



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

March 29, 2004

The Honorable James M. Jeffords
United States Senate
Washington, D.C. 20510

Dear Senator Jeffords:

I am responding on behalf of the U.S. Nuclear Regulatory Commission (NRC or the Commission) to your letter of February 27, 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 expressed by your constituents, your letter requested that the NRC consult with the Vermont State Nuclear Advisory Panel (VSNAP) and hold public meetings in Vermont related to the Vermont Yankee power uprate request.

In response to your request, we contacted Mr. William Sherman from the Vermont Department of Public Service. We informed Mr. Sherman that the NRC will be holding two public meetings on March 31, 2004. Mr. Sherman has, in turn, contacted the VSNAP members and invited them to attend these meetings. Both meetings will be held in the Vernon Elementary School, near the Vermont Yankee plant. The purpose of the first meeting, which is scheduled to begin at 7:00 p.m., is to meet with representatives of Entergy to discuss the results of the Agency's annual assessment of safety performance at Vermont Yankee during the year 2003. Following the assessment meeting and a short break, the NRC staff will meet with the public at approximately 8:00 p.m., to present information regarding the NRC's review of the Vermont Yankee power uprate request and the review process. The public will be invited to participate in this meeting by providing comments and asking questions of the NRC staff. We have issued separate meeting notices and a press release for these meetings, which are available on our Web site at <http://www.nrc.gov>. We will continue our dialog with Mr. Sherman to determine if VSNAP has any additional informational needs. The NRC staff will also assess the need for future public meetings related to the Vermont Yankee power uprate request.

The NRC staff has previously met with VSNAP regarding power uprates. On June 11, 2003, the NRC staff made a presentation to VSNAP regarding the process the NRC uses to review power uprate requests. The meeting included a question and answer session between VSNAP and the NRC staff, and comments from members of the public.

As noted in your letter, the NRC staff will be using the new guidance issued in December 2003 to review the Vermont Yankee power uprate request (NRC Review Standard RS-001, Revision 0, "Review Standard for Extended Power Uprates"). The Review Standard is available on the NRC Web site at <http://www.nrc.gov/reactors/operating/licensing/power-uprates.html>. As discussed in our letter to Senator Leahy dated February 20, 2004, the Review Standard was developed, in part, based on a review of 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).

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In accordance with the guidance in RS-001, we performed an acceptance review of the Vermont Yankee request as documented in our letter to Entergy dated February 20, 2004. This letter is available in the NRC's Agencywide Documents Access and Management System (ADAMS) on our Web site at <http://www.nrc.gov/reading-rm/adams/web-based.html> by entering Accession No. ML040500302. The acceptance review determined that Entergy has provided the necessary information such that the detailed review can be expected to be completed within a 12-month review schedule. The forecast completion date for the review is January 31, 2005.

The NRC's detailed technical review for the Vermont Yankee power uprate 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's review for a typical license amendment requires approximately 80 staff-hours. The specific technical areas included in the review are detailed in the matrices in Section 2.1 of RS-001. 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 confirmatory analysis by the NRC staff. Review Standard RS-001 provides guidance for determining when and what type of audits and/or confirmatory analysis are appropriate to supplement the review.

In addition to the license amendment review described above, the NRC staff will use Inspection Procedure 71004, "Power Uprates," as guidance to inspect issues related to the Vermont Yankee power uprate license amendment. The inspections addressed by this procedure include inspections that focus on issues specifically related to power uprates (e.g., flow-accelerated corrosion) and inspections that use the existing extensive baseline inspection program, as appropriate, to focus on risk-significant power uprate activities (e.g., plant modifications, post-maintenance testing, integrated plant operations). The NRC will perform inspections of power uprate activities starting in the April 2004 refueling outage since Entergy plans to install plant modifications during the outage that will later be used to operate the plant at the proposed power level. Inspection Procedure 71004 is available on the NRC Web site at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/ip71004.pdf>.

The Vermont Yankee power uprate review process will have opportunities for public involvement. The next major milestone in the Vermont Yankee process is for the NRC staff to prepare and publish a "Notice of Consideration of Issuance of Amendment to Facility Operating License and Opportunity for a Hearing" in the *Federal Register*. The *Federal Register* notice will provide a brief description of the amendment request and will give members of the public an opportunity to request a hearing. The notice will be added to the NRC Web site at <http://www.nrc.gov/what-we-do/regulatory/adjudicatory/hearing-license-applications.html> (in the table titled "Opportunities to Request a Hearing or Petition to Intervene"). As you requested, we will provide a copy of the *Federal Register* notice to you after it is published.

