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

March 21, 2011

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Mr. Michael Colomb
Site Vice President
Entergy Nuclear Operation, Inc.
Vermont Yankee Nuclear Power Station
185 Old Ferry Road
P.O. Box 500
Brattleboro, VT 05302-0500

SUBJECT: ISSUANCE OF RENEWED FACILITY OPERATING LICENSE NO. DPR-28 FOR THE VERMONT YANKEE NUCLEAR POWER STATION

Dear Mr. Colomb:

The U.S. Nuclear Regulatory Commission (NRC or the staff) has issued Renewed Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station (VYNPS). The NRC issued the renewed facility operating license based on the staff's review of your application dated January 25, 2006, as supplemented by letters submitted to the NRC through February 15, 2011. The review did not result in an amendment of the technical specifications for VYNPS.

Renewed Facility Operating License No. DPR-28 expires at midnight on March 21, 2032.

The NRC sets forth the technical basis for issuing the renewed license in NUREG-1907, "Safety Evaluation Report Related to the License Renewal of the Vermont Yankee Nuclear Power Station," issued May 2008 and supplemented in September 2009 and March 2011. The results of the environmental reviews related to the issuance of the renewed license appear in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 30, Regarding Vermont Yankee Nuclear Power Station," issued August 2007.

Documented in NUREG-1907, Entergy Nuclear Operations, Inc. (Entergy) had committed to replace its steam dryer monitoring plan during the period of extended operation for VYNPS with the inspection program guidance defined in Boiling Water Reactor Vessels and Internals Project (BWRVIP) Report 139, "Steam Dryer Inspection and Flaw Evaluation Guidelines," if BWRVIP-139 is approved by the NRC. Following discussions regarding steam dryer aging management during the Atomic Safety and Licensing Board (ASLB) hearing, that commitment has been superseded by a steam dryer license condition. The NRC has incorporated the expressed condition described in ASLB order LBP-08-25 (November 24, 2008), as a license condition for the aging management of the steam dryer at VYNPS. Commitment No. 37 in Appendix A of NUREG-1907 has been rendered null and void. Entergy will be required to apply for a license amendment if it desires to implement BWRVIP-139 at VYNPS.

Enclosure 1 contains Renewed Facility Operating License No. DPR-28. Enclosure 2 contains Appendix A to Operating License DPR-28, "Technical Specifications." Enclosure 3 is a copy of the related *Federal Register* notice of issuance of the renewed license. The original has been sent to the Office of the Federal Register for publication.

If you have any questions regarding this issue, please feel free to contact me at by telephone 301-415-3733 or by e-mail at Robert.Kuntz@nrc.gov.

Sincerely,

Robert F. Kuntz, Senior Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:
1. Renewed Facility Operating License No. DPR-28
2. Appendix A to Operating License No. DPR-28, "Technical Specifications"
3. Copy of *Federal Register* notice

cc w/encls 1 and 3: Listserv

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

(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. 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 of the *Code of Federal Regulations* (CFR) Chapter 1,: 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 renewed 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. Entergy Nuclear Vermont Yankee, LLC is financially qualified and Entergy Nuclear Operations, Inc. is technically and financially qualified to engage in the activities authorized by this renewed operating license, in accordance with the rules and regulations of the Commission; and

e. Entergy Nuclear Vermont Yankee, LLC and Entergy 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 renewed 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 renewed operating 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; and

h. Actions have been identified and have been or will be taken with respect to: (1) managing the effects of aging on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1) during the period of extended operation, and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by this renewed operating license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3 for the facility, and that any changes made to the facility's current licensing basis in order to comply with 10 CFR 54.29(a) are in accordance with the Act and the Commission's regulations.

Accordingly, Facility Operating License No. DPR-28, as amended, issued to Entergy Nuclear Vermont Yankee, LLC and 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 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 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.

   B. Entergy Nuclear Operations, Inc., 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., 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., 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. 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. 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. 246, 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:

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.'s environmental monitoring program, Entergy Nuclear Operations, Inc. shall provide an analysis of the problem to the Commission and to the advisory group for the Technical Specifications, and 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. 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. 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. 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.

