



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

October 28, 2009

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

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ISSUANCE OF
AMENDMENT RE: EXTENSION OF APPENDIX J, TYPE A INTEGRATED
LEAKAGE RATE TEST INTERVAL (TAC NO. ME1240)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 240 to Facility Operating License DPR-28 for the Vermont Yankee Nuclear Power Station, in response to your application dated May 5, 2009.

The amendment would revise the Technical Specification (TS) Section 6.7.C to change requirements related to the schedule for performing the 10 CFR Part 50, Appendix J, Type A test. Specifically, the proposed change would change the TS from requiring the test "no later than April 2010" to "prior to startup from the April 2010 refuel outage."

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 "James Kim".

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

Docket No. 50-271

Enclosures:

1. Amendment No. 240 to
License No. DPR-28
2. Safety Evaluation

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

ENTERGY NUCLEAR VERMONT YANKEE, LLC
AND ENTERGY NUCLEAR OPERATIONS, INC.
DOCKET NO. 50-271
VERMONT YANKEE NUCLEAR POWER STATION
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 240
License No. DPR-28

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment filed by Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (the licensee) dated May 5, 2009, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

(B) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 240 , are hereby incorporated in the license. Entergy Nuclear Operations, Inc. shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Nancy L. Salgado, Chief
Plant Licensing Branch 1-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License and
Technical Specifications

Date of Issuance: October 28, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 240

FACILITY OPERATING LICENSE NO. DPR-28

DOCKET NO. 50-271

Replace the following page of the Facility Operating License with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove
3

Insert
3

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove
265

Insert
265

- E. Entergy Nuclear Operations, Inc., pursuant to the Act and 10 CFR Parts .30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility.
- 3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Section 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified below:

- A. Maximum Power Level

Entergy Nuclear Operations, Inc. is authorized to operate the facility at reactor core power levels not to exceed 1912 megawatts thermal in accordance with the Technical Specifications (Appendix A) appended hereto.

- B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 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:

VYNPS

Report for the period of the report in which any change to the ODCM was made. Each change shall be identified by markings in the margin of the affected pages, clearly indicating the area of the page that was changed, and shall indicate the date (e.g., month/year) the change was implemented.

C. PRIMARY CONTAINMENT LEAKAGE RATE TESTING PROGRAM

A program shall be established to implement the leakage rate testing of the primary containment as required by 10 CFR 50.54(o) and 10 CFR 50, Appendix J, Option B as modified by approved exemptions. This program shall be in accordance with the guidelines contained in Regulatory Guide 1.163, entitled "Performance Based Containment Leak-Test Program," dated September 1995, as modified by the following:

- The first Type A test after the April 1995 Type A test shall be performed prior to startup from the April 2010 refuel outage. (This is an exception to Section 9.2.3 of NEI 94-01, Rev. 0, "Industry Guideline for Implementing Performance-Based Option of 10CFR50, Appendix J.")
- The leakage contributions from the main steam pathways are excluded from the sum of the leakage rates from Type B and C tests specified in (1) Section III.B of 10CFR50, Appendix J - Option B; (2) Section 6.4.4 of ANSI/ANS 56.8-1994; and (3) Section 10.2 of NEI 94-01, Rev. 0.
- The leakage contributions from the main steam pathways are excluded from the overall integrated leakage rate from Type A tests specified in (1) Section III.A of 10CFR50, Appendix J - Option B; (2) Section 3.2 of ANSI/ANS 56.8-1994; and (3) Sections 8.0 and 9.0 of NEI 94-01, Rev. 0.

The peak calculated containment internal pressure for the design basis loss of coolant accident, Pa, is 44 psig.

The maximum allowable primary containment leakage rate, La, at Pa, shall be 0.8% of primary containment air weight per day.

Leakage rate acceptance criteria are:

1. Primary containment leakage rate acceptance criterion ≤ 1.0 La.
2. The as-left primary containment integrated leakage rate test (Type A test) acceptance criterion is ≤ 0.75 La.
3. The combined local leakage rate test acceptance criterion for Type B and Type C tests (excluding the leakage contributions from the main steam pathways) is ≤ 0.6 La, calculated on a maximum pathway basis, prior to entering a mode of operation where primary containment integrity is required.
4. The combined local leakage rate test acceptance criterion for Type B and Type C tests (excluding the leakage contributions from the main steam pathways) is ≤ 0.6 La, calculated on a minimum pathway basis, at all times when primary containment integrity is required.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 240 TO FACILITY OPERATING LICENSE NO. DPR-28

