of the fuel when dry is less than 0.90 and when flooded is less than 0.95.
- B. The K_{eff} of the fuel in the spent fuel storage pool shall be less than or equal to 0.95.
- C. Spent fuel storage racks may be moved (only) in accordance with written procedures which ensure that no rack modules are moved over fuel assemblies.

BASES:5.1 SITE

Exclusion area means that area surrounding the reactor, as measured from the reactor center line, in which the reactor licensee has the authority to determine all activities including exclusion or removal of personal and property from the area. This area may be traversed by a highway, railroad, or waterway, provided those are not so close to the facility as to interfere with normal operations of the facility and provided appropriate and effective arrangements are made to control traffic on the highway, railroad, or waterway, in case of an emergency, to protect the public health and safety.

Contract provisions for property agreements in the exclusion area will ensure that the licensee retains sufficient control of all activities in the exclusion area including the authority to exclude or remove personnel and property, thereby (1) maintaining compliance with 10CFR50.67 radiological limits for the exclusion area, and (2) ensuring that any and all activities, now or in the future, in the exclusion area would not negatively affect nuclear safety, safe plant operation or violate current plant design or licensing basis.

Any property transaction in the exclusion area, as is the case for any activity which has the potential to adversely affect nuclear safety or safe plant operation, requires a review in accordance with 10CFR50.59. Additionally, any property transaction would be required to comply with other regulatory requirements (e.g., 10CFR50.83) as applicable.