As noted in your letter, the Advisory Committee on Reactor Safeguards (ACRS) will perform a review of the Vermont Yankee power uprate request. The ACRS is a statutory committee that reports directly to the Commission and is structured to provide a forum where experts representing many technical perspectives can provide advice that is factored into the NRC's decision-making process. As part of the ACRS review process, the NRC staff and the ACRS will discuss the NRC staff's draft safety evaluation in a meeting that, except for discussions of proprietary information, is 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

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review, it will make a recommendation to the Commission regarding whether the proposed power uprate amendment should be approved.

The NRC staff has received a copy of the recent letters from Mr. Paul Blanch to you and Senator Leahy about the proposed Vermont Yankee power uprate. Mr. Blanch raises a general concern regarding the adequacy of the regulatory criteria used in the original licensing of Vermont Yankee in light of the current NRC regulations. The NRC frequently updates its regulations as a result of improvements to technology and based on operating experience. When requirements are changed, the NRC applies a rigorous evaluation standard to determine if the safety benefit of the new requirements justifies imposing the changes on existing licensees. For example, Vermont Yankee was designed and constructed based on the proposed General Design Criteria (GDC) published by the Atomic Energy Commission (AEC) on July 11, 1967. The final GDC were made a part of the AEC's regulations on February 20, 1971. Each plant licensed before the final GDC were formally adopted, including Vermont Yankee, was evaluated by the AEC on a plant-specific basis, and was determined to be safe. As documented in a memorandum dated September 18, 1992, the NRC determined that imposing the final GDC on plants with construction permits issued prior to May 21, 1971, would provide little or no safety benefit while requiring an extensive commitment of resources. In other cases, the NRC has imposed new regulations on nuclear facilities based on the substantial increase in safety that would be provided (e.g., environmental qualification of electrical equipment).

Mr. Blanch's letters also express concerns regarding issues that appear related to the proposed power uprate request, while other concerns appear related to the current design of the plant. On March 19, 2004, the NRC staff contacted Mr. Blanch and he confirmed that his concerns only relate to the proposed power uprate.

Various stakeholders have requested an independent safety assessment be performed at Vermont Yankee as an additional verification of plant design/operation in light of the proposed power uprate. Stakeholders are requesting that this assessment be similar to the one performed at the Maine Yankee facility approximately eight years ago. Additionally, in a letter to the NRC dated March 15, 2004, the Vermont Public Service Board (PSB) requested that "as the NRC conducts its current uprate analysis of Vermont Yankee, it do so in a way that will provide Vermont with a level of assurance about reliability equivalent to an independent engineering assessment."

It is important to note that the NRC, as an integral part of its reactor oversight process, performs inspections of plants (e.g., baseline, supplemental, and event-follow-up inspections) based on safety performance. Both inspection results and performance indicator data are formally reviewed quarterly to determine if plant performance warrants a change in inspection effort or NRC regulatory oversight. The NRC's most recent assessment of Vermont Yankee, as documented in a letter dated March 2, 2004 (ADAMS Accession No. ML040630192), places this plant in the "Licensee Response" category of the NRC's action matrix because all inspection findings were classified as having very low safety significance (Green) and all plant performance indicators indicated performance at a level requiring no additional NRC oversight (Green). Therefore, based on the current plant performance, the NRC will continue to perform the normal risk-informed baseline inspection program at this time (i.e., additional inspections

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are not warranted at this time). If plant performance changes, we will not hesitate to perform the additional inspections as required by our reactor oversight process.

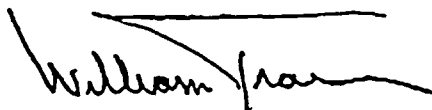
The independent safety assessment at Maine Yankee was performed following specific allegations regarding computer code applications. The scope and nature of that assessment was developed for specific issues raised at that plant at that time. The staff had significant concerns with the Maine Yankee licensee's conformance to license requirements; a situation which does not exist currently at Vermont Yankee. Additionally, the NRC performed extensive reviews at plants across the country to determine if licensees were operating plants in accordance with their design bases. Vermont Yankee was included in this review, receiving a special design team inspection in 1997. Design review inspections have been maintained as an integral part of the NRC's oversight process. Inspection results at Vermont Yankee, from hundreds of hours of design-related inspection efforts over the last several years, do not meet NRC criteria for when inspections need to be conducted above the baseline inspection program.

Based on the results from the reactor oversight process, the NRC has determined that the baseline inspection program is the appropriate level of NRC oversight. Plant performance has been good overall and recent engineering inspections have not revealed significant weaknesses. Additionally, the NRC's reactor oversight process is able to quickly respond with additional inspections and regulatory oversight if plant performance warrants.

In conclusion, the NRC conducts an extensive power uprate review and, along with the ongoing NRC inspection program, our current processes are fully capable of assessing whether safe operation can be maintained at this facility following a power uprate.

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

Sincerely,



William D. Travers
Executive Director
for Operations