

October 27, 2006

LICENSEE: Entergy Nuclear Operations, Inc.
FACILITY: Vermont Yankee Nuclear Power Station
SUBJECT: SUMMARY OF A TELEPHONE CONFERENCE CALL HELD ON
SEPTEMBER 25, 2006, BETWEEN THE U.S. NUCLEAR REGULATORY
COMMISSION AND ENTERGY NUCLEAR OPERATIONS, INC., CONCERNING
INFORMATION PERTAINING TO THE VERMONT YANKEE NUCLEAR
POWER STATION LICENSE RENEWAL APPLICATION

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of Entergy Nuclear Operations, Inc., (ENO) held a telephone conference call on September 25, 2006, to discuss and clarify the staff's requests for additional information (RAIs) concerning the Vermont Yankee Nuclear Station (VYNPS) license renewal application (LRA). The conference call was useful in clarifying the staff's questions.

Enclosure 1 provides a listing of the conference call participants. Enclosure 2 contains a listing of the issues discussed with the applicant, including a brief discussion of the items' status.

The applicant had an opportunity to comment on this summary.

/RA/

Jonathan Rowley, Project Manager
License Renewal Branch B
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosures:
As stated

cc w/encls: See next page

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Vermont Yankee Nuclear Power Station

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Note to Entergy Nuclear Operations, Inc., from Jonathan Rowley dated October 27, 2006

SUBJECT: SUMMARY OF A TELEPHONE CONFERENCE CALL HELD ON
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COMMISSION AND ENTERGY NUCLEAR OPERATIONS, INC., CONCERNING
INFORMATION PERTAINING TO THE VERMONT YANKEE NUCLEAR
POWER STATION LICENSE RENEWAL APPLICATION

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TO DISCUSS THE VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION**

September 25, 2006

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**VERMONT YANKEE NUCLEAR POWER STATION
LICENSE RENEWAL APPLICATION**

September 25, 2006

The U.S. Nuclear Regulatory Commission staff (the staff) and representatives of Entergy Nuclear Operations, Inc., held a telephone conference call on September 25, 2006, to discuss and clarify the staff's requests for additional information (RAIs) and other issues concerning the Vermont Yankee Nuclear Power Station (VYNPS) license renewal application (LRA). The following issues were discussed during the telephone conference call:

RAI 2.3.3.8-1

License renewal application (LRA) drawing LRA-G-191163-SH-01-0, "Fire Protection System Inner Loop," shows the yard fire hydrants as out of scope (i.e., not colored in purple). Verify whether the yard fire hydrants are in scope of license renewal in accordance with Title 10 *Code of Federal Regulations* Part 54.4(a) (10 CFR 54.4(a)) and subject to an aging management review (AMR) in accordance with 10 CFR 54.21(a)(1). If they are excluded from the scope of license renewal and not subject to an AMR, please provide justification for the exclusion.

Discussion: The staff found the applicant's response in their September 20, 2006, letter (License Renewal Application, Amendment 14) to this RAI incomplete. The staff reiterated its position that yard fire hydrants require an AMR and asked for additional information. The applicant will provide a supplemental response to this concern in a future letter to the NRC.

RAI B.1.2-1

The applicant states that the Control Rod Drive (CRD) return line nozzle has been capped at VYNPS. The staff requests that the applicant provide the following information regarding the cap and the weld.

- (1) Describe the configuration, location and material of construction of the capped nozzle. This should include the existing base material for the nozzle, piping (if piping remnants exist) and cap material, and any welds.
- (2) Describe how the aging effects for this weld and the cap are managed in accordance with the guidelines of BWRVIP-75, "BWR Vessel and Internals Project (BWRVIP), Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedule."
- (3) Discuss whether the event at Pilgrim (leaking weld at capped nozzle, September 30, 2003) is applicable to VYNPS. The staff issued Information Notice 2004-08, "Reactor Coolant Pressure Boundary Leakage Attributable to Propagation of Cracking in Reactor Vessel Nozzle Welds," dated April 22, 2004, which states that the cracking occurred in an Alloy 182 weld that was previously repaired extensively. Discuss experience with previous leakage at the VYNPS capped nozzle, if any. Include in your discussion the past inspection techniques applied, the results obtained, and mitigative strategies imposed.

Enclosure 2

Provide information as to how the plant-specific experience related to this aging effect impacts the attributes specified in AMP B.1.2, "BWR CRD Return line Nozzles."

Discussion: The staff required clarification of the applicant's response in their September 20, 2006, letter (License Renewal Application, Amendment 14) to this RAI. The applicant clarified that BWRVIP-75 would be followed at VYNPS in the period of extended operation.

RAI B.1.2-2

Section 4 of the Generic Aging Lessons Learned Report (GALL) AMP XI.M6, "BWR Control Rod Drive (CRD) Return Line Nozzle," recommends that the aging degradation in the CRD return line nozzles should be monitored per the inspection recommendations specified in NUREG-0619, "BWR Feedwater Nozzle and Control Rod Drive Return Line Nozzle Cracking." Section 8.2(2) of NUREG-0619 recommends that ultrasonic testing (UT) should be performed on the welded connection joining the rerouted CRD return line to the system which then returns the flow to the reactor vessel during each refueling outage.

In a letter dated January 15, 1982, the applicant made a commitment to the staff indicating that it will perform UT examination of the CRD to the reactor water cleanup (RWCU) weld joint as discussed in NUREG-0619 for three consecutive refuel outages. The applicant further stated that upon the completion of these inspections, the inspection frequency will be reassessed based on the inspection results. In AMP B.1.2, "BWR CRD Return Line Nozzle," the applicant stated that it inspected the CRD return line to the RWCU weld joint using UT methods for three consecutive refuel outages and found no indications. Since no indications were found, the applicant intends to take exception to GALL AMP XI.M6, in which the applicant proposes not to inspect the aforementioned weld joint during the extended period of operation. The staff determined that the following information regarding the subject weld is required to complete its review.

- (1) The applicant should provide technical justification for not performing the UT examination of the subject weld as recommended by the GALL AMP XI.M6 and NUREG-0619 during the extended period of operation.
- (2) The applicant should confirm that the CRD return lines that are connected to RWCU piping system that fall under the jurisdiction of the ASME Code, Section XI boundary will be inspected per the ASME Section XI Code.

Discussion: The staff required clarification of the applicant's response in their September 20, 2006, letter (License Renewal Application, Amendment 14) to this RAI. The applicant provided the necessary clarification.

RAI 4.2-1

In Section 4.2.1 of the VYNPS LRA it is stated that "...the reactor fluence ...has been projected to the end of the period of extended operation." In Sections 4.2.1 and 4.2.2 of the LRA there is no discussion of how this extrapolation was performed. Vermont Yankee has been approved for operation at an extended power uprate. In general, power uprates are based on revised axial power profiles with higher axial peaks at a lower axial location. Therefore, extrapolation of the existing axial profile may not provide an accurate projection.

In view of the above, please respond to the following:

- (1) Compare the axial power profiles (at the peak power azimuthal location) and confirm that the extrapolation remains valid.
- (2) Confirm that the projected operating plan will support the assumed axial power profile to the end of the period of extended operation.

Discussion: The staff found the applicant's response in their September 20, 2006, letter (License Renewal Application, Amendment 14) to this RAI incomplete. The staff requested clarification on whether the applicant had accounted for the shift in axial power profile due to the power uprate when performing the extrapolation. The applicant agreed to provide the staff the GE-NE-0000-2342-R1-NP report mentioned in the response. The staff will review the report to verify the values provided in the response.