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. Entergy 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 Entergy Nuclear Operations, Inc.

    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.

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.

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:

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

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[1], 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.

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), Entergy Nuclear 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 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

[1] The Training and Qualification Plan and Safeguards Contingency Plan are Appendices to the Security Plan.

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) 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.

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

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.

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.

L. Transient Testing

1. During the extended power uprate (EPU) power ascension test program and prior to exceeding 168 hours of plant operation at the nominal full EPU reactor power level, with feedwater and condensate flow rates stabilized at approximately the EPU full power level, Entergy Nuclear Operations, Inc. shall confirm through performance of transient testing that the loss of one condensate pump will not result in a complete loss of reactor feedwater.

2. Within 30 days at nominal full-power operation following successful performance of the test in (1) above, through performance of additional transient testing and/or analysis of the results of the testing conducted in (1) above, confirm that the loss of one reactor feedwater pump will not result in a reactor trip.

M. Potential Adverse Flow Effects

This license condition provides for monitoring, evaluating, and taking prompt action in response to potential adverse flow effects as a result of power uprate operation on plant structures, systems, and components (including verifying the continued structural integrity of the steam dryer).

1. The following requirements are placed on operation of the facility above the original licensed thermal power (OLTP) level of 1593 megawatts thermal (MWt):

   a. Entergy Nuclear Operations, Inc. shall monitor hourly the 32 main steam line (MSL) strain gages during power ascension above 1593 MWt for increasing pressure fluctuations in the steam lines.

   b. Entergy Nuclear Operations, Inc. shall hold the facility for 24 hours at 105%, 110%, and 115% of OLTP to collect data from the 32 MSL strain gages required by Condition M.1.a, conduct plant inspections and walkdowns, and evaluate steam dryer performance based on these data; shall provide the evaluation to the NRC staff by facsimile or electronic transmission to the NRC project manager upon completion of the evaluation; and shall not increase power above each hold point until 96 hours after the NRC project manager confirms receipt of the transmission.

   c. If any frequency peak from the MSL strain gage data exceeds the limit curve established by Entergy Nuclear Operations, Inc. and submitted to the NRC staff prior to operation above OLTP, Entergy Nuclear Operations, Inc. shall return the facility to a power level at which the limit curve is not exceeded. Entergy Nuclear Operations, Inc. shall resolve the uncertainties in the steam dryer analysis, document the continued structural integrity of the steam dryer, and provide that documentation to the NRC staff by facsimile or electronic transmission to the NRC project manager prior to further increases in reactor power.

   d. In addition to evaluating the MSL strain gage data, Entergy Nuclear Operations, Inc. shall monitor reactor pressure vessel water level instrumentation or MSL piping accelerometers on an hourly basis during power ascension above OLTP. If resonance frequencies are identified as increasing above nominal levels in proportion to strain

gage instrumentation data, Entergy Nuclear Operations, Inc. shall stop power ascension, document the continued structural integrity of the steam dryer, and provide that documentation to the NRC staff by facsimile or electronic transmission to the NRC project manager prior to further increases in reactor power.

e. Following start-up testing, Entergy Nuclear Operations, Inc. shall resolve the uncertainties in the steam dryer analysis and provide that resolution to the NRC staff by facsimile or electronic transmission to the NRC project manager. If the uncertainties are not resolved within 90 days of issuance of the license amendment authorizing operation at 1912 MWt, Entergy Nuclear Operations, Inc. shall return the facility to OLTP.

