



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

November 13, 2012

Vice President, Operations
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
P.O. Box 250
Governor Hunt Road
Vernon, VT 05354

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF
AMENDMENT TO RENEWED FACILITY OPERATING LICENSE RE: CYBER
SECURITY PLAN IMPLEMENTATION SCHEDULE MILESTONE
(TAC NO. ME9012)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 251 to Renewed Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated July 2, 2012.

The licensee's application for the proposed amendment to the Renewed Facility Operating License (FOL) would revise the scope of Cyber Security Plan (CSP) Implementation Schedule Milestone #6 and the existing license condition in the facility operating license. Milestone #6 of the CSP implementation schedule concerns the identification, documentation, and implementation of cyber security controls (technical, operational, and management) for critical digital assets related to target set equipment. Entergy is requesting to modify the scope of Milestone #6 to apply to the technical cyber security controls only. The operational and management controls, as described in NEI 08-09, Revision 6, would be implemented concurrent with the full implementation of the Cyber Security Program (Milestone #8). Thus, all CSP activities would be fully implemented by the completion date, identified in Milestone #8 of the licensee's CSP implementation schedule.

This license amendment is effective as of the date of its issuance and shall be implemented by December 31, 2012.

V. P. Operations

- 2 -

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Guzman", with a long horizontal flourish extending to the right.

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:

1. Amendment No. 251 to
License No. DPR-28
2. Safety Evaluation

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

ENERGY NUCLEAR VERMONT YANKEE, LLC

AND ENERGY NUCLEAR OPERATIONS, INC.

DOCKET NO. 50-271

VERMONT YANKEE NUCLEAR POWER STATION

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 251
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (the licensee) on July 2, 2012, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(B) Technical Specifications


The Technical Specifications contained in Appendix A, as revised through Amendment No. 251, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

Further, the following paragraph is added to the existing License Condition 3.G:

“Entergy Nuclear Operations, Inc. shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). Entergy Nuclear Operations, Inc. CSP was approved by License Amendment No. 247, as supplemented by a change approved by License Amendment No. 251.”

3. This license amendment is effective as of the date of its issuance and shall be implemented by December 31, 2012.

FOR THE NUCLEAR REGULATORY COMMISSION



George A. Wilson, Chief
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License

Date of Issuance: November 13, 2012

ATTACHMENT TO LICENSE AMENDMENT NO. 251

RENEWED FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following pages of the Renewed Facility Operating License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

Page 3

Page 6

Insert

Page 3

Page 6

- 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. 251 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.

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 plans¹, 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.

Entergy Nuclear Operations, Inc. shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). Entergy Nuclear Operations, Inc. CSP was approved by License Amendment No. 247, as supplemented by a change approved by License Amendment No. 251.

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

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



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 251 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-28

ENERGY NUCLEAR VERMONT YANKEE, LLC

AND ENERGY NUCLEAR OPERATIONS, INC.

VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By application dated July 2, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML121910298), Entergy Nuclear Operations, Inc. (Entergy, the licensee) requested changes to the facility operating license (FOL) for Vermont Yankee (VY) Nuclear Power Station. The proposed change would revise the scope of Cyber Security Plan (CSP) Implementation Schedule Milestone #6 and the existing license condition in the FOL. Milestone #6 of the CSP implementation schedule concerns the identification, documentation, and implementation of cyber security controls (technical, operational, and management) for critical digital assets (CDAs) related to target set equipment. Entergy is requesting to modify the scope of Milestone #6 to apply to the technical cyber security controls only. The operational and management controls, as described in Nuclear Energy Institute (NEI) 08-09, Revision 6, would be implemented concurrent with the full implementation of the Cyber Security Program (Milestone #8). Thus, all CSP activities would be fully implemented by the completion date, identified in Milestone #8 of the licensee's CSP implementation schedule.

Portions of the letter dated July 2, 2012, contain sensitive unclassified non-safeguards information and, accordingly, those portions are withheld from public disclosure.

