



Entergy Nuclear Operations, Inc.  
Vermont Yankee  
P.O. Box 0250  
320 Governor Hunt Road  
Vernon, VT 05354  
Tel 802 257 7711

September 30, 2008  
BVY 08-055

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

- References:** (1) Letter, ENO to USNRC, "Supplemental Information #6 Relating to Application for Order Approving Indirect Transfer of Control of Licenses," ENOC-08-00027, dated May 2, 2008  
(2) Letter, USNRC to ENO, "Vermont Yankee Nuclear Power Station – Order Approving Indirect Transfer of Facility Operating License (TAC No. MD6185)," NVEY 08-074, dated July 28, 2008

**Subject:** **Vermont Yankee Nuclear Power Station**  
**License No. DPR-28 (Docket No. 50-271)**  
**Technical Specifications Proposed Change No. 277**  
**License Amendment Request Application for Licensee Name Changes**

Dear Sir or Madam,

Pursuant to 10 CFR 50.90, Entergy Nuclear Operations, Inc (ENO) and Entergy Nuclear Vermont Yankee, LLC hereby proposes to amend the Vermont Yankee Nuclear Power Station's Facility Operating License (FOL), DPR-28, and Technical Specifications (TS) by incorporating the attached proposed change. The proposed change revises the FOL and TS Section 5.0 by changing the names of the licensees to Equagen Nuclear LLC and Enexus Nuclear Vermont Yankee, LLC, respectively. The proposed changes result from restructuring transactions involving the ownership structure for various corporate entities as discussed in the referenced order.

Attachment 1 to this letter provides the marked-up versions of the affected FOL and TS pages and Attachment 2 provides the retyped pages.

ENO has evaluated the proposed changes for significant hazards considerations in accordance with the determination criteria set forth in 10 CFR 50.92. The proposed amendment would only change the names of the licensees and reflect the referenced NRC Order requirements; principal management and operational staffing for the restructured organization remain largely unchanged. The proposed changes do not: a) involve a significant increase in the probability or consequences of an accident previously evaluated; b) create the possibility of a new or different kind of accident from any accident previously evaluated; or c) involve a significant reduction in a margin of safety. Therefore, ENO concludes that the proposed changes do not involve a significant hazards consideration under the standards set forth in 10CFR50.92 and a finding of no significant hazards consideration is justified.

ENO has also determined that the proposed changes satisfy the criteria for a categorical exclusion in accordance with 10 CFR 51.22(c)(21) and do not require an environmental review. Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment needs to be prepared for these changes.

ADD  
NRR

A copy of this request has been provided to the designated representative of the State of Vermont.

ENO requests approval of the proposed License Amendment by April 2, 2009. Once approved, the amendment would be implemented within 180 days of its effective date, provided the proposed restructuring transactions have been completed.

This submittal contains no new regulatory commitments.

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

I declare under penalty of perjury that the foregoing is true and correct. Executed on September 30, 2008

Sincerely,



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

Attachment 1: Mark-up of FOL and TS Pages  
Attachment 2: Retyped FOL and TS Pages

cc: Mr. Samuel J. Collins (w/o attachments)  
Regional Administrator, Region 1  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406-1415

Mr. James S. Kim, Project Manager  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
One White Flint North 0 8 C2A  
11555 Rockville Pike  
Rockville, MD 20852-2738

USNRC Resident Inspector (w/o attachments)  
Entergy Nuclear Vermont Yankee, LLC  
P.O. Box 157  
Vernon, Vermont 05354

Mr. David O'Brien, Commissioner  
VT Department of Public Service  
112 State Street – Drawer 20  
Montpelier, Vermont 05620-2601

BVY 08-055  
Docket No. 50-271

Attachment 1

Vermont Yankee Nuclear Power Station

Proposed Change 277

Marked-up FOL and TS Pages



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

*ENEXUS*

*EQUAGEN*

*LLC*

Energy Nuclear Vermont Yankee, LLC and Energy Nuclear Operations, Inc.

