

*Docket file*



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

August 22, 1995

*50-271*

Mr. Donald A. Reid  
Vice President, Operations  
Vermont Yankee Nuclear Power Corporation  
Ferry Road  
Brattleboro, VT 05301

SUBJECT: CORRECTION TO THE SAFETY EVALUATION FOR AMENDMENT NO. 125,  
VERMONT YANKEE NUCLEAR POWER STATION (TAC NO. M90339)

Dear Mr. Reid:

By letter dated August 23, 1990, the staff issued Amendment No. 125 to Facility Operating License No. DPR-28 for the Vermont Yankee Nuclear Power Station (VY). The safety evaluation (SE) enclosed with the amendment stated in part,

The proposed SR [Surveillance Requirement] 4.10.A.2.a adds a requirement to measure and record pilot cell (every sixth cell) electrolyte level weekly. It also requires measurement of the temperature of the pilot cell itself weekly. The proposed SR 4.10.A.2.b adds a requirement to measure and record electrolyte level and temperature for all the cells during quarterly battery surveillance.

By letter dated August 3, 1994, the Vermont Yankee Nuclear Power Corporation requested that the staff review the statement in the SE that the pilot cell is every sixth cell. The licensee noted that the application for the amendment (dated April 8, 1990) discusses using a measurement from every sixth cell for quarterly temperature averaging, but does not state that every sixth cell is a pilot cell. The licensee indicated that, consistent with common industry practice, it has always designated one cell in each battery bank as the pilot cell. The licensee therefore requested that the staff "revise and/or amend" the SE.

The staff has reviewed Vermont Yankee's application dated April 8, 1990, the staff's SE dated August 23, 1990, and Vermont Yankee's request dated August 3, 1994. The staff concludes that the licensee did not intend to designate every sixth cell as a pilot cell, that the licensee's practice of designating one cell in each battery bank as a pilot cell is reasonable and consistent with industry practice, and that the staff's statement that a pilot cell is "every sixth cell" was in error.

Therefore the staff is issuing the enclosed corrected page 2 to the SE issued on August 23, 1990. The corrected page removes the parenthetical clause "(every sixth cell)". The staff also corrected a typographical error at the end of the third paragraph under item 2 from "IEE Std. 450-1975" to "IEEE Std. 450-1975". This corrected page should be retained with the record of Amendment No. 125 to Operating License DPR-28.

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D. Reid

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This completes the staff's actions under TAC No. M90339. If you have any questions regarding this matter, please contact me at (301)415-1429.

Sincerely,

A handwritten signature in black ink, appearing to read "Daniel H. Dorman". The signature is fluid and cursive, with a long horizontal stroke at the end.

Daniel H. Dorman, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-271

cc w/encl: Corrected SE page 2

D. Reid  
Vermont Yankee Nuclear Power Company

cc:

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D. Reid

- 2 -

This completes the staff's actions under TAC No. M90339. If you have any questions regarding this matter, please contact me at (301)415-1429.

Sincerely,

Original signed by:

Daniel H. Dorman, Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-271

cc w/encl: Corrected SE page 2

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We reviewed the licensee's proposed battery test provisions and find that they represent an improvement because the probability of detecting a potentially degraded cell or battery would be increased. We also find that the proposed SRs are consistent with the Standard TS. Therefore, we conclude that the proposed SRs 4.10.A.2.c and 4.10.A.2.d of the TS are acceptable.

2. Surveillance Requirements (SRs) 4.10.A.2.a and 4.10.A.2.b.

The proposed SR 4.10.A.2.a adds a requirement to measure and record pilot cell electrolyte level weekly. It also requires measurement of the temperature of the pilot cell itself weekly. The proposed SR 4.10.A.2.b adds a requirement to measure and record electrolyte level and temperature for all the cells during quarterly battery surveillance.

If the electrolyte level falls below the minimum level, the top of the cell plates could be exposed. This would result in a battery capacity loss.

The performance and life of the battery is significantly degraded due to overcompensation of the battery charger if the temperature of a battery is not maintained properly. The proposed requirement to measure pilot cell electrolyte level and temperature during a weekly battery surveillance interval, and to monitor those parameters for all the cells during quarterly battery surveillance is consistent with recommendations provided by both the battery manufacturer and IEEE Std. 450-1975.

Therefore, we conclude the proposed modifications to SR 4.10.A.2.a and 4.10.A.2.b are acceptable.

3. Limiting Conditions for Operations (LCOs) 3.10.A.2.a, b, c and d.

For normal plant operation, the current LCOs 3.10.A.2.a, b, c, and d in the Battery Section of the TS require only battery chargers for neutron monitoring, station, switchyard and ECCS instrument batteries to be operable, rather than the entire dc system (i.e., dc buses, batteries and their associated battery chargers). The proposed change requires that each dc system, consisting of buses, batteries, and associated battery chargers, should be operable. We agree that each dc system including the batteries and their associated buses in addition to the chargers should be operable. We, therefore, conclude that the proposed change is acceptable.

4. Limiting Conditions for Operations (LCOs) 3.10.A.2.e and f.

The licensee proposed an LCO 3.10.A.2.e for the Appendix R alternate shutdown AS-2 battery to be added in the Battery Systems of the TS and also proposed to relocate their current LCO 3.10.A.5 for "480V Uninterruptible Power Systems" into 3.10.A.2 Battery System sub-section as a provision 3.10.A.2.f. As a result, the current LCO 3.10.A.5 provision from the current TS will be removed because all the information in it has been relocated.

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