

February 9, 2006

Dr. Graham B. Wallis, Chairman
Advisory Committee on Reactor Safeguards
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION, EXTENDED POWER
UPRATE

Dear Dr. Wallis:

On December 7, 2005, during the 528th meeting of the Advisory Committee on Reactor Safeguards (ACRS), the U.S. Nuclear Regulatory Commission (NRC) staff presented its review of the Vermont Yankee Nuclear Power Station (VYNPS) extended power uprate (EPU) application from Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Entergy or the licensee). The VYNPS EPU application was also discussed during meetings of the ACRS Subcommittee on Power Uprates in Brattleboro, Vermont, on November 15 and 16, 2005, and in Rockville, Maryland on November 29 and 30, 2005.

In a letter to Chairman Diaz dated January 4, 2006, the ACRS provided the following conclusions and recommendations regarding the VYNPS EPU application:

1. The Entergy application for the EPU at the VYNPS should be approved.
2. The change in the licensing basis associated with the requested containment overpressure credit should be approved.
3. Load rejection and main steam isolation valve closure transient tests are not warranted. The planned transient testing program adequately addresses the performance of the modified systems.
4. The times available to perform critical operator actions remain adequate under EPU conditions.
5. The margin added to the safety limit minimum critical power ratio is an appropriate interim measure until General Electric obtains additional data to complete the validation of nuclear analysis methods.
6. The monitoring that will be performed during the ascension to uprate power provides adequate assurance that, if resonant vibrational modes are induced in the steam dryer, they will be identified prior to component failure.
7. An enhanced, focused engineering inspection was performed. An additional expanded inspection is not warranted.
8. The review standard for EPUs (RS-001) provides a structured process for the review of applications for EPUs. Its continued use and improvement are encouraged.

In addition to the recommendations and conclusions, the ACRS provided some general comments on the NRC staff's review of the VYNPS EPU application. Regarding the issue of crediting containment overpressure for determination of the available net positive suction head for the emergency core cooling system pumps, the ACRS letter stated that:

Although we concur with the staff's conclusion to grant credit for containment overpressure, we would have preferred to see the assessment performed and presented in a more coherent manner, with a more complete and rigorous consideration of uncertainties. The staff is developing additional guidance to be used in the consideration of overpressure credit in the future. We look forward to reviewing their proposed approach.

The letter provided some additional comments from several ACRS members which addressed a proposed approach for consideration of uncertainties as part of an assessment of crediting containment overpressure. The NRC staff will consider the ACRS comments as it develops more explicit guidance as part of the ongoing revisions to Regulatory Guide (RG) 1.82. Based on discussions with the ACRS, during NRC staff presentations related to the proposed revisions to RG 1.82, the staff understands that the ACRS would prefer that licensees use a statistical approach for the analysis related to crediting containment overpressure. The staff is currently developing guidance for this new approach and will bring the revised RG 1.82 to the Committee in the future.

Thank you for your comments. The NRC staff appreciates the Committee's insights concerning the VYNPS EPU amendment review.

Sincerely,

/RA/

Luis A. Reyes
Executive Director
for Operations

cc: Chairman Diaz
Commissioner McGaffigan
Commissioner Merrifield
Commissioner Jaczko
Commissioner Lyons
SECY

In addition to the recommendations and conclusions, the ACRS provided some general comments on the NRC staff's review of the VYNPS EPU application. Regarding the issue of crediting containment overpressure for determination of the available net positive suction head (NPSH) for the emergency core cooling system (ECCS) pumps, the ACRS letter stated that:

Although we concur with the staff's conclusion to grant credit for containment overpressure, we would have preferred to see the assessment performed and presented in a more coherent manner, with a more complete and rigorous consideration of uncertainties. The staff is developing additional guidance to be used in the consideration of overpressure credit in the future. We look forward to reviewing their proposed approach.

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Thank you for your comments. The NRC staff appreciates the Committee's insights concerning the VYNPS EPU amendment review.

Sincerely,
/RA/
 Luis A. Reyes
 Executive Director
 for Operations

cc: Chairman Diaz
 Commissioner McGaffigan
 Commissioner Merrifield
 Commissioner Jaczko
 Commissioner Lyons
 SECY

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