

From: Wentzel, Michael
Sent: Monday, June 21, 2021 3:31 PM
To: Orf, Tracy J
Subject: Browns Ferry Nuclear Plant, Units 1, 2, and 3 - Request for Additional Information Regarding Request to TS 3.8.6 (EPID L-2020-LLA-0177)
Attachments: Browns Ferry Nuclear Plant, Units 1, 2, and 3 - Request for Additional Information Regarding Application to Revise TS 3.8.6 (L-2020-LLA-0177).pdf

Dear Mr. Orf:

By application dated August 6, 2020 (Agencywide Documents Access and Management System Accession No. ML20219A762), the Tennessee Valley Authority (TVA), submitted a license amendment request for Browns Ferry Nuclear Plant, Units 1, 2, and 3. The proposed amendments would revise Technical Specification 3.8.6, "Battery Cell Parameters," to clarify the operability requirements for the Unit, Shutdown Board, and Diesel Generator batteries.

The U.S. Nuclear Regulatory Commission's (NRC's) Electrical Engineering Branch (EEEB) staff have reviewed the application and have identified areas where they need additional information to support their review. The NRC staff's request for additional information is attached. As previously discussed with you, the NRC staff requests your response to the request for additional information within 30 days of the date of this email.

If you have any questions, please contact me at (301) 415-6459 or michael.wentzel@nrc.gov.

Sincerely,

Michael Wentzel, Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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"Orf, Tracy J" <tjorf@tva.gov>
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Options
Priority: Normal
Return Notification: No
Reply Requested: No
Sensitivity: Normal
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REQUEST FOR ADDITIONAL INFORMATION
REGARDING LICENSE AMENDMENT REQUEST TO REVISE
TECHNICAL SPECIFICATION 3.8.6, "BATTERY CELL PARAMETERS"
TENNESSEE VALLEY AUTHORITY
BROWNS FERRY NUCLEAR PLANT, UNITS 1, 2 AND 3
DOCKET NOS. 50-259, 50-260, AND 50-296

By application dated August 6, 2020 (Agencywide Documents Access and Management System Accession No. ML20219A762), the Tennessee Valley Authority (the licensee) requested amendments to Renewed Facility Operating License Nos. DPR-33, DPR-52, and DPR-68 for Browns Ferry Nuclear Plant (Browns Ferry), Units 1, 2, and 3, respectively. The proposed amendments would revise Technical Specification (TS) 3.8.6, "Battery Cell Parameters," to clarify the operability requirements for the Unit, Shutdown Board, and Diesel Generator batteries.

The U.S. Nuclear Regulatory Commission's Electrical Engineering Branch staff is reviewing the license amendment request and has identified where additional information is needed to complete its review. The NRC staff's request for additional information is below.

Regulatory Requirements

Part 50.36, "Technical Specifications," of Title 10 of the *Code of Federal Regulations* requires, in part, that the operating license of a nuclear production facility include TS. Paragraph 50.36(c)(2) of Title 10 of the *Code of Federal Regulations* requires, in part, that the TS include limiting conditions for operation (LCOs), which are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS, until the condition can be met.

EEEB RAI - 1

The licensee proposed to revise TS 3.8.6 by deleting the existing alternate condition "One or more batteries with one or more battery cell parameters not within Category C values," in Condition B and adding the proposed new Condition C:

Condition C	"One or more batteries with one or more battery cell parameters not within Category B limits AND Any corresponding battery cell parameter for that battery not within its Category C limit."
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Required Action C.1	Declare associated battery inoperable
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Completion Time	Immediately
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The licensee also proposed to revise Table 3.8.6-1, Battery Cell Parameter Requirements, by adding Note (e):

- (e) Category C battery cell parameters are not considered when the corresponding Category B cell parameters are met.

The Table 3.8.6-1 Category C allowable value for each connected cell specific gravity is: Not more than 0.020 below average of all connected cells AND average of all connected cells ≥ 1.195 .

The licensee provided the following basis for the proposed changes:

When the average specific gravity of all connected cells is near the nominal, fully charged value, this limit [i.e., not more than 0.020 below average of all connected cells] provides a valid indication of a cell that may not be able to meet its design basis requirements. When the average specific gravity is high, having one cell more than 0.020 below the average of all connected is not necessarily an indication of a problem and is an invalid basis on which to declare the battery inoperable when all other parameter limits are met. Likewise, because the acceptable range of specific gravity is wider than 0.020, the natural variance of specific gravity can cause a given cell to be lower than 0.020 below the average and still be acceptable, notwithstanding the LCO. The proposed change corrects this situation.

The licensee also stated:

This proposed change clarifies the usage of the Category C limits as allowable values that determine operability only if any of the corresponding Category B limits are not met.

In a case when a battery pilot cell specific gravity does not meet Categories A and C limits in Condition A, the TS requires the licensee to declare the battery inoperable in Condition B (Required Action and associated Completion of Condition A not met). In this case, Category C limits would determine the operability of the battery if Category A limits are not met. Thus, the situation that the licensee would correct with the proposed change remains in the TS when Categories A and C limits are not met.

1. Provide a discussion of the TS requirements when Categories A and C are not met.
2. Clarify how the Category C limits would determine the operability of the battery when they "are not considered," as stated in the proposed Note (e).