

April 27, 2006

The Honorable Christopher J. Donelan  
State Representative  
The Commonwealth of Massachusetts  
House of Representatives  
State House  
Boston, MA 02133

Dear Representative Donelan:

On behalf of the Nuclear Regulatory Commission (NRC), I am writing in response to your letter to NRC Chairman Nils J. Diaz, of March 22, 2006, in which you expressed concerns about the implementation of the extended power uprate (EPU) at the Vermont Yankee Nuclear Power Station (Vermont Yankee). Specifically, your letter requested that the NRC conduct a comprehensive independent safety assessment of Vermont Yankee.

I am enclosing a copy of a letter that Chairman Diaz sent to the Vermont Public Service Board (PSB), dated May 4, 2004, explaining the NRC's approach in response to the PSB's request for an independent engineering assessment of Vermont Yankee. As noted in the letter, the NRC staff concluded that its detailed technical review of the proposed amendment, combined with the inspections prescribed by the reactor oversight process, as enhanced by an improved engineering inspection, was determined to be the most effective method of informing the staff decision on whether Vermont Yankee could operate safely under uprated power conditions.

On March 2, 2006, the NRC staff issued its safety evaluation documenting the results of the technical review for the power uprate. A copy of this 335 page report is available on the NRC's Web site at <http://adamswebsearch.nrc.gov/dologin.htm> by searching for accession number ML060050028. Section 1.6 of the safety evaluation discusses the engineering inspection that was completed in September 2004. The NRC staff spent over 11,000 hours on the technical review of the proposed power uprate. In addition, over 900 hours were spent on the engineering inspection effort. We believe that the Vermont Yankee engineering inspection responds appropriately to requests to conduct an independent assessment of Vermont Yankee.

The NRC Advisory Committee on Reactor Safeguards (ACRS) reviewed the engineering inspection results in the context of its evaluation 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. The ACRS Subcommittee on Power Uprates held a meeting on November 15 and 16, 2005, in Brattleboro, Vermont to receive input from the public, Entergy, and the NRC staff regarding the proposed power uprate. During this meeting the NRC staff provided the results of the engineering inspection, including a discussion of all relevant inspection findings. Many members of the public asked for a more extensive inspection, similar to that performed at the Maine Yankee plant. In a letter to NRC Chairman

Diaz dated January 4, 2006, the ACRS recommended approval of the Vermont Yankee power uprate. As noted in the letter, the ACRS concluded that based on the results of the inspection that was performed and the performance of Vermont Yankee as determined by the NRC's reactor oversight process, a more extensive inspection is not warranted.

The NRC's approval of the Vermont Yankee EPU included a license condition that provides for monitoring, evaluating, and taking prompt action in response to potential adverse flow effects as a result of power uprate operation on structures, systems, and components (including verifying the continued structural integrity of the steam dryer). The license condition is implemented through the procedural steps, performance criteria, and required actions specified in the Vermont Yankee steam dryer monitoring plan and power ascension test procedure.

On March 4, 2006, Entergy began slowly increasing reactor power at Vermont Yankee following the NRC's approval of the EPU amendment on March 2, 2006. Since that time, the plant has suspended the power ascension twice (at 105% and 112.5% of original licensed thermal power) when administrative limits specified in the steam dryer monitoring plan were reached. When an administrative limit is reached, the monitoring plan requires that an engineering evaluation be performed prior to further increases in power. As documented in the NRC staff's Safety Evaluation for the EPU, Entergy formally committed to not increase power above the applicable hold point, if any safety concerns were identified during the NRC staff's review of the power ascension data. The NRC staff reviewed the evaluation and the power ascension data at 105%, 110%, 112.5%, and 115% to determine if it had any safety concerns. On April 25, the NRC approved continued ascension to 120% power level.

Your letter also raised a concern regarding an unexpected plant shutdown at Vermont Yankee related to failure of a transformer. This event received significant scrutiny by the NRC. On June 18, 2004, an electrical fault on the 22 kilovolt (kV) electrical system forced the reactor to automatically shut down from 100% power. Arcing and heat generated during the fault caused a main transformer fire. The fire was extinguished through the combined efforts of the automatic fire suppression system, the site's fire brigade, and the local volunteer fire department. The NRC's resident inspectors immediately responded to the event, and the Region I Incident Response Center was staffed to support the residents and follow Entergy's response to the fire. The fire caused no damage to safety systems and Entergy restarted the plant on July 6, 2004, after making necessary repairs. In its November 8, 2004, quarterly inspection report, the NRC discussed Entergy's failure to incorporate operating experience into preventive maintenance of the 22 kV electrical system. Entergy is managing this issue through its corrective action program.

