

November 12, 2004

Mr. Michael Kansler
President
Entergy Nuclear Operations, Inc.
440 Hamilton Avenue
White Plains, NY 10601

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - ENVIRONMENTAL
ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT RELATED TO
THE ISSUANCE OF EXEMPTION TO 10 CFR PART 50, APPENDIX J
(TAC NO. MC0253)

Dear Mr. Kansler:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application for exemption from certain requirements of Title 10 of the *Code of Federal Regulations*, Section 50.54(o), dated July 31, 2003, as supplemented on October 10, November 7 (2 letters), November 20, December 11 (2 letters), and December 30, 2003, and February 10, February 18, February 25, March 17, May 12, and July 20, 2004. The proposed exemption would exempt Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. from requirements to include main steam isolation valve leakage in (a) the overall integrated leakage rate test measurement required by Section III. A of Appendix J, Option B; and (b) the sum of local leak rate test measurements required by Section III. B of Appendix J, Option B.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

Richard B. Ennis, Senior Project Manager, VY Section
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure: Environmental Assessment

cc w/encl: See next page

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Sincerely,

/RA/

Richard B. Ennis, Senior Project Manager, VY Section
Project Directorate I
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Vermont Yankee Nuclear Power Station

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Vermont Yankee Nuclear Power Station

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UNITED STATES NUCLEAR REGULATORY COMMISSIONENTERGY NUCLEAR VERMONT YANKEE, LLCAND ENTERGY NUCLEAR OPERATIONS, INC.DOCKET NO. 50-271VERMONT YANKEE NUCLEAR POWER STATIONENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACTINTRODUCTION

The U.S. Nuclear Regulatory Commission (NRC) is considering issuance of an exemption from 10 CFR Part 50.54(o) and 10 CFR Part 50, Appendix J, for Facility Operating License No. DPR-28, issued to Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy or the licensee) for operation of the Vermont Yankee Nuclear Power Station (VYNPS), located in Vernon, Vermont. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENTIdentification of the Proposed Action:

The proposed action would exempt Entergy from requirements to include main steam isolation valve (MSIV) leakage in (a) the overall integrated leakage rate test measurement required by Section III.A of Appendix J, Option B, and (b) the sum of local leak rate test measurements required by Section III.B of Appendix J, Option B.

The proposed action is in accordance with the licensee's application dated July 31, 2003, as supplemented by letters dated October 10, November 7 (2 letters), November 20, December 11 (2 letters), and December 30, 2003, and February 10, February 18, February 25,

March 17, May 12, and July 20, 2004, for exemption from certain requirements of 10 CFR 50.54(o) and 10 CFR Part 50, Appendix J.

The Need for the Proposed Action:

Section 50.54(o) of 10 CFR Part 50 requires that primary reactor containments for water cooled power reactors be subject to the requirements of Appendix J to 10 CFR Part 50. Appendix J specifies the leakage test requirements, schedules, and acceptance criteria for tests of the leak tight integrity of the primary reactor containment and systems and components which penetrate the containment. Option B, Section III.A requires that the overall integrated leak rate must not exceed the allowable leakage (La) with margin, as specified in the Technical Specifications (TSs). The overall integrated leak rate, as specified in the 10 CFR Part 50, Appendix J definitions, includes the contribution from MSIV leakage. By letter dated July 31, 2003, the licensee has requested an exemption from Option B, Section III.A, requirements to permit exclusion of MSIV leakage from the overall integrated leak rate test measurement. Option B, Section III.B of 10 CFR Part 50, Appendix J requires that the sum of the leakage rates of Type B and Type C local leak rate tests be less than the performance criterion (La) with margin, as specified in the TSs. The licensee's July 31, 2003, letter also requests an exemption from this requirement, to permit exclusion of the MSIV contribution to the sum of the Type B and Type C tests.

The above-cited requirements of Appendix J require that MSIV leakage measurements be grouped with the leakage measurements of other containment penetrations when containment leakage tests are performed. These requirements are inconsistent with the design of the VYNPS and the analytical models used to calculate the radiological consequences of design basis accidents. At VYNPS, and similar facilities, the leakage from primary containment penetrations, under accident conditions, is collected and treated by the secondary containment system, or would bypass the secondary containment. However, the leakage from MSIVs is

collected and treated via an Alternative Leakage Treatment (ALT) path having different mitigation characteristics. In performing accident analyses, it is appropriate to group various leakage effluents according to the treatment they receive before being released to the environment, i.e., bypass leakage is grouped, leakage into secondary containment is grouped, and ALT leakage is grouped, with specific limits for each group defined in the TSs. The proposed exemption would permit ALT path leakage to be independently grouped with its unique leakage limits.

Environmental Impacts of the Proposed Action:

The NRC has completed its safety evaluation of the proposed action and concludes that the calculated radiological consequences remain within the criteria of 10 CFR 50.67. The details of the staff's safety evaluation will be provided in the exemption that will be issued as part of the letter to the licensee approving the exemption to the regulation.

The proposed action will not significantly increase the probability or consequences of accidents. No changes are being made in the types of effluents that may be released off site. There is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not have a potential to affect any historical sites. It does not affect non-radiological plant effluents and has no other environmental impact. Therefore, there are no significant non-radiological impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the "no action" alternative). Denial of the application would result in no change in

current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources than those previously considered in the Final Environmental Statement dated July 1972 for VYNPS.

Agencies and Persons Consulted:

On May 13, 2004, the NRC staff consulted with the Vermont State official, Mr. William K. Sherman of the Vermont Department of Public Service, regarding the environmental impact of the proposed action. The State official had no comments on the environmental impact of the proposed exemption, but provided comments on the associated Technical Specification changes discussed in the July 31, 2003, application. These comments will be addressed in the Safety Evaluation documenting the staff's review of that proposed change.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to this action, see the licensee's letter dated July 31, 2003, as supplemented by letters dated October 10, November 7 (2 letters), November 20, December 11 (2 letters), and December 30, 2003, and February 10, February 18, February 25, March 17, May 12, and July 20, 2004. Documents may be examined, and/or copied for a fee, at the NRC's Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland. Publically available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site, <http://www.nrc.gov/reading->

[rm/adams.html](http://www.nrc.gov/readingrm/adams.html). Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff by telephone at 1-800-397-4209 or 301-415-4737, or by e-mail to pdr@nrc.gov. (Note: Public access to ADAMS has been temporarily suspended so that security reviews of publicly available documents may be performed and potentially sensitive information removed. Please check the NRC Web site for updates on the resumption of ADAMS access.)

Dated at Rockville, Maryland, this 12th day of November, 2004.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Richard B. Ennis, Senior Project Manager, VY Section
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation