



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

ENTERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 271  
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for a license amendment filed by Entergy Nuclear Operations, Inc., dated February 9, 2017, as supplemented by letters dated April 6, 2017, August 22, 2017, August 28, 2017, December 4, 2017, December 22, 2017, May 21, 2018, and June 28, 2018, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and applicable portions of the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
  - B. The facility will operate in conformity with the application, as supplemented, 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, "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions," of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, Renewed Facility Operating License No. DPR-28 is amended as indicated in the attachment to this license amendment.

3. This license amendment is effective at the time the proposed direct and indirect license transfer is completed and shall be implemented within 30 days from that date.

FOR THE NUCLEAR REGULATORY COMMISSION

John R. Tappert, Director  
Division of Decommissioning, Uranium Recovery  
and Waste Programs  
Office of Nuclear Material Safety  
and Safeguards

Attachment:  
Changes to Renewed Facility  
Operating License No. DPR-28

Date of Issuance: [date]

ATTACHMENT TO LICENSE AMENDMENT NO. 271

TO RENEWED FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following pages of Renewed Facility Operating License No. DPR-28 and Appendix A, Technical Specifications, with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Renewed Facility Operating License No DPR-28

REMOVE

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revised first page

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Technical Specifications

REMOVE

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~~NorthStar Energy Nuclear~~ Vermont Yankee, LLC and ~~NorthStar Energy Nuclear Operations, Inc.~~ ~~Nuclear Decommissioning Company, LLC.~~

(Vermont Yankee Nuclear Power Station)

Docket No. 50-271

Renewed Facility Operating License

Renewed Operating License No. DPR-28

The U.S. Nuclear Regulatory Commission (NRC or the Commission), having previously made the findings set forth in Facility Operating License No. DPR-28, dated February 28, 1973, has now found that:

- a. This paragraph deleted by Amendment No. 263.
- b. The facility is prohibited from operating the reactor 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 (i) that the activities authorized by this 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. ~~Energy Nuclear~~NorthStar Vermont Yankee, LLC is financially qualified and NorthStar Nuclear Decommissioning Company, LLC~~Energy Nuclear Operations, Inc.~~ is technically and financially qualified to engage in the activities authorized by this license, in accordance with the rules and regulations of the Commission; and
- e. ~~Energy Nuclear~~NorthStar Vermont Yankee, LLC and NorthStar Nuclear Decommissioning Company, LLC. ~~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 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 license (subject to the conditions for protection of the environment set forth herein) is in accordance with 10 CFR Part 51, of the Commission's regulations and all applicable requirements of said Part 51 have been satisfied.

Renewed Facility Operating License No. DPR-28  
Amendment 263, 270, 271

Accordingly, Facility Operating License No. DPR-28, as amended, issued to [Entergy Nuclear NorthStar Vermont Yankee, LLC](#) and [NorthStar Nuclear Decommissioning Company, LLC](#), ~~[Entergy Nuclear Operations, Inc.](#)~~ is superseded by Renewed Facility Operating License No. DPR-28 and is hereby amended in its entirety to read:

1. This renewed 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 NorthStar 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," [Entergy Nuclear NorthStar Vermont Yankee, LLC](#) to possess and use, and [NorthStar Nuclear Decommissioning Company, LLC](#), ~~[Entergy Nuclear Operations, Inc.](#)~~, to possess ~~and use, maintain and decommission~~ the facility ~~as a utilization facility~~ at the designated location on the [Entergy Nuclear NorthStar Vermont Yankee, LLC](#) site.
  - B. [NorthStar Nuclear Decommissioning Company, LLC](#), ~~[Entergy Nuclear Operations, Inc.](#)~~, pursuant to the Act and 10 CFR Part 70, to possess at any time special nuclear material that was used 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. [NorthStar Nuclear Decommissioning Company, LLC](#), ~~[Entergy Nuclear Operations, Inc.](#)~~, 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 that were used for reactor startup, sealed sources that were used for calibration of reactor instrumentation and are used in radiation monitoring equipment, and as fission detectors in amounts as required.
  - D. [NorthStar Nuclear Decommissioning Company, LLC](#), ~~[Entergy Nuclear Operations, Inc.](#)~~, 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.
  - E. [NorthStar Nuclear Decommissioning Company, LLC](#), ~~[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 renewed 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. This paragraph deleted by Amendment No. 263.

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. ~~270~~271, are hereby incorporated in the license. [NorthStar Nuclear Decommissioning Company, LLC](#), ~~Entergy Nuclear Operations, Inc.~~ shall operate, possess, maintain and decommission the facility in accordance with the Technical Specifications.

