



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

DOCKETED  
USNRC

December 16, 2005

December 20, 2005 (9:50am)

OFFICE OF SECRETARY  
RULEMAKINGS AND  
ADJUDICATIONS STAFF

**Docket No. 50-271-OLA**

**SERVED December 20, 2005**

The Honorable James M. Jeffords  
United States Senate  
Washington, D.C. 20515

Dear Senator Jeffords:

On behalf of the Nuclear Regulatory Commission (NRC), I am writing in response to your letter of November 10, 2005, in which you urged the NRC to fully evaluate the condition of the steam dryer at the Vermont Yankee Nuclear Power Station (Vermont Yankee) as the NRC staff reviews the proposed extended power uprate (EPU) request from Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy). I am pleased to take this opportunity to update you on the NRC's actions to address this issue.

During the fall 2005 refueling outage at Vermont Yankee, Entergy performed an enhanced visual inspection which identified 46 indications of small cracks in the steam dryer. These were in addition to 18 indications identified during the spring 2004 outage. Although the previous dryer inspection was conducted in accordance with the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, it was expected that additional indications would be found during the 2005 outage based on use of visual examination techniques that provided greater magnification and resolution. The enhanced inspection also confirmed that none of the previously-identified cracks had propagated in width or length since the last inspection.

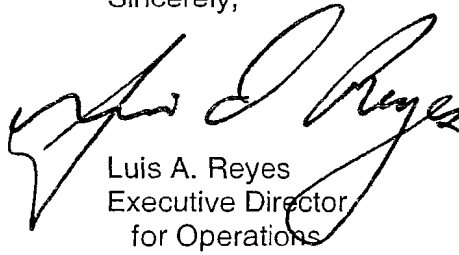
Entergy currently believes that, like the previously-identified indications, these new indications developed sometime early in plant operational history, and will not affect the steam dryer structural integrity at current power conditions or at the proposed EPU conditions. None of the identified indications required repairs; however, Entergy did make modifications during the 2004 outage to provide additional structural support to the steam dryer to address generic industry issues with steam dryer integrity. Entergy will continue to monitor the indications during future inspections to ensure there is no further change to the individual indications.

The NRC is closely monitoring Entergy's steam dryer examination and evaluation activities. A specialist inspector from the NRC's Region I office was sent to the site to review the steam dryer inspection results. Further, specialists from Region I and NRC Headquarters reviewed the examination data and steam dryer evaluation. The NRC reviews did not identify problems with the steam dryer crack evaluation and disposition that would cause concern with operation of Vermont Yankee at current licensed conditions.

Entergy is completing its final evaluation of the new steam dryer indications with regard to EPU operation. The NRC will thoroughly review the final evaluation as part of the proposed EPU review. Additionally, if the proposed EPU is granted, a condition would be added to the Vermont Yankee license for Entergy to monitor and evaluate the effects of increased steam flow on the steam dryer, and promptly take actions as necessary to resolve any adverse flow effects.

The NRC's primary mission is to ensure adequate protection of public health and safety. The NRC will not approve the Vermont Yankee EPU, or 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.

Sincerely,



Luis A. Reyes  
Executive Director  
for Operations



# Congress of the United States

Washington, DC 20515

November 10, 2005

The Honorable Nils J. Diaz  
Chairman  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555-0001

Dear Mr. Chairman:

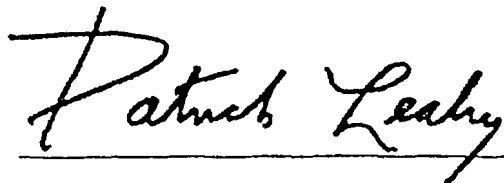
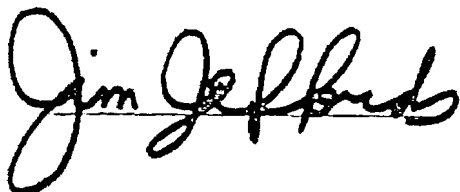
We write in response to the announcement today of the discovery, during a recent scheduled outage, of more than 40 additional cracks in the steam dryer at Vermont Yankee. We understand that a Region 1 Nuclear Regulatory Commission (NRC) inspector was dispatched to assist the resident inspector in the determining whether these cracks pose safety and operational concerns for the plant's current power production. We request that the condition of the steam dryer be fully evaluated, using the techniques of the most recent inspection and any other appropriate means, as the NRC considers Entergy Nuclear's request to produce an additional 100 megawatts of power from Vermont Yankee.

We understand that these cracks were discovered through the use of enhanced visual inspection techniques. As you know, these cracks are in addition to some 18 cracks, both hairline and larger, that were discovered through visual inspections of the plant's steam dryer in April and May of 2004. Steam dryer cracking is of concern at many boiling water reactor facilities. We know that cracking problems have persisted at the Quad Cities facilities' steam dryers, despite repeated fixes, and that uprated power conditions at those facilities place additional stresses on dryer performance. While the steam dryer itself is not a safety-related piece of equipment, its proper functioning is important to the plant's safe and reliable operation. Steam dryer cracking could result in pieces breaking off, and falling back into the steam lines that lead out of the reactor. In the case of the Quad Cities reactors, these plants have been forced to shut down because of cracking, making their operation less reliable.

As the NRC reviews the Vermont Yankee power uprate request, we believe it is essential that our constituents receive needed information about whether the plant's steam dryer will be able to withstand boosted power conditions and operate safely and reliably. The functioning of this piece of equipment should receive the Commission's full and thorough attention during the review of the uprate application.

We look forward to a prompt reply.

Sincerely,



Diaz, pg. 2  
November 10, 2005

Bert A. A.

John W. Oliver

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
ENTERGY NUCLEAR VERMONT YANKEE L.L.C. ) Docket No. 50-271-OLA  
and ENTERGY NUCLEAR OPERATIONS, INC. )  
 )  
Vermont Yankee Nuclear Power Station) )  
 )  
(Operating License Amendment) )

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing LETTER FROM LUIS A. REYES ADDRESSED TO SENATOR JAMES M. JEFFORDS, AS WELL AS THE LETTER FROM SENATOR JAMES M. JEFFORDS DATED NOVEMBER 10, 2005 have been served upon the following persons by U.S. mail, first class, or through NRC internal distribution.

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Washington, DC 20555-0001

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Docket No. 50-271-OLA  
LETTER FROM LUIS A. REYES ADDRESSED TO  
SENATOR JAMES M. JEFFORDS, AS WELL AS THE  
LETTER FROM SENATOR JAMES M. JEFFORDS DATED  
NOVEMBER 10, 2005

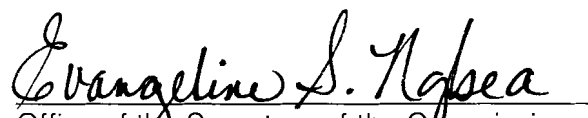
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Office of the Secretary of the Commission

Dated at Rockville, Maryland,  
this 20<sup>th</sup> day of December 2005