

From: Chawla, Mahesh
Sent: Tuesday, September 13, 2011 10:19 AM
To: Alan I Hassoun
Cc: Wolfgang, Robert; McMurtray, Anthony; Pascarelli, Robert; Lingam, Siva; Boyle, Patrick; Hopkins, Ogbonna; Mathew, Roy; Matharu, Gurcharan; Waig, Gerald; Elliott, Robert
Subject: Request for Additional Information - Fermi 2 - LAR for Adoption of TSTF-501, Rev.1, "Relocated Stored Fuel Oil and Lube Oil Values to Licensee Control" - ME6861

By letter dated August 12, 2011 (ADAMS Accession No. ML112270114), Detroit Edison Co. submitted a license amendment request (LAR) for Fermi 2. The proposed LAR would revise TS 3.8.3, "Diesel Fuel Oil and Starting Air," by relocating the current stored diesel fuel oil numerical requirements from the TS to the TS Bases so that it may be modified under licensee control. In order for the NRC staff to proceed with the review of the subject LAR, additional information has been requested. In order to maintain the schedule, the staff is requesting this information by **October 14, 2011**. Please arrange a teleconference if you wish to discuss this further with the staff.

Request for Additional Information (RAI)
DTE Energy
Fermi 2
Docket No. 50-341
License Amendment Request for Adoption of TSTF-501, Revision 1
(TAC No. ME6861)

Reference:

Letter from Joseph H. Plona of DTE Energy to NRC, "License Amendment Request for Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-501, Revision 1, "Relocate Stored Fuel Oil and Lube Oil Volume Values to Licensee Control,"" dated August 12, 2011.

RAI CPTB-1:

Section 2.0 of your submittal states that the current reference at Fermi 2 is ANSI N-195 (no revision). Reference 3 in the Bases denotes ANSI N195-1976. Please confirm that Fermi 2 uses ANSI N195-1976 as the current reference.

RAI CPTB-2:

Section 5.1 of your submittal states that "The specific volume of fuel oil equivalent to a 7 and 6 day supply is calculated using the NRC-approved methodology described in Regulatory Guide 1.137, Revision 1, "Fuel-Oil Systems for Standby Diesel Generators" and ANSI N195-1976, "Fuel Oil Systems for Standby Diesel-Generators" based on the diesel generator manufacturer's consumption values including consideration of minimum required energy content." Reference 2

in the Bases denotes Regulatory Guide 1.137 without any revision. Please confirm that Fermi 2 uses Revision 1 of Regulatory Guide 1.137.

RAI CPTB-3:

Please provide the methodology of how you determine the direct energy content of the fuel oil. Also provide the range of energy content that is acceptable and the energy content value that is used in your fuel oil volume calculation.

RAI CPTB-4:

Please state which calculation method in ANSI N195-1976 you use to calculate the fuel oil volumes, the time dependent method or the conservative alternative method. Please confirm that your calculation includes an explicit allowance for fuel consumption required by periodic testing. If you use the time dependent method, please confirm that the calculation includes a minimum margin of 10 percent.

RAI CPTB-5:

Please confirm that the energy content in a fuel shipment is determined before it is transferred to the fuel oil storage tank.

RAI CPTB-6:

Is Fermi 2 currently using Ultra Low Sulfur Diesel (ULSD) fuel?

RAI CPTB-7:

Are the fuel oil quantity values (storage tank and day tank) currently in the Technical Specifications (TSs) and the diesel generator manufacturer's fuel consumption values based on ULSD fuel? If not, what type of fuel are they based on?

RAI CPTB-8:

Please confirm that the fuel oil quantity values (storage tank and day tank) and the diesel generator fuel consumption values are based on the EDGs operating at their upper TS frequency of 61.2 Hertz.

RAI CPTB-9:

Section 2.0 of your submittal states that "Direct energy content measurement of the diesel fuel oil is used to verify compliance with the most limiting energy content assumed in the determination of the required fuel oil volume." However, Insert 2 to TS Surveillance Requirement (SR) 3.8.3.1 in the Bases states that "Using the most limiting energy content as

verified by direct energy content measurement or the known correlation of diesel fuel absolute specific gravity or API gravity to energy content, the required diesel generator output, and the corresponding fuel consumption rate, the onsite fuel storage volume required for 7 days of operation can be determined.” Also, TS SR 3.8.3.2 in the Bases discusses measuring the fuel oil absolute specific gravity or API gravity, but measuring direct energy content is not mentioned. Please discuss the discrepancy between Section 2.0 and what is written in TS SR 3.8.3.1 and SR 3.8.3.2 in the Bases and also discuss which method of determining fuel oil energy content at Fermi 2 will be used.

RAI CPTB-10:

Paragraph 6.1 of ANSI N-195-1976 states that “Each diesel shall be equipped with day or integral tank or tanks whose capacity is sufficient to maintain at least 60 minutes of operation at the level where oil is automatically added to the day or integral tank or tanks. This capacity shall be based on fuel consumption at a load of 100% of the continuous rating of the diesel plus a minimum margin of 10%. Please confirm that your fuel oil calculation for the diesel generator day tanks complies with this requirement.

RAI ISTB-1:

Background:

Fermi 2 proposes the following TS SR 3.8.1.4:

TS SR 3.8.1.4: “Verify each day tank contains \geq one hour supply of fuel oil.”

Fermi 2 provided the following regarding the corresponding change to the TS SR 3.8.1.4 Bases:

“This SR provides verification that there is an adequate inventory of fuel oil in the day tank to support the EDG operation for one hour at full load. The volume of fuel oil **equivalent to** [emphasis added] one hour supply is 210 gallons.”

The current Fermi 2 TS SR 3.8.1.4 Bases states:

“This SR provides verification that the level of fuel oil in the day tank is at or above the level at which fuel oil is automatically added. The level is expressed as an equivalent volume in gallons, and is selected to ensure adequate fuel oil for a **minimum of** [emphasis added] 1 hour of EDG operation at full load.”

Question:

The proposed Fermi 2 TS SR 3.8.1.4 Bases is inconsistent with the proposed TS SR because the proposed Bases states the volume of fuel oil is equivalent to a one hour supply but the TS states “... \geq [greater than or equal to] a one hour supply... .” Please explain the reason for this

discrepancy and the difference with the minimum TS requirement from the current TS SR
3.8.1.4 Bases.