(Vermont Yankee Nuclear Power Station)

Docket No. 50-271

Facility Operating License

License No. DPR-28  
Amendment No. 5, 208

The Atomic Energy Commission (the Commission) having found that:

- a. Construction of the Vermont Yankee Nuclear Power Station (the facility) has been substantially completed in conformity with the application, as amended, the Provisional Construction Permit No. CPPR-36, the provisions of the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission as set forth in Title 10, Chapter 1, CFR; and
- b. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission; and
- c. There is reasonable assurance (1) that the activities authorized by this amended operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission; and

*ENEXUS*

*EQUAGEN Nuclear LLC*

- d. ~~Energy Nuclear Vermont Yankee, LLC~~ is financially qualified and ~~Energy Nuclear Operations, Inc.~~ is technically and financially qualified to engage in the activities authorized by this amended operating license, in accordance with the rules and regulations of the Commission; and

*ENEXUS*

*EQUAGEN*

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- e. ~~Energy Nuclear Vermont Yankee, LLC~~ and ~~Energy Nuclear Operations, Inc.~~ have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements" of the Commission's regulations; and
- f. The issuance of this amended operating license will not be inimical to the common defense and security or to the health and safety of the public; and

g. After weighing the environmental, economic, technical and other benefits of the facility against environmental costs and considering available alternatives, the issuance of this amended operating license (subject to the conditions for protection of the environment set forth herein) is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied.

Accordingly, Facility Operating License No. DPR-28, as amended, issued to ~~Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.~~ <sup>Entergy Nuclear</sup> ~~Entergy Nuclear Operations, Inc.~~ <sup>LLC</sup> is hereby amended in its entirety to read:

1. This license applies to the Vermont Yankee Nuclear Power Station (the facility), a single cycle, boiling water, light water moderated and cooled reactor, and associated electric generating equipment. The facility is located on ~~Entergy Nuclear Vermont Yankee, LLC's~~ <sup>Entergy Nuclear</sup> site, in the Town of Vernon, Windham County, Vermont, and is described in the application as amended.

2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:

A. Pursuant to Sections 104b of the Atomic Energy Act of 1954, as amended (the Act), and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," ~~Entergy Nuclear Vermont Yankee, LLC to possess and use, and Entergy Nuclear Operations, Inc., to possess, use, and operate the facility as a utilization facility at the designated location on the Entergy Nuclear Vermont Yankee, LLC site.~~ <sup>Entergy Nuclear</sup> ~~Entergy Nuclear Operations, Inc.~~ <sup>LLC</sup>

B. ~~Entergy Nuclear Operations, Inc.~~ <sup>Entergy Nuclear</sup>, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation as described in the Final Safety Analysis Report, as supplemented and amended.

C. ~~Entergy Nuclear Operations, Inc.~~ <sup>Entergy Nuclear</sup>, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for calibration of reactor instrumentation and radiation monitoring equipment, and as fission detectors in amounts as required.

D. ~~Entergy Nuclear Operations, Inc.~~ <sup>Entergy Nuclear</sup>, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components.

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*Equagen*

*LLC*

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

*Equagen*

*LLC*

~~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

*Equagen*

The Technical Specifications contained in Appendix A, as revised through Amendment No. 232, are hereby incorporated in the license. ~~Entergy Nuclear Operations, Inc.~~ shall operate the facility in accordance with the Technical Specifications. *LLC*

C. Reports

*Equagen*

*LLC*

~~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:

1. This paragraph deleted by Amendment No. 206, October 22, 2001.

2. This paragraph deleted by Amendment 131, 10/07/91.

3. This paragraph deleted by Amendment No. 206, October 22, 2001.

4. If harmful effects or evidence of irreversible damage in land or water ecosystems as a result of facility operation are detected by ~~Entergy Nuclear Operations, Inc.~~ <sup>Equagen</sup> environmental monitoring program, ~~Entergy Nuclear Operations, Inc.~~ <sup>LLC</sup> shall provide an analysis of the problem to the Commission and to the advisory group for the Technical Specifications, and ~~Entergy Nuclear Operations, Inc.~~ <sup>LLCs</sup> thereafter will provide, subject to the review by the aforesaid advisory group, a course of action to be taken immediately to alleviate the problem. <sup>LLC</sup>

5. ~~Entergy Nuclear Operations, Inc.~~ <sup>Equagen</sup> will grant authorized representatives of the Massachusetts Department of Public Health (MDPH) and Metropolitan District Commission (MDC) access to records and charts related to discharge of radioactive materials to the Connecticut River. <sup>LLC</sup>

6. This paragraph deleted by Amendment No. 206, October 22, 2001.

7. This paragraph deleted by Amendment No. 206, October 22, 2001.

*EQUAGEN* *LLC*  
8. ~~Entergy Nuclear Operations, Inc.~~ will permit authorized representatives of the MDPH and MDC to examine the chemical and radioactivity analyses performed by Entergy Nuclear Operations, Inc.

*EQUAGEN* *LLC*  
9. ~~Entergy Nuclear Operations, Inc.~~ shall immediately notify MDPH, or an agency designated by MDPH, in the event concentrations of radioactive materials in liquid effluents, measured at the point of release from the Vermont Yankee facility, exceed the limit set forth in the facility Offsite Dose Calculation Manual. ~~Entergy Nuclear Operations, Inc.~~ will also notify MDPH in writing within 30 days following the release of radioactive materials in liquid effluents in excess of 10 percent of the limit set forth in the facility Offsite Dose Calculation Manual. *EQUAGEN*

*LLC*  
10. A report shall be submitted to MDPH and MDC by May 15 of each year of plant operation, specifying the total quantities of radioactive materials released to the Connecticut River during the previous calendar year. The report shall contain the following information:

- (a) Total curie activity discharged other than tritium and dissolved gases.
- (b) Total curie alpha activity discharged.
- (c) Total curies of tritium discharged.
- (d) Total curies of dissolved radio-gases discharged.
- (e) Total volume (in gallons) of liquid waste discharged.



- (f) Total volume (in gallons) of dilution water.
  - (g) Average concentration at discharge outfall.
  - (h) This paragraph deleted by Amendment No. 206, October 22, 2001.
  - (i) Total radioactivity (in curies) released by nuclide including dissolved radio-gases.
  - (j) Percent of the facility Offsite Dose Calculation Manual limit for total activity released.
11. This paragraph deleted by Amendment No. 206, October 22, 2001.
12. This paragraph deleted by Amendment No. 206, October 22, 2001.

*Eggen*

*LLC*

13. ~~Energy Nuclear Operations, Inc.~~ shall establish and maintain a system of emergency notification to the states of Vermont and New Hampshire, and the Commonwealth of Massachusetts, satisfactory to the appropriate public health and public safety officials of those states and the Commonwealth, which provides for:
- a. Notice of site emergencies as well as general emergencies.
  - b. Direct microwave communication with the state police headquarters of the respective states and the Commonwealth when the transmission facilities of the respective states and the Commonwealth so permit, at the expense of ~~Energy Nuclear Operations, Inc.~~

*LLC*

*Eggen*

c. A verification or coding system for emergency messages between ~~Entergy Nuclear Operations, Inc.~~ and the state police headquarters of the respective states and the Commonwealth.

*EQUAGEN*

*LLC*

*EQUAGEN*

14. ~~Entergy Nuclear Operations, Inc.~~ shall furnish advance notification to MDPH, or to another Commonwealth agency designated by MDPH, of the time, method and proposed route through the Commonwealth of any shipments of nuclear fuel and wastes to and from the Vermont Yankee facility which will utilize railways or roadways in the Commonwealth.