C. This paragraph deleted by Amendment No. 270.

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 [NorthStar Nuclear Decommissioning Company, LLC](#), ~~Entergy Nuclear Operations, Inc.~~'s environmental monitoring program, [NorthStar Nuclear Decommissioning Company, LLC](#), ~~Entergy Nuclear Operations, Inc.~~ shall provide an analysis of the problem to the Commission and to the advisory group for the Technical Specifications, and [NorthStar Nuclear Decommissioning Company, LLC](#), ~~Entergy Nuclear Operations, Inc.~~ 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. [NorthStar Nuclear Decommissioning Company, LLC](#), ~~Entergy Nuclear Operations, Inc.~~ 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. [NorthStar Nuclear Decommissioning Company, LLC](#).~~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.
9. [NorthStar Nuclear Decommissioning Company, LLC](#).~~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. [NorthStar Nuclear Decommissioning Company, LLC](#).~~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.
10. A report shall be submitted to MDPH and MDC by May 15 of each year, 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. This paragraph deleted by Amendment No. 270.



14. ~~NorthStar Nuclear Decommissioning Company, LLC~~ 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.

F. This paragraph deleted by Amendment No. 263.

G. Security Plan

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<sup>1</sup> including amendments made pursuant to 10 CFR 72.212(b)(9) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "ISFSI Physical Security Plan, Revision 0", approved on July 25, 2018.

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

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

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<sup>1</sup> The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

J. License Transfer Conditions

On the closing date of the transfer of Vermont Yankee Nuclear Power Station (Vermont Yankee), ~~Entergy Nuclear~~NorthStar Vermont Yankee, LLC shall obtain from Vermont Yankee 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 ~~NorthStar~~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, ~~NorthStar~~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 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.
- (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) ~~NorthStarEnergy Nuclear~~ Vermont Yankee, LLC shall establish a standby trust to receive funds from the surety, if a surety is obtained, in the event that ~~NorthStarEnergy 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.

~~NorthStarEnergy 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 ~~NorthStarEnergy Nuclear~~ Vermont Yankee, LLC and ~~Entergy Nuclear Operations, Inc.~~~~NorthStar Nuclear Decommissioning Company, LLC.~~, and the requirements of the Order approving the transfer, and consistent with the safety evaluation supporting the Order.

~~Entergy Nuclear~~~~NorthStar~~ Vermont Yankee, LLC and ~~NorthStar Nuclear Decommissioning Company, LLC.~~~~Entergy Nuclear Operations, Inc.~~ shall take no action to cause ~~Entergy Global Investments, Inc.~~~~NorthStar Group Services, Inc.~~, or ~~Entergy International Holdings Ltd. LLC, or their parent companies~~ to void, cancel, or modify the ~~lines of credit~~\$140 million Support agreement 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.

c. Performance Bond

NorthStar Vermont Yankee, LLC shall obtain a performance bond if a Settlement Agreement with the U.S. Department of Energy (DOE), on DOE reimbursements for spent fuel management expenses, is not entered into by January 1, 2022. The performance bond will be effective January 1, 2022, initially in the amount of \$4.3 million, and it will be renewed annually. This amount covers the annual amount of Independent Spent Fuel Storage Installation (ISFSI) operation and maintenance (O&M) costs projected for 2022-2024. If a settlement is not reached by January 1, 2024, this amount will be increased to \$9.3 million, which covers the annual amount of ISFSI O&M costs projected for years after 2024.

4. This license is effective as of the date of issuance and is effective until the Commission notifies the licensee in writing that the license is terminated.

FOR THE NUCLEAR REGULATORY COMMISSION

Original Signed By  
Eric J. Leeds

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Enclosures:  
Appendix A - Technical Specifications

Date of Issuance: March 21, 2011

APPENDIX A

TO

10 CFR PART 50 LICENSE DPR-28

TECHNICAL SPECIFICATIONS

FOR

VERMONT YANKEE NUCLEAR POWER STATION

VERNON, VERMONT

~~ENERGY NUCLEAR OPERATIONS, INC.~~ NORTHSTAR NUCLEAR  
DECOMMISSIONING COMPANY, LLC

AND

~~ENERGY NUCLEAR~~ NORTHSTAR VERMONT YANKEE, LLC

DOCKET NO. 50-271

## 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 ~~Entergy Nuclear~~NorthStar Vermont Yankee, LLC either owns or to which it has perpetual rights and easements.

### 5.2 Spent Fuel Storage

Spent Fuel shall not be stored in the Spent Fuel Pool.