From:	Arora, Surinder
Sent:	Tuesday, May 4, 2021 3:38 PM
To:	Margaret M Offerle
Cc:	Salgado, Nancy; Widrevitz, Dan
Subject:	Fermi 2 - Request for Additional Information for Revised Relief Request RR A-39 (EPID L-2020-LLR-0161)
Attachments:	DNRL NVIB RAI Fermi 2 - RR-A39.docx

Ms. Offerle,

By letter dated December 30, 2020 (Agencywide Documents Access Management System (ADAMS) Accession No. ML20365A043), DTE Electric Company (DTE, the licensee) submitted for the NRC staff review and approval the revised relief request RR-A39 for the Fourth Ten-Year Inservice Inspection Interval. DTE requested authorization to utilize BWRVIP Guidelines in lieu of the applicable Section XI requirements for Examination Categories B-N-1 and B-N-2. The revised submittal proposes the use of BWRVIP-25-R1-A, BWRVIP-41-R4-A, and BWRVIP-48-R1 in lieu of the previous revision of these documents as approved in the original submittal per letter dated July 20, 2019 (ADAMS Accession No. ML19204A253).

The U.S. Nuclear Regulatory Commission (NRC) staff is reviewing the above request and has determined that response to the attached request for additional information (RAI) is needed to complete its review. Attached is the RAI for your response. You confirmed that you did not need a clarification call to discuss the RAI questions. Although our default schedule allows 30 days for providing your response to the staff's questions, you have requested that you will need 60 days for responding to RAI question RAI-2. Please note that this delay in response may impact the final disposition schedule of this relief request. After receipt of your response, if we determine this impact, we will let you know in a separate communication at that time.

Thank you,

SURINDER ARORA, PE
Project Manager, Fermi 2
US NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION (NRR)
DIVISION OF OPERATING REACTOR LICENSING (DORL)
Plant Licensing Branch III (LPL3)

Phone: 301 415-1421
Email: Surinder.Arora@nrc.gov

Docket No. 50-341
EPID: L-2020-LLR-0161

Hearing Identifier: NRR_DRMA
Email Number: 1175

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Sent Date: 5/4/2021 3:37:58 PM
Received Date: 5/4/2021 3:37:00 PM
From: Arora, Surinder

Created By: Surinder.Arora@nrc.gov

Recipients:
"Salgado, Nancy" <Nancy.Salgado@nrc.gov>
Tracking Status: None
"Widrevitz, Dan" <Dan.Widrevitz@nrc.gov>
Tracking Status: None
"Margaret M Offerle" <margaret.offerle@dteenergy.com>
Tracking Status: None

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REQUEST FOR ADDITIONAL INFORMATION

REVISED RELIEF REQUEST RR-A39

FERMI NUCLEAR GENERATING STATION, UNIT 2

DTE ELECTRIC COMPANY

DOCKET NO. 50-341

By letter dated December 30, 2020 (Agencywide Documents and Access Management System (ADAMS) Accession No. ML20365A043), DTE Electric Company (DTE or the licensee) submitted revised relief request RR-A39 for the Fourth Ten-Year Inservice Inspection Interval at the Enrico Fermi Nuclear Generating Station, Unit 2 (Fermi 2). DTE requested authorization to utilize BWRVIP Guidelines in lieu of the applicable Section XI requirements for Examination Categories B-N-1 and B-N-2. The revised submittal proposes the use of BWRVIP-25-R1-A, BWRVIP-41-R4-A, and BWRVIP-48-R1 in lieu of the previous revisions of these documents as approved in the original submittal per letter dated July 20, 2019.

Regulatory Basis

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 50.55a(z)(1), the licensee proposed to utilize BWRVIP Guidelines in lieu of the applicable Section XI requirements for Examination Categories B-N-1 and B-N-2. 10 CFR 50.55a(z)(1) requires the licensee to demonstrate that the proposed alternative provides an acceptable level of quality and safety.

The NRC staff needs to issue requests for additional information (RAIs) to complete its review of the licensee's proposed alternative.