2. As described in Entergy Nuclear Operations, Inc. letter BVY 05-084 dated September 14, 2005, Entergy Nuclear Operations, Inc. shall implement the following actions:

   a. Prior to operation above OLTP, Entergy Nuclear Operations, Inc. shall install 32 additional strain gages on the main steam piping and shall enhance the data acquisition system in order to reduce the measurement uncertainty associated with the acoustic circuit model (ACM).

   b. In the event that acoustic signals are identified that challenge the limit curve during power ascension above OLTP, Entergy Nuclear Operations, Inc. shall evaluate dryer loads and re-establish the limit curve based on the new strain gage data, and shall perform a frequency-specific assessment of ACM uncertainty at the acoustic signal frequency.

   c. After reaching 120% of OLTP, Entergy Nuclear Operations, Inc. shall obtain measurements from the MSL strain gages and establish the steam dryer flow-induced vibration load fatigue margin for the facility, update the dryer stress report, and re-establish the steam dryer monitoring plan (SDMP) limit curve with the updated ACM load definition and revised instrument uncertainty, which will be provided to the NRC staff.

   d. During power ascension above OLTP, if an engineering evaluation is required in accordance with the SDMP, Entergy Nuclear Operations, Inc. shall perform the structural analysis to address frequency uncertainties up to ±10% and assure that peak responses that fall within this uncertainty band are addressed.

   e. Entergy Nuclear Operations, Inc. shall revise the SDMP to reflect long-term monitoring of plant parameters potentially indicative of

steam dryer failure; to reflect consistency of the facility's steam dryer inspection program with General Electric Services Information Letter 644, Revision 1; and to identify the NRC Project Manager for the facility as the point of contact for providing SDMP information during power ascension.

f. Entergy Nuclear Operations, Inc. shall submit the final extended power uprate (EPU) steam dryer load definition for the facility to the NRC upon completion of the power ascension test program.

g. Entergy Nuclear Operations, Inc. shall submit the flow-induced vibration related portions of the EPU startup test procedure to the NRC, including methodology for updating the limit curve, prior to initial power ascension above OLTP.

3. Entergy Nuclear Operations, Inc. shall prepare the EPU startup test procedure to include the (a) stress limit curve to be applied for evaluating steam dryer performance; (b) specific hold points and their duration during EPU power ascension; (c) activities to be accomplished during hold points; (d) plant parameters to be monitored; (e) inspections and walkdowns to be conducted for steam, feedwater, and condensate systems and components during the hold points; (f) methods to be used to trend plant parameters; (g) acceptance criteria for monitoring and trending plant parameters, and conducting the walkdowns and inspections; (h) actions to be taken if acceptance criteria are not satisfied; and (i) verification of the completion of commitments and planned actions specified in its application and all supplements to the application in support of the EPU license amendment request pertaining to the steam dryer prior to power increase above OLTP. Entergy Nuclear Operations, Inc. shall provide the related EPU startup test procedure sections to the NRC by facsimile or electronic transmission to the NRC project manager prior to increasing power above OLTP.

4. When operating above OLTP, the operating limits, required actions, and surveillances specified in the SDMP shall be met. The following key attributes of the SDMP shall not be made less restrictive without prior NRC approval:

   a. During initial power ascension testing above OLTP, each test plateau increment shall be approximately 80 MWt;

   b. Level 1 performance criteria; and

   c. The methodology for establishing the stress spectra used for the Level 1 and Level 2 performance criteria.

Changes to other aspects of the SDMP may be made in accordance with the guidance of NEI 99-04.

5. During each of the three scheduled refueling outages (beginning with the spring 2007 refueling outage), a visual inspection shall be conducted of all accessible, susceptible locations of the steam dryer, including flaws left "as is" and modifications.

6. The results of the visual inspections of the steam dryer conducted during the three scheduled refueling outages (beginning with the spring 2007 refueling outage) shall be reported to the NRC staff within 60 days following startup from the respective refueling outage. The results of the SDMP shall be submitted to the NRC staff in a report within 60 days following the completion of all EPU power ascension testing.

7. The requirements of paragraph 4 above for meeting the SDMP shall be implemented upon issuance of the EPU license amendment and shall continue until the completion of one full operating cycle at EPU. If an unacceptable structural flaw (due to fatigue) is detected during the subsequent visual inspection of the steam dryer, the requirements of paragraph 4 shall extend another full operating cycle until the visual inspection standard of no new flaws/flaw growth based on visual inspection is satisfied.

