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June 21, 2005

Docket No. 50-271
BVY 05-066

ATTN: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

Subject: **Vermont Yankee Nuclear Power Station**
Comments Regarding License Amendment No. 223

References: 1) Letter (NVY 05-045), USNRC to Entergy "Vermont Yankee Nuclear Power Station – Issuance of Amendment Re: Alternative Source Term (TAC No. MC0253)," dated March 29, 2005.

Entergy Nuclear Operations, Inc. (Entergy) hereby provides comments regarding NRC's letter issuing Amendment No. 223 to Vermont Yankee Nuclear Power Station's (VY) Facility Operating License (Reference 1). This amendment revised the VY licensing basis to incorporate a full-scope application of an alternative source term methodology.

Attachment 1 to this submittal contains Entergy's comments regarding the Safety Evaluation provided by Reference 1.

This submittal documents Entergy's comments on the Safety Evaluation identified during review and implementation of the license amendment. There are no new regulatory commitments contained in this submittal.

If you have any questions, please contact me at (802) 258-4236.

Sincerely,

James M. DeVincentis
Manager, Licensing
Vermont Yankee Nuclear Power Station

Attachment (1)

cc: (next page)

A001

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ATTACHMENT 1

Vermont Yankee Nuclear Power Station

Comments Regarding License Amendment No. 223

Total number of pages in Attachment 1 (excluding this cover sheet) is 1.

ATTACHMENT 1
Vermont Yankee Nuclear Power Station (VY)
Comments Regarding License Amendment No. 223

This attachment provides Entergy's comments on the Safety Evaluation identified during review and implementation of the license amendment that revised the VY licensing basis to incorporate a full-scope application of an alternative source term (AST) methodology.

Comment 1: In Section 3.2.1, "LOCA," the following statement appears: "With a LOCA, it is anticipated that the initial fission product release to the primary containment will last 30 seconds and will release all of the radioactive materials dissolved or suspended in the RCS liquid." This statement implies that the coolant activity release was included. However, reactor coolant activity was not included. For inerted BWRs that do not assume a purge valve may be open at the time of the LOCA, the coolant activity is a negligible contributor to dose.

Comment 2: In Section 3.2.1.1, "Suppression Pool Post-LOCA pH Control," second paragraph, sodium pentaborate is referred to as a base. It is a buffer. Later in this same section, a discussion of sodium pentaborate buffering is provided, correctly stating its buffering properties.

Comment 3: In Section 3.2.6, "Post-Accident Access to Vital Areas," third paragraph, "the 1 percent of all other particulates" does not "substantially" exceed the amounts assumed by the AST (i.e., the Te, Ba, and Sr releases are greater than 1 percent); rather they "generally" exceed the amounts assumed by the AST.

Comment 4: In Table 2, "iodine species fraction" should be "iodine species percentage."

Comment 5: In Table 2, the MSIV leakage that bypasses the main condenser is about 1 scfh (0.008 of the total), not 5 scfh. The 5 scfh is the reactor building bypass flow rate.

Comment 6: In Table 2, the "ECCS leakage release fraction" should be "ECCS leakage iodine release fraction."

Comment 7: In Table 2, the drywell spray removal coefficients for both particulates and elemental iodine should be 20 per hour starting at 0.25 hours, decreasing to 2 per hour at 2.068 hours. The reason there is a change to 11.3 per hour at 2.033 hours (and 1.13 per hour at 2.068 hours) is that in the RADTRAD model, a combined "drywell + wetwell" volume beyond 2.033 hours is used. This necessitates a reduction in the spray removal coefficient by the ratio of the drywell volume to the combined volume. The drywell spray removal coefficient actually remains 20 per hour until 2.068 hours, and then it is reduced by a factor of ten because an overall decontamination factor of 50 has been reached (per the Standard Review Plan).