

NRR-DMPSPEm Resource

From: Goetz, Sujata
Sent: Tuesday, December 12, 2017 2:21 PM
To: Jason R Haas
Subject: Final Fermi RAI for LAR regarding UHC (TS 3.7.2)
Attachments: Fermi RAI dec 12.docx

Mr. Haas,

In a letter dated July 17, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17198C829), the DTE Electric Company requested an amendment to Renewed Facility Operating License Nos. NPF-43 in the form of changes to the technical specifications (TS) for Fermi 2.

The proposed amendment would modify the Fermi 2 TS 3.7.2, "Emergency Equipment Cooling Water (EECW) / Emergency Equipment Service Water (EESW) System and Ultimate Heat Sink (UHS)" and its associated TS Bases. Specifically, the proposed changes are to revise the TS 3.7.2 Conditions and Surveillance Requirements to reflect a proposed change to the design of the two redundant cross-tie lines that are part of the UHS.

The Nuclear Regulatory Commission staff is reviewing the submittal and has determined that additional information below is needed to complete its review. As discussed during the call held on Dec 5, 2017 a response is to be submitted by Jan 15, 2018.

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REQUESTS FOR ADDITIONAL INFORMATION
LICENSE AMENDMENT REQUEST TO
REVISE TS 3.7.2 FOR EMERGENCY EQUIPMENT COOLING WATER/EMERGENCY
EQUIPMENT SERVICE WATER SYSTEM AND ULTIMATE HEAT SINK
DTE ELECTRIC COMPANY
FERMI UNIT 2
DOCKET NOS. 50-341

NRC RAI-1

The original design basis for the Residual Heat Removal (RHR) Complex as summarized in the Fermi-2 Safety Evaluation Report, NUREG-0798, described two independent divisions for the RHR Complex, with each division having its own reservoir. The reservoirs are separated by a four foot thick concrete wall. The two divisions are functionally independent of each other with complete system and component redundancy. NUREG-0798 concluded that there is sufficient makeup water in the reservoirs for a 30 day on-site supply. In contrast, in the July 17, 2017, license amendment request (LAR), the licensee states that the reservoirs are a single source and that the combined volume is necessary for accident mitigation for 7 days. Please explain the discrepancy between the LAR and NUREG-0798.

NRC RAI-2

The LAR states that the reservoirs are a single source and that the combined volume is necessary for accident mitigation for 7 days. However, Updated Final Safety Analysis Report (UFSAR) Section 3.8.4.1.2 describes the RHR Complex consisting of two divisions completely independent of the other, with each division having a water reservoir and the capacity to shutdown the reactor during normal and/or accident conditions completely independent of the other. Please explain the discrepancy.

NRC RAI-3

UFSAR Section 9.2.5.2.1 describes the RHR complex reservoir consisting of “two one-half capacity structures.” What is meant by the term “capacity”? Capacity could be related to the quantity of water needed to perform its design function or two equally sized structures making the capacity of the RHR complex.

NRC RAI-4

UFSAR Section 9.2.5.3 refers to the ultimate heat sink as a single water source. RHR Complex could be considered a single source. What is meant by “a single source”?

NRC RAI-5

TS Bases 3.7.2 in the LCO Section is not clear. The third paragraph under the LCO section states “each reservoir must have sufficient capacity to accept the design heat load from supported equipment.” Yet each reservoir’s supported equipment has sufficient capacity to shutdown the reactor during normal and/or accident conditions. Explain the LCO section of TS Base 3.7.2.

NRC RAI-6

Fermi 2 UFSAR Appendix 1.27 describes 6,598,000 gallons of water to meet regulatory guide 1.27 position 1. Does this refer to a combined single source or redundant reservoirs?