



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 1, 2015

Mr. Vito Kaminskas
Site Vice President - Nuclear Generation
DTE Electric Company
Fermi 2 - 280 OBA
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION FOR THE REVIEW OF THE
FERMI 2 LICENSE RENEWAL APPLICATION – SET 37 (TAC NO. MF4222)

Dear Mr. Kaminskas:

By letter dated April 24, 2014, DTE Electric Company (DTE or the applicant) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54, to renew the operating license NPF-43 for Fermi 2, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff). The staff is reviewing the information contained in the license renewal application and has identified, in the enclosure, areas where additional information is needed to complete the review.

This request for additional information was discussed with Ms. Lynne Goodman, and a mutually agreeable date for the response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-3301 or e-mail Daneira.Melendez-Colon@nrc.gov.

Sincerely,

/RA/

Daneira Meléndez-Colón, Project Manager
Projects Branch 1
Division of License Renewal
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosure:
Requests for Additional Information

cc: ListServ

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**FERMI 2
LICENSE RENEWAL APPLICATION
REQUESTS FOR ADDITIONAL INFORMATION SET 37**

RAI 4.3.3-1b

Background:

By letter dated May 21, 2015, the staff issued follow-up RAI 4.3.3-1a regarding the plant-specific implementation of the generic procedures in EPRI Technical Report 1024995. Item 2 of RAI 4.3.3-1a requested that the applicant:

Select a number of representative systems and provide the evaluation of the EAF analysis, ranking of sentinel locations, and selection of limiting sentinel locations. The systems should be selected so that they demonstrate the adequacy of the methodology to identify the limiting plant-specific component locations. Consideration should be given to the thermal zones, materials, transients, and complexity of the systems selected. The systems selected should demonstrate that the methodology conservatively evaluates EAF effects, with the same degree of analytical rigor for all locations, to identify the bounding locations.

Item 3 of RAI 4.3.3-1a requested that the applicant:

Describe and justify any engineering judgement, plant-specific assumptions, and plant-specific criteria used in the EAF analysis or screening process. This should include the systematic process used to eliminate sentinel locations as limiting and examples showing how the process was implemented.

In its response dated June 18, 2015, the applicant stated that the same degree of analytical rigor was not always applied when determining the EAF CUF (CUF_{en}) values of a location. The response for item 2 also states that the methodology used to determine bounding locations accounts for differences in the degree of analytical rigor. The response to item 3 does not provide the technical justification or systematic process used to account for differences in degree of analytical rigor.

Issue:

The relative ranking of analyzed locations based on CUF_{en} values may be influenced by applying different degrees of analytical rigor. Therefore, the subsequent identification of bounding locations may also be affected. The staff cannot determine the adequacy of the bounding locations because it lacks sufficient information regarding the approach used to account for differences in analytical rigor.

Request:

Describe the approach used to account for differences in analytical rigor when determining bounding locations. Justify that the approach retains an appropriate level of conservatism in the methodology being used to identify plant-specific bounding locations.

ENCLOSURE

RAI 4.3.3-2

Background:

By letter dated June 26, 2015, the applicant submitted the annual update for LRA Section 4.3.3. Page 22 of Enclosure 1 states that prescreening is performed to identify all ASME Class 1 reactor coolant pressure boundary locations with CUF calculations and that the components with the highest CUF values are evaluated for EAF effects. On the following page of the annual update, there is a seven step summary of the screening approach. The third step in the approach (including the prescreening step) is to apply the NUREG/CR-6909 fatigue curves. Therefore, the first screening step includes CUF_{en} values determined using ASME fatigue curves.

By letter dated June 18, 2015, the applicant responded to follow-up RAI 4.3.3-1a. Page 7 of Enclosure 1 lists the site-specific activities for identifying the bounding locations. Page 7 lists two primary activities, each of which have three subtasks. The second subtask under the first primary activity involves selecting the highest CUF_{en} values, which were determined using the design fatigue curves from NUREG/CR-6909, for further EAF analysis. The following page of the letter provides a three step process for selecting additional bounding locations, which are focused on reducing bounding locations.

Issue:

The process used to screen locations, identify bounding locations, and reduce bounding locations has been partially summarized in the response to RAI 4.3.3-1, response to follow-up RAI 4.3.3-1a, and the annual update. However, none of these documents fully describe the process. Additionally, when reviewed as a group, the documents still leave areas of uncertainty and potentially inconsistent steps/activities. The process is not defined clearly enough to be evaluated by the staff.

Request:

Describe the steps (from prescreening to establishing the final bounding locations) of the screening process in sufficient detail to be performed independently on a random system. Each step should include plant-specific criteria that was used in the analysis. Describe and justify any engineering judgment, all plant-specific assumptions, and all plant-specific criteria for each step in the process.

RAI 4.3.3-3

Background:

LRA Table 4.3-8, "EAF Screening of Fermi 2 Locations," contains bounding locations with CUF_{en} values projected to exceed 1.0. These locations will be managed by the Fatigue Monitoring Program and further actions will be taken in accordance with the AMP. Additional actions may include refining the fatigue analyses to produce CUF_{en} values below 1.0.

Issue:

It is unclear to the staff how bounding locations with CUF_{en} values projected to exceed 1.0 will be affected if the fatigue analyses are refined to reduce the CUF_{en} value.

Request:

Describe the process used to rank locations and identify leading locations that have been (or will be) re-evaluated because the environmentally adjusted CUF exceeds the limit of 1.0. Justify that the process retains an appropriate level of conservatism to identify plant-specific bounding locations.

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