NRR-DMPSPEm Resource

From: Goetz, Sujata
Sent: Wednesday, July 25, 2018 3:36 PM
To: Jason R Haas
Subject: Draft Request for Additional Information Regarding Fermi LAR to Adopt TSTF -542
Attachments: Fermi TSTF-542 RAI July 25.docx

Dear Mr. Haas,

By letter dated August 31, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17243A422), DTE Electric Company (DTE or the licensee), submitted a license amendment request (LAR) to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2, (ADAMS Accession No. ML16074A448) which changes the technical specifications for Fermi 2. Your application was also supplement by letter dated April 4, 2018 (ADAMS Accession No. ML18094A165), May 17, 2018 (ADAMS Accession No. ML18138A149) and June 27, 2018 (ADAMS Accession No. ML18178A134.)

The LAR replaces existing technical specifications requirements related to operations with a potential for draining the reactor vessel with new requirements on reactor pressure vessel water inventory control to protect safety limit 2.1.1.3. Safety limit 2.1.1.3 requires reactor vessel water level to be greater than the top of active irradiated fuel.

The Nuclear Regulatory Commission staff has reviewed your submittals and has determined that additional information, as stated in the attachment to this email, is needed to complete its review.

The attached draft RAI will be the subject of discussion during a public meeting on August 9, 2018.

Sujata Goetz
Project Manager, Fermi, Unit 2

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"Jason R Haas" <haasj@dteenergy.com>
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REQUEST FOR ADDITIONAL INFORMATION
APPLICATION TO REVISE TECHNICAL SPECIFICATION TO ADOPT TSTF-542
REVISION 2, "REACTOR PRESSURE VESSEL WATER INVENTORY CONTROL"
DTE ELECTRIC COMPANY
FERMI 2

By letter dated August 31, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17243A422), DTE Electric Company (DTE or the licensee), submitted a license amendment request (LAR) to adopt Technical Specifications Task Force (TSTF) Traveler TSTF-542, "Reactor Pressure Vessel Water Inventory Control," Revision 2, ML16074A448 which changes the technical specifications (TS) for Fermi 2. Your application was also supplement by letter dated April 4, 2018 (ADAMS Accession No. ML18094A165), May 17, 2018 (ADAMS Accession No. ML18138A149) and June 27, 2018 (ADAMS Accession No. ML18178A134).

RAI EICB-4

In Enclosure 2 of the LAR, the licensee proposed to adopt TS 3.3.5.3 Condition D (equivalent to TSTF-542 Standard Technical Specification (STS) 3.3.5.2 Condition D), which requires that an inoperable instrumentation channel be restored to operable status within 24 hours. It would apply to the manual initiation functions for core spray (CS) and low pressure coolant injection (LPCI) subsystem.

The licensee stated in its letter dated April 4, 2018, in response to RAI EICB -2:

> Fermi 2 does not have the capability to actuate an entire subsystem of or LPCI by a single manual pushbutton, as described in the response to [question number] RAI EICB-1. Instead, a CS or LPCI subsystem is actuated by manually controlling each individual component of that subsystem in accordance with approved plant procedures. In this context, the phrase "manual initiation channel" in the proposed TS Bases page B 3.3.5.3-3 is used to collectively describe all of the individual components required to manually initiate a subsystem and is not intended to imply that pushing one or two buttons actuates an entire subsystem.

Based on this information, Fermi 2's design does not align with the TSTF-542 STS Bases 3.3.5.2 design description of manual initiation instrumentation, which assumes that an entire ECCS subsystem can be started with the press of one button.

Furthermore, TSTF-542 STS 3.3.5.2 Bases for Required Action D.1 states, in part:

> If a manual initiation function is inoperable, the ECCS subsystem pumps can be started manually and the valves can be opened manually, but this is not the preferred condition.
>
> The 24 hour Completion Time was chosen to allow time for the operator to evaluate and repair any discovered inoperabilities. The Completion Time is appropriate given the ability to manually start the ECCS pumps and open the injection valves and to manually ensure the pump does not overheat.

Since the Fermi 2 design does not have the capability to start an entire CS or LPCI subsystem, the individual component controls would be the only method to inject water. Should any of those controls become inoperable, there would be no backup means to inject water using the associated required ECCS subsystem, rendering it inoperable as well. Proposed Fermi 2 TS 3.3.5.3 Condition D would allow the plant to remain in this condition, without injection capability, for up to 24 hours, which is a non-conservative TS action considering the assumptions described in the STS.

Please provide technical justification for why proposed Fermi 2 TS 3.3.5.3 Condition D would be appropriate for the CS and LPCI manual initiation functions, or revise the TS changes as necessary.