October 28, 2004

MEMORANDUM TO:	Allen G. Howe, Chief, VY Section Project Directorate I Division of Licensing Project Management Office of Nuclear Reactor Regulation
FROM:	Richard B. Ennis, Senior Project Manager, VY Section / RA / Project Directorate I Division of Licensing Project Management Office of Nuclear Reactor Regulation
SUBJECT:	SUMMARY OF SEPTEMBER 21, 2004 CONFERENCE CALL WITH ENTERGY - VERMONT YANKEE STEAM DRYER

Attached is a summary of a conference call with Entergy on September 21, 2004, concerning the Vermont Yankee steam dryer analysis supporting the proposed extended power uprate.

Docket No. 50-271

Attachment: As stated

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OFFICE	PDI-VY/PM	PDI-VY/SC
NAME	REnnis	AHowe
DATE	10/25/04	10/27/04

SUMMARY OF CONFERENCE CALL WITH ENTERGY VERMONT YANKEE STEAM DRYER ANALYSIS

Date: September 21, 2004

- NRC Participants Rick Ennis Allen Howe Tom Scarborough Corneilus Holden John Wu David Terao Larry Doerflein Harold Gray
- Entergy Participants Brian Hobbs Jim DeVincentis Ronda Daflucas Craig Nichols Scott Goodwin

<u>General Electric Participants</u> Dan Pappone Michael Dick Lou Quintana

On September 21, 2004, the NRC staff held a conference call with Entergy staff at Vermont Yankee, and Entergy's contractor, General Electric, regarding the results of NRC's audit of the steam dryer analysis conducted August 23 through August 26, 2004. The analysis is being used to support Entergy's proposed extended power uprate (EPU) amendment request. Based on the information provided by the Entergy in its submittals, at the public meetings, and during the recent audit, the NRC staff informed Entergy that the analysis submitted to date does not demonstrate that the steam dryer at Vermont Yankee will remain capable of maintaining its structural integrity under EPU conditions. Specifically, the analysis of the Vermont Yankee steam dryer as currently submitted in support of Entergy's EPU request:

- 1. has not adequately identified and verified the excitation sources for flow-induced vibration mechanisms that resulted in significant degradation of similar steam dryers at other boiling water reactor nuclear power plants operating at EPU conditions;
- 2. has not provided a complete load definition for the Vermont Yankee steam dryer for EPU conditions in light of several assumptions that have not been adequately justified;
- has not justified the applied methodology as realistic in light of assumptions to account for uncertainties that resulted in apparent significant overestimation of predicted steam dryer stresses;
- 4. might be non-conservative based on assumptions for reducing the stress experienced by steam dryer parts and the creation of new potential fatigue failure locations as a result of modifications to the Vermont Yankee steam dryer; and
- 5. has not validated the extrapolation of pressure peaks from original power levels to EPU conditions for the steam dryer at Vermont Yankee.

The NRC staff also indicated that a purely analytical approach to resolution of the dryer issues was not likely to be successful in demonstrating the ability of the dryers to maintain structural integrity. Consideration should be given to some other method such as instrumentation, or a monitoring strategy, or an incremental power ascension process.