Your letter also referenced the views expressed by Commissioner Jaczko in a memorandum to his fellow Commissioners, concerning the Vermont Yankee EPU. The memorandum reflects the views of Commissioner Jaczko and not the entire Commission's view on any particular matter. On March 3, 2006, the Commission declined to stay the issuance of the requested EPU amendment, pending completion of the adjudicatory proceeding on this application; Commissioner Jaczko concurred in that decision.

The NRC's primary mission is to ensure adequate protection of public health and safety. The NRC will not approve any proposed change to any plant license unless our technical staff can conclude that it has reasonable assurance that adequate protection of public health and safety will be ensured. We have taken great care in conducting the technical reviews and inspections

regarding the Vermont Yankee power increase in order to ensure that these reviews and inspections will identify and address any potential safety concerns for operating the plant at uprated power conditions. We will continue to closely monitor the Vermont Yankee power ascension process and will take any actions deemed appropriate for continued protection of public health and safety. I trust that this letter addresses your concerns.

Sincerely,

**/RA/**

Luis A. Reyes  
Executive Director  
for Operations

Enclosure: As stated

Identical letters sent to:

The Honorable Stan Rosenberg  
Commonwealth of Massachusetts Senate  
Boston, MA 02133

The Honorable Andrea Nuciforo  
Commonwealth of Massachusetts Senate  
Boston, MA 02133

The Honorable Denis Guyer  
Commonwealth of Massachusetts House of Representatives  
Boston, MA 02133

The Honorable Stephen Kulik  
Commonwealth of Massachusetts House of Representatives  
Boston, MA 02133

The Honorable Daniel Bosley  
Commonwealth of Massachusetts House of Representatives  
Boston, MA 02133

April 27, 2006

The Honorable Stan Rosenberg  
State Senator  
The Commonwealth of Massachusetts  
Senate  
State House  
Boston, MA 02133

Dear Senator Rosenberg:

On behalf of the Nuclear Regulatory Commission (NRC), I am writing in response to your letter to NRC Chairman Nils J. Diaz, of March 22, 2006, in which you expressed concerns about the implementation of the extended power uprate (EPU) at the Vermont Yankee Nuclear Power Station (Vermont Yankee). Specifically, your letter requested that the NRC conduct a comprehensive independent safety assessment of Vermont Yankee.

I am enclosing a copy of a letter that Chairman Diaz sent to the Vermont Public Service Board (PSB), dated May 4, 2004, explaining the NRC's approach in response to the PSB's request for an independent engineering assessment of Vermont Yankee. As noted in the letter, the NRC staff concluded that its detailed technical review of the proposed amendment, combined with the inspections prescribed by the reactor oversight process, as enhanced by an improved engineering inspection, was determined to be the most effective method of informing the staff decision on whether Vermont Yankee could operate safely under uprated power conditions.

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The NRC Advisory Committee on Reactor Safeguards (ACRS) reviewed the engineering inspection results in the context of its evaluation 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. The ACRS Subcommittee on Power Uprates held a meeting on November 15 and 16, 2005, in Brattleboro, Vermont to receive input from the public, Entergy, and the NRC staff regarding the proposed power uprate. During this meeting the NRC staff provided the results of the engineering inspection, including a discussion of all relevant inspection findings. Many members of the public asked for a more extensive inspection, similar to that performed at the Maine Yankee plant. In a letter to NRC Chairman

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The Honorable Andrea Nuciforo  
State Senator  
The Commonwealth of Massachusetts  
Senate  
State House  
Boston, MA 02133

Dear Senator Nuciforo:

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State Representative  
The Commonwealth of Massachusetts  
House of Representatives  
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Dear Representative Guyer:

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The Commonwealth of Massachusetts  
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State House  
Boston, MA 02133

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State Representative  
The Commonwealth of Massachusetts  
House of Representatives  
State House  
Boston, MA 02133

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Sincerely,

**/RA/**

Luis A. Reyes  
Executive Director  
for Operations

Enclosure: As stated

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