*EQUAGEN*

*LLC*

F. ~~Entergy Nuclear Operations, Inc.~~ shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated January 13, 1978, and supplemental SERs, dated 9/12/79, 2/20/80, 4/15/80, 7/3/80, 10/24/80, 11/10/81, 1/13/83, 7/24/84, 3/25/86, 12/1/86, 12/8/89, 11/29/90, 8/30/95, 3/23/97, 6/9/97, 8/12/97, 3/6/98, 3/31/98, 9/2/98, and 2/24/99, subject to the following provisions:

*EQUAGEN*

*LLC*

~~Entergy Nuclear Operations, Inc.~~ may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

G. Security Plan

*EQUAGEN*

*LLC*

~~Entergy Nuclear Operations, Inc.~~ shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>1</sup>, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Vermont Yankee Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 0," submitted by letter dated October 18, 2004, as supplemented by letter dated May 16, 2006.



<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan. Amendment No. 107, 168, 206, 208  
Revised by letter dated October 28, 2004  
Revised by letter dated February 18, 2005  
Revised by letter dated April 5, 2007



H. This paragraph deleted by Amendment No. 107, 8/25/88.

I. This paragraph deleted by Amendment No. 131, 10/7/91.

J. License Transfer Conditions

On the closing date of the transfer of Vermont Yankee Nuclear Power Station (Vermont Yankee), <sup>Enxus</sup> Entergy Nuclear Vermont Yankee, LLC shall obtain from <sup>Enxus</sup> Vermont Yankee, <sup>Enxus</sup> ~~Nuclear Power Corporation~~ all of the accumulated decommissioning trust funds for the facility, and ensure the deposit of such funds into a decommissioning trust for Vermont Yankee established by Entergy Nuclear Vermont Yankee, LLC. If the amount of such funds does not meet or exceed the minimum amount required for the facility pursuant to 10 CFR 50.75, Entergy Nuclear Vermont Yankee, LLC shall at such time deposit additional funds into the trust and/or obtain a parent company guarantee (to be updated annually) and/or obtain a surety pursuant to 10 CFR 50.75(e)(1)(iii) in a form acceptable to the NRC and in an amount or amounts which, when combined with the decommissioning trust funds for the facility that have been obtained and deposited as required above, equals or exceeds the total amount required for the facility pursuant to 10 CFR 50.75. The decommissioning trust, and surety if utilized, shall be subject to or be consistent with the following requirements, as applicable:

a. Decommissioning Trust

- (i) The decommissioning trust agreement must be in a form acceptable to the NRC.
- (ii) With respect to the decommissioning trust funds, investments in the securities or other obligations of <sup>or Enxus Energy Corporation</sup> Entergy Corporation and its affiliates, successors, or assigns shall be prohibited. In addition, except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited. <sup>their</sup>
- (iii) The decommissioning trust agreement must provide that no disbursements or payments from the trust, other than for ordinary administrative expenses, shall be made by the trustee until the trustee has first given the NRC 30 days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director of the Office of Nuclear Reactor Regulation.
- (iv) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30 days prior written notification to the Director of the Office of Nuclear Reactor Regulation.
- (v) The appropriate section of the decommissioning trust agreement shall state that the trustee, investment advisor, or anyone else directing the investments made in the trust shall adhere to a "prudent investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.

b. Surety

- (i) The surety agreement must be in a form acceptable to the NRC and be in accordance with all applicable NRC regulations.
- (ii) The surety company providing any surety obtained to comply with the Order approving the transfer shall be one of those listed by the U.S. Department of the Treasury in the most recent edition of Circular 570 and shall have a coverage limit sufficient to cover the amount of the surety. *Enxus*
- (iii) *Enxus* Entergy Nuclear Vermont Yankee, LLC shall establish a standby trust to receive funds from the surety, if a surety is obtained, in the event that Entergy Nuclear Vermont Yankee, LLC defaults on its funding obligations for the decommissioning of Vermont Yankee. The standby trust agreement must be in a form acceptable to the NRC, and shall conform with all conditions otherwise applicable to the decommissioning trust agreement.
- (iv) The surety agreement must provide that the agreement cannot be amended in any material respect, or terminated, without 30 days prior written notification to the Director of the Office of Nuclear Reactor Regulation. *Enxus*