2.0 REGULATORY EVALUATION

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed and approved the licensee's existing CSP implementation schedule by License Amendment No. 247 dated July 20, 2011 (ADAMS Accession No. ML11152A013), concurrent with the incorporation of the CSP into the facility current licensing basis. The NRC staff considered the following regulatory requirements and guidance in its review of the current license amendment request to modify the existing CSP implementation schedule:

- Title 10 of the *Code of Federal Regulations* (10 CFR) 73.54 states: "Each [CSP] submittal must include a proposed implementation schedule. Implementation of the licensee's cyber security program must be consistent with the approved schedule."
- The licensee's facility operating license includes a license condition that requires the licensee to fully implement and maintain in effect all provisions of the Commission-approved CSP.
- Amendment No. 247, dated July 20, 2011, which approved the licensee's CSP and implementation schedule, included the following statement: "The implementation of the CSP, including the key intermediate milestone dates and the full implementation date, shall be in accordance with the implementation schedule submitted by the licensee on July 16, 2010, as supplemented by letters dated February 15 and April 4, 2011, and approved by the NRC staff with this license amendment. All subsequent changes to the NRC-approved CSP implementation schedule will require prior NRC approval pursuant to 10 CFR 50.90."
- In a letter to the NEI dated March 1, 2011 (ADAMS Accession No. ML110070348), the NRC staff acknowledged that the cyber security implementation schedule template was "written generically and licensees that use the template to develop their proposed implementation schedules may need to make changes to ensure the submitted schedule accurately accounts for site-specific activities."

3.0 TECHNICAL EVALUATION

Amendment No. 247 to Renewed FOL No. DPR-28 for VY was issued on July 20, 2011. The NRC staff also approved the licensee's CSP implementation schedule, as discussed in the safety evaluation issued with the amendment. The implementation schedule had been submitted by the licensee based on a template prepared by NEI, which the NRC staff found acceptable for licensees to use to develop their CSP implementation schedules (ADAMS Accession No. ML110600218). The licensee's proposed implementation schedule for the Cyber Security Program identified completion dates and bases for the following eight milestones:

- 1) Establish the Cyber Security Assessment Team;
- 2) Identify Critical Systems and Critical Digital Assets (CDAs);
- 3) Install a deterministic one-way device between lower level devices and higher level devices;
- 4) Implement the security control "Access Control For Portable And Mobile Devices;"
- 5) Implement observation and identification of obvious cyber related tampering to existing insider mitigation rounds by incorporating the appropriate elements;
- 6) Identify, document, and implement cyber security controls as per "Mitigation of Vulnerabilities and Application of Cyber Security Controls" for CDAs that could adversely impact the design function of physical security target set equipment;
- 7) Commence ongoing monitoring and assessment activities for those target set CDAs whose security controls have been implemented; and
- 8) Fully implement the CSP.

3.1 Licensee's Proposed Change

Currently, Milestone #6 of VY's CSP requires Entergy to identify, document, and implement cyber security controls for CDAs that could adversely impact the design function of physical security target set equipment by December 31, 2012. These cyber security controls consist of technical, operational and management security controls. In its July 2, 2012, application, Entergy proposed to modify Milestone #6 to change the scope of the cyber security controls due to be implemented on December 31, 2012, to include only the NEI 08-09, Revision 6, Appendix D technical security controls. Entergy proposes to amend its CSP to provide that operational and management security controls, identified in Milestone #6, will be fully implemented by a later date, which is the completion date identified in Milestone #8 of the CSP implementation schedule. The licensee stated that implementing the technical cyber security controls for target set CDAs provides a high degree of protection against cyber-related attacks that could lead to radiological sabotage. The licensee further stated that many of its existing programs are primarily procedure-based programs and must be implemented in coordination with the comprehensive Cyber Security Program. The licensee also stated that the existing programs currently in place at VY (e.g., physical protection, maintenance, configuration management, and operating experience) provide sufficient operational and management cyber security protection during the interim period until the Cyber Security Program is fully implemented.

