October 21, 2005

MEMORANDUM TO: John T. Larkins, Executive Director
Advisory Committee on Reactor Safeguards

FROM: Ledyard B. Marsh, Director *[RA by C. Haney for]*
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - DRAFT SAFETY EVALUATION FOR THE PROPOSED EXTENDED POWER UPRATE (TAC NO. MC0761)

Attached is the Office of Nuclear Reactor Regulation (NRR) staff's draft safety evaluation (SE) for the proposed extended power uprate (EPU) for the Vermont Yankee Nuclear Power Station (VYNPS). The SE is being provided to support the following Advisory Committee on Reactor Safeguards (ACRS) meetings:

- ACRS Thermal-Hydraulic Phenomena Subcommittee meeting on November 15 and November 16, 2005, in Brattleboro, Vermont;
- ACRS Thermal-Hydraulic Phenomena Subcommittee meeting on November 30 and December 1, 2005, in Rockville, Maryland; and
- ACRS Full Committee Meeting on December 8, 2005, in Rockville, Maryland.

There are no open items in the draft SE; however, the licensee has indicated that it intends to submit a supplement to the VYNPS EPU application on or about October 21, 2005, to address crediting of containment accident pressure from a risk perspective. The intent of the supplement is to address issues raised during the ACRS full committee meeting on October 7, 2005, concerning the proposed revision to Regulatory Guide 1.82. After the supplement is received, the NRR staff will assess if any changes to the draft SE are warranted. The crediting of containment accident pressure is discussed in SE Sections 2.6.5 and 2.13.

In a letter from Nuclear Regulatory Commission (NRC) Chairman Diaz to the Vermont Public Service Board (PSB) dated May 4, 2004 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML041170438), the NRC staff discussed an engineering inspection that was to be performed at VYNPS. The inspection was to be performed, in part, to address the PSB's requests dated March 15, and 31, 2004, (ADAMS Accession Nos. ML040850076 and ML041040352, respectively) for an independent engineering assessment of VYNPS to address concerns regarding the proposed EPU. The NRC's letter to the PSB committed to "provide the results of its review efforts, including relevant inspection findings, to the ACRS for review."

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The results of the engineering inspection are documented in NRC Inspection Report 05000271/2004008 dated December 2, 2004 (copy attached). As discussed in the inspection report, the NRC conducted a team inspection in accordance with Temporary Instruction (TI) 2515/158, "Functional Review of Low Margin/Risk Significant Components and Human Actions" at VYNPS during the period from August 9 through September 3, 2004. The inspection was the first of four pilot inspections to be conducted at different plant sites to assist the NRC in determining whether changes should be made to the Reactor Oversight Process to improve the effectiveness of its inspections and oversight in the design/engineering area.

In selecting samples for review, the engineering inspection team focused on those components and operator actions that contribute the greatest risk to an accident that could involve damage to the reactor core. Additional consideration was given to those components and operator actions impacted by the proposed EPU license amendment. In addition, inspection samples were added based upon operational experience and issues previously identified by the NRC's technical staff during the course of their VYNPS EPU review. The inspection report findings that impacted the VYNPS EPU amendment review are discussed in SE Section 1.6.

The attached draft SE contains proprietary information and should not be released to the public. The NRR staff will provide the draft SE to the licensee to ensure all proprietary information is marked appropriately. A redacted version of the draft SE will be released publicly following receipt and review of the proprietary markings from the licensee.

Docket No. 50-271

Attachments: As stated

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Memo: ML052910200
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