



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

February 21, 2013

Site Vice President
Entergy Nuclear Operations, Inc.
Vermont Yankee Nuclear Power Station
P.O. Box 250
Governor Hunt Road
Vernon, VT 05354

SUBJECT: VERMONT YANKEE NUCLEAR POWER STATION - REQUEST FOR
ADDITIONAL INFORMATION REGARDING CHANGE TO LICENSING BASIS
FOR STATION BLACKOUT DIESEL GENERATOR (TAC NO. MF0422)

Dear Sir or Madam:

By letter dated December 21, 2012 (Agencywide Document Access and Management System Accession No. ML12362A041), Entergy Nuclear Operations, Inc. submitted a license amendment request to revise the licensing basis relative to how Vermont Yankee Nuclear Power Station (VYNPS) satisfies the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.63, "Loss of all alternating current power." Entergy proposes to replace the Vernon Hydroelectric Station with an onsite diesel generator as the alternate alternating current power source providing acceptable capability to withstand a station blackout under 10 CFR 50.63(c)(2). The proposed change would involve revisions to the VYNPS facility and procedures described in the Updated Final Safety Analysis Report.

The Nuclear Regulatory Commission staff is reviewing the information provided in your letter and has determined that additional information is needed to support its review. Enclosed is the NRC staff's request for additional information (RAI). The RAI was discussed with your staff on February 14, 2013, and it was agreed that your response would be provided within 30 days of the date of this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "R. Guzman", is written over the typed name.

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-271

Enclosure:
As stated

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION FOR
LICENSE AMENDMENT REQUEST RE: REVISION TO LICENSING BASIS FOR
REPLACING THE VERNON HYDROELECTRIC STATION WITH A
STATION BLACKOUT ONSITE EMERGENCY DIESEL GENERATOR
ENTERGY NUCLEAR OPERATIONS, INC.
VERMONT YANKEE NUCLEAR POWER STATION
DOCKET NO. 50-271

By letter dated December 21, 2012 (Agencywide Documents Access and Management System Accession No. ML12362A041), Entergy Nuclear Operations, Inc. (Entergy or the licensee) submitted a license amendment request (LAR) to revise the licensing basis relative to how Vermont Yankee Nuclear Power Station (VYNPS) satisfies the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.63, "Loss of all alternating current power." Entergy proposes to replace the Vernon Hydroelectric Station with an onsite emergency diesel generator (EDG) as the alternate alternating current (AAC) power source providing acceptable capability to withstand a station blackout (SBO) under 10 CFR 50.63(c)(2). The proposed change would involve revisions to the VYNPS facility and procedures described in the Updated Final Safety Analysis Report. The NRC staff is reviewing the LAR and has determined that additional information as requested below will be needed to support its review.

RAI-1

In the LAR, the licensee stated:

In Reference 7.a, the NRC accepted the determination that VY is categorized as an 8 hour coping plant with a target EDG reliability of 0.95. No changes to the station coping duration or credited EDG reliability are proposed in the amendment.

Based on the proposed design change, provide a summary of your detailed Regulatory Guide (RG) 1.155, "Station Blackout," analysis, considering the most up-to-date data (e.g., current grid reliability, loss of offsite power events, EDG reliability, etc.), showing the minimum specified duration that Vermont Yankee should be required to mitigate the consequences of an SBO event.

RAI-2

In the LAR, the licensee stated that:

Once every refueling outage, a timed start will be performed to demonstrate that the AAC power source can be started and aligned to either safety Bus 3 or safety Bus 4 within one (1) hour...

Enclosure

Once the AAC power source is energized up to 3V4 [the feeder circuit breaker for the Vernon Hydroelectric Station tie line], it takes very little time to align loads from the control room (less than 10 minutes).

The regulatory guidance in Section B.12, Appendix B, of NUMARC 87-00 Revision 1 as endorsed by RG 1.155, states that: "Unless otherwise governed by technical specifications, the AAC system shall be demonstrated by initial test to be capable of powering required shutdown equipment within one hour of a station blackout event." Given the above, explain how the licensee demonstrates that the AAC system can power required shutdown equipment within one-hour of a station blackout event (not just be aligned).

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Sincerely,

/ra/

Richard V. Guzman, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
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*Concurrence via e-mail

NRR-088

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