*Enxus* Entergy Nuclear Vermont Yankee, LLC shall take all necessary steps to ensure that the decommissioning trust is maintained in accordance with the application for approval of the transfer of this license to *Enxus* Entergy Nuclear Vermont Yankee, LLC and *Enxus* Entergy Equinox Nuclear Operations, Inc., and the requirements of the Order approving the transfer, and consistent with the safety evaluation supporting the Order.

LLC

Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. shall take no action to cause Entergy Global Investments, Inc., or Entergy International Holdings Ltd. LLC, or their parent companies to void, cancel, or modify the lines of credit to provide funding for Vermont Yankee as represented in the application without prior written consent of the Director of the Office of Nuclear Reactor Regulation.

Insert a Head

K. Minimum Critical Power Ratio

When operating at thermal power greater than 1593 megawatts thermal, the safety limit minimum critical power ratio (SLMCPR) shall be established by adding 0.02 to the cycle-specific SLMCPR value calculated using the NRC-approved methodologies documented in General Electric Licensing Topical Report NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," as amended, and documented in the Core Operating Limits Report.



Insert 1

Enexus Nuclear Vermont Yankee, LLC and Equagen Nuclear, LLC shall take no action to cause Enexus Energy Corporation to void, cancel, or modify the \$700 million contingency commitment to provide funding for Enexus Nuclear Vermont Yankee, LLC as represented in the application without prior written consent of the Director of the Office of Nuclear Reactor Regulation.

APPENDIX A

TO

OPERATING LICENSE DPR-28

TECHNICAL SPECIFICATIONS

AND BASES

FOR

VERMONT YANKEE NUCLEAR POWER STATION

VERNON, VERMONT

*Equa Gen*

*LLC*

~~ENERGY NUCLEAR OPERATIONS, INC.~~

AND

*ENEXUS*

ENERGY NUCLEAR VERMONT YANKEE, LLC

DOCKET NO. 50-271

Reissued by  
Change Nos. 13, 15, and 17  
Dated 1/17/74, 1/28/74, and 4/10/74

Amendment No. 208

5.0 DESIGN FEATURES5.1 Site

ENERGY

The station is located on the property on the west bank of the Connecticut River in the Town of Vernon, Vermont, which ~~Energy~~ 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.

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

ENERGY

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.

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Attachment 2

Vermont Yankee Nuclear Power Station

Proposed Change 277

Revised FOL and TS Pages



Enexus Nuclear Vermont Yankee, LLC and EquaGen Nuclear LLC

(Vermont Yankee Nuclear Power Station)

Docket No. 50-271

Facility Operating License

License No. DPR-28  
Amendment No. 5, 208

The Atomic Energy Commission (the Commission) having found that:

- a. Construction of the Vermont Yankee Nuclear Power Station (the facility) has been substantially completed in conformity with the application, as amended, the Provisional Construction Permit No. CPPR-36, the provisions of the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission as set forth in Title 10, Chapter 1, CFR; and
- b. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission; and
- c. There is reasonable assurance (1) that the activities authorized by this amended operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the rules and regulations of the Commission; and
- d. Enexus Nuclear Vermont Yankee, LLC is financially qualified and EquaGen Nuclear LLC is technically and financially qualified to engage in the activities authorized by this amended operating license, in accordance with the rules and regulations of the Commission; and
- e. Enexus Nuclear Vermont Yankee, LLC and EquaGen Nuclear LLC have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements" of the Commission's regulations; and
- f. The issuance of this amended operating license will not be inimical to the common defense and security or to the health and safety of the public; and

- g. After weighing the environmental, economic, technical and other benefits of the facility against environmental costs and considering available alternatives, the issuance of this amended operating license (subject to the conditions for protection of the environment set forth herein) is in accordance with 10 CFR Part 50, Appendix D, of the Commission's regulations and all applicable requirements of said Appendix D have been satisfied.

Accordingly, Facility Operating License No. DPR-28, as amended, issued to Enexus Nuclear Vermont Yankee, LLC and Equagen Nuclear LLC is hereby amended in its entirety to read:

1. This license applies to the Vermont Yankee Nuclear Power Station (the facility), a single cycle, boiling water, light water moderated and cooled reactor, and associated electric generating equipment. The facility is located on Enexus Nuclear Vermont Yankee, LLC's site, in the Town of Vernon, Windham County, Vermont, and is described in the application as amended.
2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
  - A. Pursuant to Sections 104b of the Atomic Energy Act of 1954, as amended (the Act), and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," Enexus Nuclear Vermont Yankee, LLC to possess and use, and Equagen Nuclear LLC to possess, use, and operate the facility as a utilization facility at the designated location on the Enexus Nuclear Vermont Yankee, LLC site.
  - B. Equagen Nuclear LLC, pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation as described in the Final Safety Analysis Report, as supplemented and amended.
  - C. Equagen Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for calibration of reactor instrumentation and radiation monitoring equipment, and as fission detectors in amounts as required.
  - D. Equagen Nuclear LLC, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components.

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2/14/77

- E. EquaGen Nuclear LLC, 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

EquaGen Nuclear LLC 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. \_\_\_\_\_, are hereby incorporated in the license. EquaGen Nuclear LLC shall operate the facility in accordance with the Technical Specifications.

C. Reports

EquaGen Nuclear LLC 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:

1. This paragraph deleted by Amendment No. 206, October 22, 2001.
  
2. This paragraph deleted by Amendment 131, 10/07/91.
  
3. This paragraph deleted by Amendment No. 206, October 22, 2001.
  
4. If harmful effects or evidence of irreversible damage in land or water ecosystems as a result of facility operation are detected by Equagen Nuclear LLCs environmental monitoring program, Equagen Nuclear LLC shall provide an analysis of the problem to the Commission and to the advisory group for the Technical Specifications, and Equagen Nuclear LLC thereafter will provide, subject to the review by the aforesaid advisory group, a course of action to be taken immediately to alleviate the problem.
  
5. Equagen Nuclear LLC will grant authorized representatives of the Massachusetts Department of Public Health (MDPH) and Metropolitan District Commission (MDC) access to records and charts related to discharge of radioactive materials to the Connecticut River.
  
6. This paragraph deleted by Amendment No. 206, October 22, 2001.

7. This paragraph deleted by Amendment No. 206, October 22, 2001.
8. Equagen Nuclear LLC will permit authorized representatives of the MDPH and MDC to examine the chemical and radioactivity analyses performed by EN.
9. Equagen Nuclear LLC shall immediately notify MDPH, or an agency designated by MDPH, in the event concentrations of radioactive materials in liquid effluents, measured at the point of release from the Vermont Yankee facility, exceed the limit set forth in the facility Offsite Dose Calculation Manual. Equagen Nuclear LLC will also notify MDPH in writing within 30 days following the release of radioactive materials in liquid effluents in excess of 10 percent of the limit set forth in the facility Offsite Dose Calculation Manual.
10. A report shall be submitted to MDPH and MDC by May 15 of each year of plant operation, specifying the total quantities of radioactive materials released to the Connecticut River during the previous calendar year. The report shall contain the following information:
  - (a) Total curie activity discharged other than tritium and dissolved gases.
  - (b) Total curie alpha activity discharged.
  - (c) Total curies of tritium discharged.
  - (d) Total curies of dissolved radio-gases discharged.
  - (e) Total volume (in gallons) of liquid waste discharged.

