

May 27, 2004

Steven and Elizabeth Clark  
P.O. Box 2082  
W. Brattleboro, VT 05303

Dear Mr. and Ms. Clark:

I am responding on behalf of the U.S. Nuclear Regulatory Commission (NRC) to your letter dated March 15, 2004, regarding 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. In that letter you expressed concerns with Entergy's request for the Vermont Yankee power uprate. Based on those concerns, you requested that the NRC conduct an independent safety audit of Vermont Yankee.

Currently, the NRC staff is in the early stages of the review of the Vermont Yankee power uprate request. As such, we have not reached any conclusions concerning the acceptability of the proposed change. We believe that the extensive technical review performed by the NRC staff along with the ongoing NRC inspection program, provide assurance that any issues that could affect safe operation of the plant, related to the proposed power uprate, will be identified. The NRC will not approve the Vermont Yankee uprate, or any proposed change to a plant license, unless the NRC staff can conclude that the proposed change will be executed in a manner that assures public health and safety.

I have enclosed a copy of the letter that we sent to the Vermont Public Service Board regarding its request for an independent engineering assessment. In our response, the NRC has taken a closer look at our proposed inspections and technical reviews to assure ourselves that they will identify any potential concerns for operating at uprated power conditions. We have concluded that the detailed technical review, combined with the inspections prescribed by the reactor oversight process, as enhanced by a pilot engineering inspection, is the most effective method of informing our decision on whether Vermont Yankee could safely operate under uprated power conditions.

Regarding your concern that the plant's design criteria might not meet the current safety standards, Vermont Yankee was licensed in 1972, and many changes to the regulations have occurred subsequent to the initial licensing. 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) in 1967. The final GDC were made a part of the AEC's regulations in 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. The NRC determined that imposing the final GDC on plants with construction permits issued prior to 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).

Lastly, you expressed concerns with Vermont Yankee's storage capacity for spent fuel rods. The maximum number of fuel assemblies that are authorized to be stored in the plant's spent fuel pool are defined in the plant's Technical Specifications. The Technical Specifications are an appendix to the plant operating license. The criteria for limiting the number of assemblies allowed in the spent fuel pool include the ability to safely handle the assemblies, provide adequate heat removal, and ensure that the fuel stored is maintained sufficiently sub-critical. Changes to the Technical Specifications require NRC review and approval before the change can be implemented. These changes are called license amendments.

Vermont Yankee's ability to continue to perform a full-core offload into the spent fuel pool will be shortened by about one year if the power uprate is implemented using Entergy's current plan. If the power uprate is approved by the NRC, Vermont Yankee will continue to store its spent fuel in accordance with its existing Technical Specifications requirements and NRC guidelines.

At the time Vermont Yankee was licensed, spent fuel storage needs were anticipated to be small because of expectations for fuel reprocessing and/or permanent disposal in a high level repository. Several license amendments have been issued by the NRC over the years that approved increases in the Vermont Yankee spent fuel capacity. The plant is currently authorized to store a maximum of 3353 fuel assemblies at this time, and the licensee is meeting the Technical Specifications requirement with regard to the number of spent fuel assemblies being stored in the pool.

Thank you for your interest in NRC activities. For current information on the NRC's review of the proposed power uprate, please see the Vermont Yankee webpage on the NRC's website at <http://www.nrc.gov/reactors/plant-specific-items/vermont-yankee-issues.html>.

Sincerely,

**/RA/**

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

Enclosure: Letter to the Vermont Public Service Board

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**/RA/**

Cornelius F. Holden, Jr., Director  
Project Directorate I  
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Enclosure: Letter to the Vermont Public Service Board

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