



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

May 7, 2010

Mr. R. M. Krich
Vice President, Nuclear Licensing
Tennessee Valley Authority
3R Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3 – REQUEST FOR ADDITIONAL INFORMATION REGARDING EXTENDING COMPLETION TIMES FOR EMERGENCY DIESEL GENERATORS (TAC NOS. ME3423, ME3424, AND ME3425)

Dear Mr. Krich:

By letter dated February 18, 2010, as supplemented by letter dated April 5, 2010, the Tennessee Valley Authority (TVA, the licensee) submitted a request to amend the operating license for the Browns Ferry Nuclear Plant, Units 1, 2, and 3, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.90, "Application for amendment of license, construction permit, or early site permit." The amendment would revise the Technical Specifications to extend the completion time for out of service emergency diesel generators.

The U. S. Nuclear Regulatory Commission requires additional information in order to complete its review of the subject license amendment request. Please respond to the questions in the enclosed request for additional information. This request was discussed with Mr. Terrel Cribbe of your staff on April 26, 2010, and it was agreed that TVA would provide a response May 28, 2010.

If you have any questions, please contact me at (301) 415-1321.

Sincerely,

A handwritten signature in black ink, appearing to read "S. Bailey".

Stewart N. Bailey, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-259, 50-260, and 50-296

Enclosure: Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION
EXTENSION OF THE TECHNICAL SPECIFICATION COMPLETION TIME
FOR THE EMERGENCY DIESEL GENERATORS
TENNESSEE VALLEY AUTHORITY
BROWNS FERRY UNITS 1, 2, AND 3
DOCKET NOS. 50-259, 50-260, AND 50-296

1. License amendment request (LAR) Section 3.2.2.3, states, "It is possible using the 4kV [kilo volt] bus tie board (UFSAR [Updated Final Safety Analysis Report] Figure 8.4-2), to make any DG [diesel generator] available to any 4kV Shutdown Board." Browns Ferry Nuclear Plant's (BFN) UFSAR, Section 8.5.2, "Safety Design Basis," states "The Standby AC Power System will meet or exceed the requirements of [Institute of Electrical and Electronics Engineers (IEEE) standard] IEEE-308 and -279." Explain how the cross-tie connections are made such that redundancy, separation, and isolation criteria are met. Given BFN's unique electrical design, describe, in detail the capability of the OPERABLE emergency DGs to replace the power lost due to removing a DG from service for an extended period. In your response, provide a summary description with drawings, as appropriate, showing DG operating configurations and their required loads for the worst-case design basis events. If applicable, describe the time required to interconnect a DG to another shutdown board and the procedures used.
2. LAR page E1-17 states, "Station Blackout (SBO) coping duration for BFN is four hours. Coping strategy is to shutdown the blacked-out unit with equipment powered from the 250 volt direct current battery system." Considering the extended allowed outage times and the current reliability and availability values of the DGs (as of March 2010), provide a summary of the evaluation and analysis to confirm that the original SBO assumptions, including the coping strategy and duration, remain the same as previously submitted.
3. LAR Page E1-17 states, "SBO on Unit 2 is the loss of DGs B and D and loss of DGs A and C for SBO on Unit 1. SBO on Unit 3 is the loss of DGs 3A and 3C. Considering the failure of one DG in each of the nonblacked-out units (A or C for Unit 1, B or D for Unit 2, and 3A or 3C for Unit 3), and an additional failure of DG 3B or 3D, a minimum of three DGs remain available for SBO. These provide sufficient power to supply required HVAC and common loads." Clarify whether three DGs have sufficient capacity to supply safe shutdown loads of non-SBO units and any required alternate AC power for the SBO unit. Provide a summary of the loading requirements for each DG and the loading margins.

Enclosure

4. The LAR states that the proposed change is needed because the existing 7-day completion time (CT) does not permit adequate time to perform some planned and corrective maintenance, and discusses the 12-year preventative maintenance that requires extensive diesel engine disassembly (pages E1-2 to E1-4). Later discussions in Section E describe the extended CT as being used "to perform maintenance or to trouble shoot and repair an inoperable DG." Enclosure 4 of the LAR provides the regulatory commitments. It is not clear to the staff that the extended CT will be typically used to perform infrequent diesel manufacturer's recommended inspections and preventive maintenance activities or that the extended CT would reduce entries into the limiting condition for operation (LCO) and reduce the number of DG starts for major DG maintenance activities. Clarify the regulatory commitments regarding the use of the extended CT for maintenance activities and/or the compensatory measures that will be used for LCO entries that are not part of a planned maintenance activity.

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/RA/

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