3.2 NRC Staff Evaluation

The intent of the cyber security implementation schedule was for licensees to demonstrate ongoing implementation of their cyber security program prior to full implementation, which is set for the date specified in Milestone #8. In addition to Milestone #6 and its associated activities, licensees will be completing six other milestones (Milestones #1 through #5 and Milestone #7) by December 31, 2012. Activities include establishing a Cyber Security Assessment Team, identifying critical systems and CDAs, installing deterministic one-way devices between defensive levels, implementing access control for portable and mobile devices, implementing methods to observe and identify obvious cyber related tampering, and conducting ongoing monitoring and assessment activities for target set CDAs. In their aggregate, the interim milestones demonstrate ongoing implementation of the cyber security program at VY.

The NRC staff has reviewed the licensee's evaluation of the proposed change in its submittal dated July 2, 2012, and finds that by completing Milestones #1 through #5, Milestone #6 with implementation of technical controls to target set CDAs, and Milestone #7, VY will have an acceptable level of cyber security protection until full program implementation is achieved. Technical cyber security controls include access controls, audit and accountability, CDA and communications protection, identification and authentication, and system hardening. These controls are executed by computer systems, as opposed to people, and consist of hardware and software controls that provide automated protection to a system or application. Implementation of technical cyber security controls promotes standardization, trust, interoperability, connectivity, automation, and increased efficiency. For these reasons, the NRC staff concludes that the licensee's approach is acceptable.

The NRC staff also recognizes that full implementation of operational and management cyber security controls in accordance with requirements of the VY CSP will be achieved with full implementation of the VY Cyber Security Program by the date set in Milestone #8. That is, all required elements for the operational and management cyber security controls in accordance

with the VY CSP will be implemented in their entirety at the time of full implementation of the CSP.

The licensee provided a regulatory commitment in its submission dated July 2, 2012; however, the NRC staff does not regard the CSP milestone implementation dates as regulatory commitments that can be changed unilaterally by the licensee, particularly in light of the regulatory requirement at 10 CFR 73.54, that "[i]mplementation of the licensee's cyber security program must be consistent with the approved schedule." As the NRC staff explained in its letter to all operating reactor licensees dated May 9, 2011 (ADAMS Accession No. ML110980538), the implementation of the plan, including the key intermediate milestone dates and the full implementation date shall be in accordance with the implementation schedule submitted by the licensee and approved by the NRC. All subsequent changes to the NRC-approved CSP implementation schedule, thus, will require prior NRC approval pursuant in 10 CFR 50.90.

3.3 Revision to License Condition

By letter dated July 2, 2012, the licensee proposed to modify the paragraph in the License Condition 3.G of Renewed Facility Operating License No. DPR-28 for Vermont Yankee Nuclear Power Station, which requires the licensee to fully implement and maintain in effect all provisions of the NRC-approved CSP.

The paragraph in the License Condition 3.G of Renewed Facility Operating License No. DPR-28 for Vermont Yankee Nuclear Power Station is modified as follows:

"Entergy Nuclear Operations, Inc. shall fully implement and maintain in effect all provisions of the Commission-approved cyber security plan (CSP), including changes made pursuant to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). Entergy Nuclear Operations, Inc. CSP was approved by License Amendment No. 247, as supplemented by a change approved by License Amendment No. 251."

3.4 Summary

Based on its review of the licensee's submissions, the NRC staff concludes that the proposed changes to Milestone #6 of the licensee's CSP implementation schedule are acceptable. The NRC staff also concludes that, upon full implementation of the licensee's cyber security program, the requirements of the licensee's CSP and 10 CFR 73.54 will be met. Therefore, the NRC staff finds the proposed changes acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Vermont State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

This amendment relates solely to safeguards matters and does not involve any significant construction impacts. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(12). Pursuant to 10 CFR 51.22(b), no environmental

impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

6.0 CONCLUSION

The Commission staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations; and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: M. Coflin, NSIR/DSP

Date: November 13, 2012

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:

- 1. Amendment No. 251 to License No. DPR-28
- 2. Safety Evaluation

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ADAMS Accession No.: ML12261A292 (*) No substantial change from SE Input Memo

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