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SUBJECT: SUMMARY OF TELEPHONE CONFERENCE CALL HELD ON DECEMBER 18, 2007, BETWEEN THE U.S. NUCLEAR REGULATORY COMMISSION AND ENTERGY NUCLEAR OPERATIONS, INC., CONCERNING A REQUEST FOR ADDITIONAL INFORMATION PERTAINING TO THE VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Nuclear Operations, Inc. held a telephone conference call on December 18, 2007, to discuss and clarify the staff=s request for additional information (RAI) concerning the Vermont Yankee Nuclear Power Station license renewal application. The telephone conference call was useful in clarifying the intent of the staff=s RAI.

Enclosure 1 provides a listing of the participants and Enclosure 2 contains the RAI discussed with the applicant, including a brief description on the status of the item.

The applicant had an opportunity to comment on this summary.

Jonathan G. Rowley, Project Manager Projects Branch 2 Division of License Renewal Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:

- 1. List of Participants 2. Request for Additional
- Information

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## TELEPHONE CONFERENCE CALL VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

## LIST OF PARTICIPANTS DECEMBER 18, 2007

**AFFILIATIONS** 

#### PARTICIPANTS

Jonathan Rowley Kenneth Chang On Yee Qi Gan David Mannai David Lach Michael Metell Scott Goodwin James Fitzpatrick Alan Cox David Gerber Terry Herrmann Nuclear Regulatory Commission (NRC) NRC NRC Entergy Nuclear Operations, Inc. (Entergy) Entergy Entergy Entergy Entergy Entergy Structural Integrity Associates (SIA) SIA

Enclosure 1

## REQUESTS FOR ADDITIONAL INFORMATION VERMONT YANKEE NUCLEAR POWER STATION LICENSE RENEWAL APPLICATION

#### DECEMBER 18, 2007

The U.S. Nuclear Regulatory Commission (NRC or the staff) and representatives of Entergy Nuclear Operations, Inc. held a telephone conference call on December 18, 2007, to discuss and clarify the following request for additional information (RAI) concerning the Vermont Yankee Nuclear Power Station (VYNPS) license renewal application (LRA).

#### RAI 4.3.3-2

Your response to audit question # 387 in your November 14, 2007, letter states that "In most cases the maximum component stress difference with time matched the maximum stress intensity calculated by ANSYS. This shows that shearing stresses are negligible for the thermal transient at that location and the maximum component stress difference is the maximum stress intensity."

Please identify the exceptions where maximum component stress difference with time did not match the maximum stress intensity calculated by ANSYS. In addition, please justify the exceptions, based on quantitative evaluations, that the shearing stresses are negligible and the maximum component stress difference is the maximum stress intensity for the branch nozzle blend radius (nozzle corner) locations with geometrical discontinuities for the applicable thermal transients. Your response should cover the shearing stress differences at the 0-180 degree axis and the 90-270 degree axis to the pipe run axis.

**Discussion**: The response to RAI 4.3.3-2, submitted by VY on December 11, 2007, was reviewed by several staff and discussed during the conference call. The staff could not accept the response to close the issue raised by RAI 4.3.3-2. The response failed to demonstrate to the staff whether the shearing stresses are negligible. The response also raised uncertainty of the validity of the Green's function methodology used to calculate stresses.

Two alternative approaches were discussed that could be used to address the environmentally assisted fatigue (EAF) for all NUREG/CR-6260 nozzle locations at VY. The first is by 3-D modeling, and the second is by using 2-D modeling with adequate justification provided by the applicant. The staff indicated that either alternative, if it is based on the use of an industry-wide accepted computer code (e.g. ANSYS), would provide a sound basis for the results obtained.

The applicant emphasized that 2-D modeling for EAF is the current licensing basis (CLB) for VYNPS.

Based on the discussion with the applicant, an additional RAI may be required. The staff will have an internal discussion in order to make that determination.

Enclosure 1