

September 17, 2004

Gill Select Board  
Town of Gill  
325 Main Road  
Gill, MA 01376

Dear Members of the Board:

I am responding on behalf of the U.S. Nuclear Regulatory Commission (NRC) to your letter dated July 28, 2004, in which you characterized the NRC's recent pilot engineering inspection as "inadequate to provide protection to its citizenry." In addition, you called for a comprehensive independent safety assessment at the Vermont Yankee Nuclear Power Station. In your letter, you state that the assessment should be conducted to demonstrate that the plant's safety "system can meet current regulatory standards for operating conditions" and in support of the proposed uprate.

The engineering inspection performed at Vermont Yankee was a pilot inspection that used a new approach aimed at improving the effectiveness of NRC inspections in the design/engineering area. The inspection reviewed risk-significant components and human actions, regardless of the plant system in which they reside. This included components and actions where margins may be impacted as a result of Entergy's proposed power uprate. Although our prior approaches used vertical reviews of systems to assess a licensee's design and engineering activities, we believe that this new approach, focusing on risk significant components and human actions, will improve our assessment of the adequacy of Entergy's design and engineering activities at Vermont Yankee.

The NRC recently completed the on-site portion of a 3-week pilot engineering inspection at the Vermont Yankee plant with a team of eight NRC inspectors, including three contractors. This team reviewed a wide range of risk significant components and operator actions related to the design and operation of Vermont Yankee. Our inspection focused on those components and systems important to safety, including some impacted by the proposed uprate. This engineering inspection will supplement and inform our review of Entergy's request for a power uprate. The NRC's established review process for power uprate applications is independent, thorough, and comprehensive. A team of engineers with specialties in a minimum of 17 different technical areas will review this application. The NRC plans to expend about 4000 hours to perform a comprehensive assessment of the engineering, design, and safety analyses related to the uprate. The NRC's "Review Standard for Extended Power Uprates" guides the staff in its review of the application. The Review Standard also provides guidance for determining when and what type of audits should be performed at the plant or vendor sites, as well as for performing our own confirmatory analyses and independent calculations to supplement the review.

The NRC's review of the power uprate application also includes on-site inspections. NRC inspections will review selected activities and modifications made to allow operation at higher power levels to verify that changes to plant systems will support safe plant operation and are in accordance with Vermont Yankee's licensing and design bases. The NRC will use Inspection Procedure 71004, "Power Uprates," as well as a number of our baseline inspection procedures to inspect issues specifically related to power uprate. These inspections will assess changes that could impact the integrity of barriers, safety evaluations, plant modifications, post maintenance and surveillance testing, heat exchanger performance, and integrated plant operation.

Therefore, the detailed technical review, combined with the inspections prescribed by the reactor oversight process, as enhanced by a pilot engineering inspection are appropriate for informing our decision on whether Vermont Yankee can safely operate at uprated power conditions.

It is important to note that we frequently update our 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. Therefore, there may be certain requirements in our regulations that NRC has determined do not apply to Vermont Yankee. In seeking the power uprate, Entergy, must demonstrate to the NRC that the plant meets all applicable requirements and that it can safely operate at uprated conditions. The NRC will not approve the Vermont Yankee uprate unless the NRC can conclude that the proposed change will be executed in a manner that assures the public's health and safety.

Your letter of July 28, also expressed concerns with the recent event in which Entergy failed to carefully monitor spent fuel rod segments. I can assure you that the NRC is very concerned with instances in which nuclear material is not rigorously controlled. The NRC staff closely monitored Entergy's actions and investigation since its formal report to the NRC on April 21, 2004, that two spent fuel rod segments were not in their documented location in the spent fuel pool. During our special inspection, the NRC reviewed the results of Entergy's investigation, assessed the root cause evaluation, and considered whether any of the findings may have generic implications. Even after Entergy declared that it had located the fuel pins in the spent fuel pool, the NRC continued to investigate the root cause of this incident and planned corrective actions to prevent recurrence. The NRC's review is continuing and a report of our inspection is expected to be issued within the next few months.

I thank you for your interest in the NRC's activities related to Vermont Yankee. Please contact me at 301-415-3036 if you would like to discuss any of the information provided in this letter.

Sincerely,

*/RA/*

Cornelius F. Holden, Director  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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Sincerely,

*/RA/*

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