ENTERGY NUCLEAR VERMONT YANKEE, LLC
AND ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION

DOCKET NO. 50-271

1.0 INTRODUCTION

By application dated May 5, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091320234), Entergy Nuclear Operations, Inc. (the licensee) submitted a request to amend the Vermont Yankee Nuclear Power Station (Vermont Yankee) Technical Specification (TS) Section 6.7.C to extend the test interval for their next Appendix J, Type A containment integrated leakage rate test (ILRT) until prior to startup from the April 2010 refueling outage.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix J, Option B requires that a Type A test be conducted at a periodic interval based on historical performance of the overall containment system. Vermont Yankee TS 6.7.C, "Primary Containment Leakage Rate Testing Program," requires that leakage rate testing be performed as required by 10 CFR Part 50, Appendix J, Option B, as modified by approved exemptions, and in accordance with the guidelines contained in Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995. This RG endorses, with certain exceptions, Nuclear Energy Institute (NEI) Report NEI 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," dated July 26, 1995.

A Type A test is an overall (integrated) leakage rate test of the containment structure. NEI 94-01 specifies an initial test interval of 48 months, but allows an extended interval of 10 years, based upon two consecutive successful tests. There is also a provision for extending the test interval an additional 15 months in certain circumstances. The most recent two Type A tests at Vermont Yankee have been successful, so the current interval requirement would normally be 10 years. However, by letter dated October 5, 2004, and supplemented by letter dated April 22, 2005, the licensee requested a one-time deferral of the Type A ILRT by extending the 10-year interval to 15 years. On August 31, 2005, the Nuclear Regulatory Commission (NRC) staff granted this request via License Amendment No. 227. Based on the approved change, the current TS require the next Type A test shall be performed no later than April 2010.

By application dated May 5, 2009, the licensee is requesting a further extension to conduct the next scheduled Type A test. Specifically, the licensee is proposing to conduct the next Type A test prior to startup from the April 2010 refueling outage. Since the licensee's April 2010 refueling outage is scheduled to begin on April 24, 2010, the Type A test, which is performed just prior to start-up, is currently scheduled to be performed during May 2010. Thus, the licensee's request amounts to a further extension of approximately 1 month, over and above the 5-year extension that was already granted. The local leakage rate tests (Type B and Type C tests), including their schedules, are not affected by this request.

3.0 TECHNICAL EVALUATION

The NRC staff approved a one-time extension of the containment ILRT interval from 10 to 15 years in License Amendment No. 227. The test interval extension was supported by a licensee risk assessment. The NRC staff's review of the licensee's risk assessment was documented in the Safety Evaluation for the license amendment (Accession No. ML051120410), which concluded that the combined risk impact of the test interval extension, in terms of total integrated plant risk, large early release frequency, and conditional containment failure probability, is small and supportive of the change.

The licensee did not perform a risk assessment of the combined risk impact of further extending the test interval for the ILRT by one more month. The NRC staff has determined that an additional risk assessment is not warranted in this particular case, due to the relatively small interval extension.

Further, the licensee will shut down the plant in late April 2010 and put the plant in a condition that will not require primary containment integrity prior to the end of April 2010. Consistent with NEI 94-01, Section 9.2.2, primary containment integrity shall not be reestablished until successful completion of the Type A test. Therefore, the proposed rewording of TS 6.7.C does not impact the assumptions made in the risk impact assessment which formed the basis for the existing TS.

Type A testing is performed to verify the integrity of the containment structure in its loss-of-coolant accident configuration. Industry test experience has demonstrated that Type B and C testing detect a large percentage of containment leakage and that the percentage of containment leakage detected by Type A testing is very small. Extending the test interval by approximately 1 month does not significantly increase potential leakage paths not identified by Type B and C testing.

The NRC staff based its evaluation on the past performance of the Type A tests having produced acceptable results and the relatively short period of 1 month for the interval extension. As a result of our examination, it is the staff's judgment, based upon its qualitative analysis, that the requested extension should be granted, and that reasonable assurance of safety will be maintained.

Based on the foregoing evaluation, the NRC staff finds that the interval until the next containment ILRT at Vermont Yankee can be extended to prior to startup from the April 2010 refueling outage, and that the proposed change to TS Section 6.7.C is 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

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in amounts, and no significant change in the types of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (74 FR 31320). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

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

Principal Contributor: Brian Lee

Date: October 28, 2009

October 28, 2009

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

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Sincerely,

/RA/

James Kim, Project Manager
Plant Licensing Branch 1-1
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*See memo dated October 14, 2009

OFFICE	LPL1-1/PM	LPL1-1/LA	SCVB/BC	OGC	LPL1-1/BC
NAME	JKim	SLittle	RDennig*	LSubin	NSalgado
DATE	10/21/09	10/21/09	10/14/2009	10/23/09	10/28/09

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