

February 20, 2004

The Honorable Patrick Leahy
United States Senate
Washington, D.C. 20510

Dear Senator Leahy:

I am responding on behalf of the U.S. Nuclear Regulatory Commission (NRC) to your letter of January 12, 2004, concerning the request by Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Entergy), to amend the Vermont Yankee Nuclear Power Station (Vermont Yankee) license to increase the power level of the facility. Based on concerns from your constituents, your letter requested an overview of what the NRC staff's review will entail for this license amendment request and how the public can participate in the review.

Extended power uprates (EPUs) result in power level increases that usually require modifications to major plant equipment. The NRC has approved EPUs for increases as high as 20 percent. The Vermont Yankee request is considered an EPU since the licensee is seeking to increase the licensed power level by 20 percent.

The facility operating license and technical specifications for a commercial nuclear power plant specify the maximum power level at which the plant may operate. NRC approval is required for any changes to the facility operating license or technical specifications. The process for making changes to facility operating licenses and technical specifications, called the "license amendment process," is governed by Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50. The specific sections that apply are 10 CFR 50.90, "Application for amendment of license or construction permit"; 10 CFR 50.91, "Notice for public comment; State consultation"; and 10 CFR 50.92, "Issuance of amendment." Power uprates are submitted to the NRC as license amendment requests.

The process the NRC will use to review the Vermont Yankee EPU license amendment request is described in NRC Review Standard RS-001, Revision 0, "Review Standard for Extended Power Uprates," dated December 2003. The review standard is available on the NRC Web site at <http://www.nrc.gov/reactors/operating/licensing/power-uprates.html>. The purpose of this review standard is to provide guidance for the NRC staff's review of EPU applications to enhance consistency, quality, and completeness of reviews. This review standard also informs licensees and the public of the staff's guidance and criteria concerning specific areas of review.

The development of the review standard included an evaluation of NUREG-0800, "Standard Review Plan [SRP] for the Review of Safety Analysis Reports for Nuclear Power Plants," to determine the applicability and adequacy of the various SRP sections for the review of EPU applications. To determine the need for guidance beyond that in the SRP, the staff reviewed: (1) safety evaluations for previously approved power uprates; (2) previously approved topical reports for EPUs; (3) various reports related to Lessons Learned from the Maine Yankee experience (e.g., Report of the Maine Yankee Lessons Learned Task Group,

dated December 1996); and (4) generic communications. The staff also considered feedback from internal and external stakeholders.

After a licensee submits an application for an EPU license amendment, the NRC staff performs an acceptance review to determine if the licensee has addressed the areas of review described in RS-001 in sufficient detail to allow the staff to proceed with its detailed technical review. The acceptance review for the Vermont Yankee EPU license amendment request is documented in an NRC letter to Entergy dated December 15, 2003. As described in this letter, the NRC staff determined that further information was required in several areas. Entergy's letter dated January 31, 2004, provided information to address the NRC's acceptance review letter. The NRC staff has evaluated Entergy's submittal and determined that the necessary information was provided. Therefore, the staff has accepted Entergy's application and has established a forecast review completion date of January 31, 2005. As you requested, we have contacted Ms. Susanne Fleek, of your staff, on February 18, 2004, to inform her that the detailed review is in progress.

As shown in RS-001, Figure 1.1-1, "EPU Process Flow Chart," after the NRC determines that the licensee's application is acceptable such that the detailed technical review may proceed, a "Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for a Hearing" is prepared and published in the *Federal Register*. The *Federal Register* notice provides a brief description of the amendment request and gives members of the public an opportunity to request a hearing. The NRC's regulations concerning the hearing process are described in 10 CFR Part 2, "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders." This regulation was recently revised to make the hearing process more efficient and effective. One of the changes to the rule, which became effective as of February 13, 2004, was to change the time period to request a hearing from 30 days after the *Federal Register* notice is published to 60 days. Further information on public involvement in hearings can be found on the NRC Web site at <http://www.nrc.gov/what-we-do/regulatory/adjudicatory/hearing.html>.

The NRC's detailed technical review for the Vermont Yankee EPU amendment request involves reviewers in 17 different technical areas and it is estimated that the review will require approximately 4,000 staff-hours. As a comparison, the NRC staff review for a typical license amendment requires approximately 80 staff-hours. The specific technical areas included in an EPU amendment review are detailed in the matrices in Section 2.1 of RS-001. The NRC staff reviews the information submitted by the licensee and, if necessary, requests additional information in order to make a regulatory decision regarding the proposed change. For EPU amendment requests, the NRC staff typically asks 100 to 200 questions of the licensee in requests for additional information.

In addition to the review of the submitted information, the detailed technical review may involve the performance of audits at the plant or vendor sites and performance of independent calculations by the NRC staff. Review Standard RS-001 provides guidance for determining when and what type of audits and/or independent calculations are appropriate to supplement the review of the EPU amendment request.

When the NRC staff completes its detailed technical review of an EPU amendment request, a draft safety evaluation is prepared and sent to the Advisory Committee on Reactor Safeguards (ACRS) for review. The ACRS is independent of the NRC staff and reports directly to the Commission, which appoints its members. The ACRS is structured to provide a forum where experts representing many technical perspectives can provide independent advice that is factored into the Commission's decisionmaking process. As part of the ACRS review process, a meeting is held between the NRC staff and the ACRS in order to discuss the draft safety evaluation. All portions of this meeting except discussions of proprietary information are open to the public. Members of the public may request an opportunity to make an oral statement during the meeting. After the ACRS completes its review, it makes a recommendation to the Commission regarding whether the proposed EPU amendment should be approved.

In parallel with the detailed technical review, the NRC staff performs an environmental review to assess any potential environmental impacts of the proposed EPU amendment. Based on this review, a draft environmental assessment is prepared and published in the *Federal Register* for public comment. The NRC staff finalizes the environmental assessment after collecting and considering all public comments that were received.

After the final environmental assessment is issued, if the ACRS recommends approval, the NRC staff prepares the amendment package, including a final safety evaluation. For EPU license amendments, NRC procedures require that the Director for the Office of Nuclear Reactor Regulation sign the package. Typical license amendments can be signed by the NRC project manager for the plant.

In addition to the license amendment review described above, for power uprates greater than 7.5 percent, the NRC staff uses Inspection Procedure 71004, "Power Uprates," as guidance to inspect plant modifications, procedure changes, plant testing, and other issues related to the EPU license amendment. The procedure provides guidance with a focus on inspecting risk-significant issues. This inspection procedure is available on the NRC Web site at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/ip71004.pdf>.

I hope this information is useful in addressing your constituents' concerns.

Sincerely,

/RA Carl J. Paperiello Acting For/

William D. Travers
Executive Director
for Operations

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