8. This license condition shall expire upon satisfaction of the requirements in paragraphs 5, 6, and 7 provided that a visual inspection of the steam dryer does not reveal any new unacceptable flaw or unacceptable flaw growth that is due to fatigue.

N. Mitigation Strategy License Condition

Develop and maintain strategies for addressing large fires and explosions and that include the following key areas:

(a) Fire fighting response strategy with the following elements:
   1. Pre-defined coordinated fire response strategy and guidance
   2. Assessment of mutual aid fire fighting assets
   3. Designated staging areas for equipment and materials
   4. Command and control
   5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:
   1. Protection and use of personnel assets
   2. Communications
   3. Minimizing fire spread
   4. Procedures for implementing integrated fire response strategy
   5. Identification of readily-available pre-staged equipment

6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:
1. Water spray scrubbing
2. Dose to onsite responders

O. The licensee shall implement and maintain all Actions required by Attachment 2 to NRC Order EA-06-137, issued June 20, 2006, except the last action that requires incorporation of the strategies into the site security plan, contingency plan, emergency plan and/or guard training and qualification plan, as appropriate.

P. The information in the UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), shall be incorporated into the next UFSAR no later than the next scheduled update required by 10 CFR 50.71(e), following the issuance of this renewed operating license. Until this update is complete, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. may make changes to the information in the supplement without Commission approval provided that Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc., evaluates such changes pursuant to the critieria in 10 CFR 50.59 and otherwise complies with the requirements of that section.

Q. The UFSAR supplement, as revised, submitted pursuant to 10 CFR 54.21(d), describes certain future activities to be completed prior to and/or during the period of extended operation. Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. shall complete these activities in accordance with Appendix A of Supplement 2 to NUREG-1907, "Safety Evaluation Report Related to the License Renewal of Vermont Yankee Nuclear Power Station," issued March 2011 (excluding Commitment No. 37, which is superseded by the steam dryer license condition). Entergy Nuclear Vermont Yankee, LLC or Entergy Nuclear Operations, Inc. shall notify the NRC in writing when activities to be completed prior to the period of extended operation are complete and can be verified by NRC inspection.

R. Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. shall implement the most recent staff-approved version of the Boiling Water Reactor Vessels and Internals Project (BWRVIP) Integrated Surveillance Program (ISP) as the method to demonstrate compliance with the requirements of 10 CFR Part 50, Appendix H. Any changes to the BWRVIP ISP capsule withdrawal schedule must be submitted for NRC staff review and approval. Any changes to the BWRVIP ISP capsule withdrawal schedule which affects the time of withdrawal of any surveillance capsules must be incorporated into the licensing basis. If any surveillance capsules are removed without the intent to test them, these capsules must be stored in a manner which maintains them in a condition which would support re-insertion into the reactor pressure vessel, if necessary.

S. Steam Dryer License Condition

In accordance with Atomic Safety and Licensing Board order LBP-08-25, dated November 24, 2008, notwithstanding any other provision of this license, Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. shall continue to perform and implement the continuous parameter monitoring, moisture content monitoring, and visual inspections specified in the SDMP at the intervals specified in General Electric Services Information Letter 644, Revision 2. These shall continue for the full term of the period of extended operation unless this provision of the license is duly amended.

4. This renewed operating license is effective as of the date of issuance and shall expire at midnight on March 21, 2032.

FOR THE NUCLEAR REGULATORY COMMISSION

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Enclosures:
Appendix A - Technical Specifications

Date of Issuance: March 21, 2011

[7590-01-P]

NUCLEAR REGULATORY COMMISSION

ENTERGY NUCLEAR OPERATIONS, INC.,

VERMONT YANKEE NUCLEAR POWER STATION

NOTICE OF ISSUANCE OF RENEWED FACILITY OPERATING LICENSE NO. DPR-28

FOR AN ADDITIONAL 20-YEAR PERIOD

RECORD OF DECISION

DOCKET NO. 50-271

NRC-2011-xxxx

Notice is hereby given that the U.S. Nuclear Regulatory Commission (NRC of the Commission) has issued Renewed Facility Operating License No. DPR-28 to Entergy Nuclear Vermont Yankee, LLC (Entergy VY), and Entergy Nuclear Operations, Inc. (ENO), (licensee), the operator of the Vermont Yankee Nuclear Power Station (VYNPS). Renewed Facility Operating License No. DPR-28 authorizes operation of VYNPS by the licensee at reactor core power levels not in excess of 1912 megawatts thermal (650 megawatts electric), in accordance with the provisions of the VYNPS renewed license and its technical specifications.

The notice also serves as the record of decision for the renewal of Facility Operating License No. DPR-28, consistent with Title 10 of the *Code of Federal Regulations* Section 51.103 (10 CFR 51.103). As discussed in the final supplemental environmental impact statement for VYNPS, dated August 2007, the Commission has considered a range of reasonable alternatives that included the no-action alternative. The factors considered in the record of decision can be found in the supplemental environmental impact statement (SEIS) for VYNPS.

VYNPS is a boiling water reactor located five miles south of Brattleboro, Vermont. The application for the renewed license complied with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. As required by the Act and the Commission's regulations in 10 CFR Chapter 1, the Commission has made appropriate findings, which are set forth in the renewed license. Prior public notice of the Commission considering the license renewal application (LRA) and of an opportunity for a hearing regarding the LRA was published in the *Federal Register* on March 27, 2006 (71 FR 15220).

For further details with respect to this action, see: (1) Entergy VY and ENO, LRA for VYNPS dated January 25, 2006, as supplemented by letters dated through February 21, 2008; (2) the Commission's safety evaluation report (SER) (NUREG-1907), published in May 2008; (3) Supplements 1 and 2 to the SER, published in September 2009 and March 2011; (4) the licensee's updated safety analysis report; and (5) the Commission's final environmental impact statement (NUREG-1437, Supplement 30), for VYNPS, published on August 1, 2007. These documents are available at the NRC's Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, and can be viewed from the NRC Public Electronic Reading Room at http://www.nrc.gov/reading-rm/adams.html.

Copies of the Renewed Facility Operating License No. DPR-28, may be obtained by writing to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001, Attention: Director, Division of License Renewal. Copies of the VYNPS SER (NUREG-1907), supplemental SER, and the final environmental impact statement (NUREG-1437, Supplement 30) may be purchased from the National Technical Information Service, U.S. Department of Commerce, Springfield, Virginia 22161 (http://www.ntis.gov), 703-605-6000, or Attention: Superintendent of Documents, U.S. Government Printing Office, P.O. Box 371954

Pittsburgh, Pennsylvania 15250-7954 (http://www.gpoaccess.gov), 202-512-1800. All orders should clearly identify the NRC publication number and the requestor's Government Printing Office deposit account number or VISA or MasterCard number and expiration date.

Dated at Rockville, Maryland, this 21st day of March, 2011.

FOR THE NUCLEAR REGULATORY COMMISSION

Bo M. Pham, Chief
Projects Branch 1
Division of License Renewal,
Office of Nuclear Reactor Regulation

Enclosure 1 contains Renewed Facility Operating License No. DPR-28. Enclosure 2 contains Appendix A to Operating License DPR-28, "Technical Specifications." Enclosure 3 is a copy of the related *Federal Register* notice of issuance of the renewed license. The original has been sent to the Office of the Federal Register for publication.

If you have any questions regarding this issue, please feel free to contact me by telephone at 301-415-3733 or by e-mail at Robert.Kuntz@nrc.gov.

Sincerely,

/RA/

Robert F. Kuntz, Senior Project Manager
Projects Branch 2
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:
1. Renewed Facility Operating License No. DPR-28
2. Appendix A to Operating License No. DPR-28, "Technical Specifications"
3. Copy of *Federal Register* notice

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Letter to Michael Colomb from Robert F. Kuntz dated March 21, 2011

SUBJECT: ISSUANCE OF RENEWED FACILITY OPERATING LICENSE NO. DPR-28 FOR THE VERMONT YANKEE NUCLEAR POWER STATION

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