



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

February 26, 2009

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: SALE OR LEASE OF PROPERTY WITHIN THE
EXCLUSION BOUNDARY (TAC NO. MD9600)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 235 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated September 4, 2008, as supplemented by letter dated January 28, 2009.

The amendment would revise the Technical Specification Section 5.1, "Site," to remove the restriction on the sale and lease of site property and replace the restriction with a requirement to retain complete authority to determine and maintain sufficient control of all activities, including the authority to exclude or remove personnel and property, within the minimum exclusion area.

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,

A handwritten signature in black ink that reads "James Kim".

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

Docket No. 50-271

Enclosures:

1. Amendment No. 235 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. 235
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 4, 2008, as supplemented by letter dated January 28, 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.

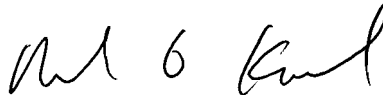
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-28 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 235 , are hereby incorporated in the license. The licensee 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



Mark Kowal, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: February 26, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 235

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
3

Insert
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
253

Insert
253

- 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. 235 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:

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 (B₄C) 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.



UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 235 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 application dated September 4, 2008 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML082540403), as supplemented by letter dated January 28, 2009 (ML090370419), Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station (Vermont Yankee or VY) Technical Specifications (TSs). The amendment changes would remove the restriction on the sale and lease of site property and replace the restriction with a requirement to retain complete authority to determine and maintain sufficient control of all activities, including the authority to exclude or remove personnel and property, within the minimum exclusion area. The supplemental letter dated January 28, 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 4, 2008 (73 FR 65692).

2.0 REGULATORY EVALUATION

This safety evaluation (SE) input addresses the impact of the proposed changes on previously analyzed design-basis accident (DBA) radiological consequences. The regulatory requirements for which the NRC staff based its acceptance are the accident dose guidelines in Title 10 of the *Code of Federal Regulations* (10 CFR) 50.67, "Accident source term," as supplemented by accident-specific criteria in Section 15 of the Standard Review Plan (SRP), NUREG-0800, and 10 CFR Part 50 Appendix A, General Design Criterion 19 (GDC-19), "Control Room," as supplemented by Section 6.4 of the SRP.

This SE also addresses the impact of the changes on the VY Emergency Plan. The regulatory requirements on which the NRC staff based its acceptance are the emergency preparedness guidelines in Appendix E to 10 CFR Part 50 "Emergency Planning and Preparedness for Production and Utilization Facilities."

3.0 TECHNICAL EVALUATION

In its letter dated September 4, 2008, the licensee proposed to revise VY TS 5.1, "Site" such that the current TS, which states,

No part of the site shall be sold or leased and no structure shall be located on the site except structures owned by Entergy Nuclear Vermont Yankee, LLC or related utility companies and used in conjunction with normal utility operation.

is replaced with,

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.

In a request for additional information, the NRC staff asked the licensee to describe any proposed activities unrelated to plant operation, which would be permitted by this license amendment, to take place within the exclusion area. By letter dated January 28, 2009, the licensee stated that the 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. The licensee also revised its proposed TS change to add the following statement:

Only activities related to plant operation are permitted in the exclusion area.

The licensee also stated that statements referring to 10 CFR Part 100 radiological limits in the September 4, 2008, submittal should have referred to 10 CFR 50.67, "Accident source term," radiological limits and are changed accordingly by the January 28, 2009, letter.

3.1 Emergency Preparedness

The impact of the changes on the Emergency Plan was reviewed in accordance with the emergency preparedness guidelines in Section II.C of Appendix E to Part 50, which states, "Protective measures to be taken within the site boundary and within each [emergency planning zone] EPZ to protect the health and safety in the event of an accident; procedures by which these measures are to be carried out (e.g., in the case of an evacuation, who authorizes the evacuation, how the public is to be notified and instructed, how the evacuation is to be carried out); and the expected response of offsite agencies in the event of an emergency."

In its September 4, 2008, submittal, and the supplement dated January 28, 2009, the licensee provided information that ENO (Entergy Nuclear Operations, Inc.) will remain cognizant of all activities performed within the exclusion area and ensure that such activities represent no hazard to the plant or have been shown to be accommodated as part of the design and licensing basis. ENO will ensure that personnel are aware of our site evacuation procedures and expect that all personnel follow them in the event of a station event warranting a site evacuation per the Vermont Yankee Emergency Plan. The Emergency Plan currently provides for evacuation when necessary for personnel within the exclusion area and these requirements are not impacted by

this proposed change. Based on this, there is reasonable assurance that persons engaged in such activities can be evacuated without receiving radiation doses in excess of 10 CFR 50.67 requirements.

The licensee further stated in its September 4, 2008, submittal, and the supplement dated January 28, 2009, that for ensuring compliance with 10 CFR 50.67 limits under evacuation scenarios and maintaining sufficient control of all current and future activities in the exclusion area, including potential radiation exposures to personnel within the exclusion area, the licensee will either maintain ownership or, for property releases from the licensee's ownership, include as part of the property agreement, requirements which retain the complete authority to determine and maintain sufficient licensee control through easement, contract and/or other legal instruments. This would include the authority to exclude or remove personnel and property from within the minimal exclusion distance.

The NRC staff concurs with the licensee's conclusions concerning the ability to maintain complete authority to determine and maintain sufficient control of all activities to ensure protective measures can and will be taken within the exclusion area to protect the health and safety of personnel in the event of an accident. Therefore, the proposed changes are acceptable in accordance with Appendix E to Part 50 and 10 CFR 50.67.

3.2 Radiological Dose Consequences

VY radiological dose consequences analyses for DBAs 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 alternate source term (AST) methodology.

The change does not change the assumptions made in the AST analysis or licensing basis. Additionally, this change does not change the size or location of the exclusion area, but rather only defines the requirements for sale or lease of property within the exclusion area and removes the restriction on sale or lease of site property outside the exclusion area. The licensee states that no physical or procedural changes are being made that affect plant equipment and therefore, the radiological consequences due to station events is not changed.

Based on the above discussion, the NRC staff finds that the radiological consequence analysis that was approved in Amendment No. 223 is not affected by the proposed change. Therefore, the NRC staff concludes this change is acceptable with respect to the radiological consequences of DBAs.

The NRC staff reviewed the justification used by the licensee to assess the radiological impacts of the changes to TS 5.1, "Site." The NRC staff finds that the licensee used methods consistent with regulatory requirements and guidance identified in Section 2.0 above. The NRC staff finds, with reasonable assurance that the licensee's estimates of the exclusion area boundary, low-population zone, and control room doses will continue to comply with these criteria. Therefore, the proposed changes to TS 5.1 are acceptable with regard to the radiological consequences of postulated DBAs and emergency planning and preparedness.

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 surveillance requirements. 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 (73 FR 65692). 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 Contributors: DyLanne Duvigneaud
Michael Norris

Date: February 26, 2009

February 26, 2009

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
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Sincerely,

/RA/

James Kim, Project Manager
Plant Licensing Branch I-1
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Docket No. 50-271

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Accession No.: ML090370456

*See memo dated February 5, 2009

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