Requests for Additional Information

RAI-1

Issue

The NRC staff's safety evaluation for BWRVIP-41, Revision 4A, "BWR Jet Pump Assembly Inspection and Flaw Evaluation Guidelines," establishes Condition #2 requiring licensees to comply with the requirements of an NRC-approved Hydrogen Water Chemistry program (e.g., BWRVIP-62-A).

The BWR fleet implements chemical mitigation as a technique to minimize applicable SCC growth rates in RCS systems. There are three mitigation methods used that include:

1. Hydrogen Water chemistry (HWC);
2. Noble Metal Chemical Addition (NMCA);
3. On-line Noble Chemical Addition (ONLC)

If a licensee opts to implement ONLC, inspection credits can be taken if the licensee conforms to the staff's criteria addressed in Section 4.0 of the supplemental final SE of BWRVIP-62A, "BWR Vessel and Internals Project, Technical Basis for Inspection Relief for BWR Internal Components with Hydrogen Injection," (ADAMS Accession No. ML18142A019).

Request

Identify which type of chemical mitigation method is used at Fermi 2 and provide a comprehensive description of how this methodology is implemented. As part of the description, include a discussion of how the program complies with the conditions issued as part of the NRC staff's safety evaluation and supplemental final safety evaluation for BWRVIP-62-A.

RAI-2

Issue

The NRC staff has become aware of a possible non-conservatism associated with the fracture toughness model published in BWRVIP-100, Rev. 1-A, "Updated Assessment of the Fracture Toughness of Irradiated Stainless Steel for BWR Core Shrouds" and incorporated into BWRVIP-235, "BWR Vessel and Internals Project, Structural Analysis Software for BWR Internals, DLL Version 3.1." This issue has been communicated to applicable recipients through a 10 CFR Part 21, transfer of information notice, dated February 19, 2021 and updated on March 19, 2021. Furthermore, this information was communicated to the NRC on a letter dated March 22, 2021 (ADAMS Accession No. ML21084A164)

The NRC staff is aware that this possible non-conservatism exists in a fluence range of 5×10^{20} n/cm² to 3×10^{21} n/cm². More specifically, additional experimental data suggests the lower bound fracture toughness of 50 ksi-√in is applicable at fluences of or greater than 5×10^{20} n/cm² as opposed to the defined threshold of 3×10^{21} n/cm².

The NRC staff has also become aware that this non-conservatism could potentially impact BWRVIP-76, Revision 1-A, BWRVIP-76, Revision 2, and BWRVIP Letter 2016-030. As a result, EPRI has determined that these documents cannot be used in their entirety as written. Furthermore, EPRI states that details on the specific impacts and recommended actions associated with BWRVIP-76, Revision 1-A, are included in Attachment 2. The NRC staff does not have access to the attachments provided in the Part 21 transfer of information notice.

The staff notes that BWRVIP-100, Rev. 1-A and BWRVIP-76-R1-A are included in the submittal's table titled, "BWRVIP Guidelines Used for Section XI Code Examinations (Part of this Request)."

Request

a) Provide detailed information on the applicability and intended use of BWRVIP-100, Rev. 1-A, as it applies to the applicable Section XI examinations that are being replaced by BWRVIP programs. Furthermore, the staff would like to know if the Part 21, transfer of information notices are applicable to Fermi 2. Within your response, provide the actions taken and/or planned to address the identified non-conservatism as applicable within the purview of this application.

b) Section 5 of the submittal includes a table titled, "BWRVIP Guidelines Used for Section XI Code Examinations." Note (3) of the table references the applicability of BWRVIP-76, Revision 1-A. Provide information on how Fermi 2 is addressing EPRI's statement in regard to stopping the specified use of BWRVIP-76, Revision 1-A. Include which

specific elements were impacted and which EPRI recommended actions are being taken (if applicable). If BWRVIP-76, Revision 1-A has been previously implemented, within your response, provide details on how this document was used within the purview of this application.