- (f) Total volume (in gallons) of dilution water.
  - (g) Average concentration at discharge outfall.
  - (h) This paragraph deleted by Amendment No. 206, October 22, 2001.
  - (i) Total radioactivity (in curies) released by nuclide including dissolved radio-gases.
  - (j) Percent of the facility Offsite Dose Calculation Manual limit for total activity released.
11. This paragraph deleted by Amendment No. 206, October 22, 2001.
12. This paragraph deleted by Amendment No. 206, October 22, 2001.
13. Equagen Nuclear LLC shall establish and maintain a system of emergency notification to the states of Vermont and New Hampshire, and the Commonwealth of Massachusetts, satisfactory to the appropriate public health and public safety officials of those states and the Commonwealth, which provides for:
- a. Notice of site emergencies as well as general emergencies.
  - b. Direct microwave communication with the state police headquarters of the respective states and the Commonwealth when the transmission facilities of the respective states and the Commonwealth so permit, at the expense of Equagen Nuclear LLC.

- c. A verification or coding system for emergency messages between Equagen Nuclear LLC and the state police headquarters of the respective states and the Commonwealth.
- 14. Equagen Nuclear LLC shall furnish advance notification to MDPH, or to another Commonwealth agency designated by MDPH, of the time, method and proposed route through the Commonwealth of any shipments of nuclear fuel and wastes to and from the Vermont Yankee facility which will utilize railways or roadways in the Commonwealth.
- F. Equagen Nuclear LLC shall implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report for the facility and as approved in the SER dated January 13, 1978, and supplemental SERs, dated 9/12/79, 2/20/80, 4/15/80, 7/3/80, 10/24/80, 11/10/81, 1/13/83, 7/24/84, 3/25/86, 12/1/86, 12/8/89, 11/29/90, 8/30/95, 3/23/97, 6/9/97, 8/12/97, 3/6/98, 3/31/98, 9/2/98, and 2/24/99, subject to the following provisions:

Equagen Nuclear LLC may make changes to the approved Fire Protection Program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

G. Security Plan

Equagen Nuclear LLC shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822), and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans<sup>1</sup>, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Vermont Yankee Nuclear Power Station Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 0," submitted by letter dated October 18, 2004, as supplemented by letter dated May 16, 2006.

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<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan. Amendment No. 107, 168, 206, 208  
Revised by letter dated October 28, 2004  
Revised by letter dated February 18, 2005  
Revised by letter dated April 5, 2007

H. This paragraph deleted by Amendment No. 107, 8/25/88.

I. This paragraph deleted by Amendment No. 131, 10/7/91.

J. License Transfer Conditions

On the closing date of the transfer of Vermont Yankee Nuclear Power Station (Vermont Yankee), Enexus Nuclear Vermont Yankee, LLC shall obtain from Entergy Nuclear Vermont Yankee, LLC all of the accumulated decommissioning trust funds for the facility, and ensure the deposit of such funds into a decommissioning trust for Vermont Yankee established by Enexus Nuclear Vermont Yankee, LLC. If the amount of such funds does not meet or exceed the minimum amount required for the facility pursuant to 10 CFR 50.75, Enexus Nuclear Vermont Yankee, LLC shall at such time deposit additional funds into the trust and/or obtain a parent company guarantee (to be updated annually) and/or obtain a surety pursuant to 10 CFR 50.75(e)(1)(iii) in a form acceptable to the NRC and in an amount or amounts which, when combined with the decommissioning trust funds for the facility that have been obtained and deposited as required above, equals or exceeds the total amount required for the facility pursuant to 10 CFR 50.75. The decommissioning trust, and surety if utilized, shall be subject to or be consistent with the following requirements, as applicable:

a. Decommissioning Trust

- (i) The decommissioning trust agreement must be in a form acceptable to the NRC.
- (ii) With respect to the decommissioning trust funds, investments in the securities or other obligations of Entergy Corporation or Enexus Energy Corporation and their affiliates, successors, or assigns shall be prohibited. In addition, except for investments tied to market indexes or other non-nuclear-sector mutual funds, investments in any entity owning one or more nuclear power plants are prohibited.
- (iii) The decommissioning trust agreement must provide that no disbursements or payments from the trust, other than for ordinary administrative expenses, shall be made by the trustee until the trustee has first given the NRC 30 days prior written notice of payment. The decommissioning trust agreement shall further contain a provision that no disbursements or payments from the trust shall be made if the trustee receives prior written notice of objection from the Director of the Office of Nuclear Reactor Regulation.
- (iv) The decommissioning trust agreement must provide that the agreement cannot be amended in any material respect without 30 days prior written notification to the Director of the Office of Nuclear Reactor Regulation.
- (v) The appropriate section of the decommissioning trust agreement shall state that the trustee, investment advisor, or anyone else directing the investments made in the trust shall adhere to a "prudent investor" standard, as specified in 18 CFR 35.32(a)(3) of the Federal Energy Regulatory Commission's regulations.



b. Surety

- (i) The surety agreement must be in a form acceptable to the NRC and be in accordance with all applicable NRC regulations.
- (ii) The surety company providing any surety obtained to comply with the Order approving the transfer shall be one of those listed by the U.S. Department of the Treasury in the most recent edition of Circular 570 and shall have a coverage limit sufficient to cover the amount of the surety.
- (iii) Enexus Nuclear Vermont Yankee, LLC shall establish a standby trust to receive funds from the surety, if a surety is obtained, in the event that Enexus Nuclear Vermont Yankee, LLC defaults on its funding obligations for the decommissioning of Vermont Yankee. The standby trust agreement must be in a form acceptable to the NRC, and shall conform with all conditions otherwise applicable to the decommissioning trust agreement.
- (iv) The surety agreement must provide that the agreement cannot be amended in any material respect, or terminated, without 30 days prior written notification to the Director of the Office of Nuclear Reactor Regulation.

Enexus Nuclear Vermont Yankee, LLC shall take all necessary steps to ensure that the decommissioning trust is maintained in accordance with the application for approval of the transfer of this license to Enexus Nuclear Vermont Yankee, LLC and EquaGen Nuclear LLC, and the requirements of the Order approving the transfer, and consistent with the safety evaluation supporting the Order.

Enexus Nuclear Vermont Yankee, LLC and EquaGen Nuclear LLC shall take no action to cause Enexus Energy Corporation to void, cancel, or modify the \$700 million contingency commitment to provide funding for Enexus Nuclear Vermont Yankee, LLC as represented in the application without prior written consent of the Director of the Office of Nuclear Reactor Regulation.

K. Minimum Critical Power Ratio

When operating at thermal power greater than 1593 megawatts thermal, the safety limit minimum critical power ratio (SLMCPR) shall be established by adding 0.02 to the cycle-specific SLMCPR value calculated using the NRC-approved methodologies documented in General Electric Licensing Topical Report NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel," as amended, and documented in the Core Operating Limits Report.

APPENDIX A  
TO  
OPERATING LICENSE DPR-28  
TECHNICAL SPECIFICATIONS  
AND BASES  
FOR  
VERMONT YANKEE NUCLEAR POWER STATION  
VERNON, VERMONT  
EQUAGEN NUCLEAR LLC  
AND  
ENEXUS NUCLEAR VERMONT YANKEE, LLC  
DOCKET NO. 50-271

Reissued by  
Change Nos. 13, 15, and 17  
Dated 1/17/74, 1/28/74, and 4/10/74

Amendment No. ~~208~~

VYNPS

5.0 DESIGN FEATURES

5.1 Site

The station is located on the property on the west bank of the Connecticut River in the Town of Vernon, Vermont, which Enexus 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.

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

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.