August 19, 2009

Mr. Jack M. Davis
Senior Vice President and Chief Nuclear Officer
Detroit Edison Company
Fermi 2 – 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 11 RELATED TO SRP SECTIONS 02.02.03, 02.04.02, 02.04.13, AND 13.03 FOR THE FERMI 3 COMBINED LICENSE APPLICATION

Dear Mr. Davis:

By letter dated September 18, 2008, Detroit Edison Company (Detroit Edison) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, you are requested to respond within 45 days of the date of this letter. If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes.

If you have any questions or comments concerning this matter, I can be reached at 301-415-8148 or by e-mail at Jerry.Hale@nrc.gov.

Sincerely,

/RA M. Tonacci for:/

Jerry R. Hale, Project Manager
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 052-033

eRAI Tracking Nos. 3404, 3407, 3570, 3422, and 3410

Enclosure:
Request for Additional Information

August 19, 2009

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Senior Vice President and Chief Nuclear Officer
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Dear Mr. Davis:

By letter dated September 18, 2008, Detroit Edison Company (Detroit Edison) submitted for approval a combined license application pursuant to 10 CFR Part 52. The U.S. Nuclear Regulatory Commission (NRC) staff is performing a detailed review of this application to enable the staff to reach a conclusion on the safety of the proposed application.

The NRC staff has identified that additional information is needed to continue portions of the review. The staff's request for additional information (RAI) is contained in the enclosure to this letter. To support the review schedule, you are requested to respond within 45 days of the date of this letter. If changes are needed to the safety analysis report, the staff requests that the RAI response include the proposed wording changes.

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Docket Nos. 052-033

eRAI Tracking Nos. 3404, 3407, 3570, 3422, and 3410
Enclosure: Request for Additional Information

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***Approval captured electronically in the electronic RAI system.**

Request for Additional Information No. 3404 Revision 0

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 02.02.03 - Evaluation of Potential Accidents
Application Section: 2.2.3

02.02.03-1

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The Fermi 3 FSAR Table 2.2-202 listed the propane amounts on premises for the facilities Meijer Distributions Inc.; TWB Company, LLC; and Rockwood Landfill, but did not provide an analysis of the potential explosion hazard. Please provide the propane explosion scenario analysis and present the results of the evaluation for these sources in the Fermi 3 FSAR Section 2.2.3.1.1.

02.02.03-2

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The Femi 3 FSAR Sections 2.2.3.1.1 and 2.2.3.1.2 address the safe separation distance between the hydrogen and oxygen storage area and nearest safety-related structure to be 229 m (750 ft) for the potential explosion and flammable vapor cloud explosion hazard. However, there is no analysis or discussion presented in FSAR as to how this safe separation distance is determined. Please provide the analysis/discussion for the calculation of the safe separation distance.

02.02.03-3

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The Fermi 3 FSAR Table 2.2-203 listed two 8000 gallon gasoline underground storage tanks adjacent to southeast corner of building 24. Please provide the potential explosion hazard of tanker trucks that deliver gasoline to these tanks.

02.02.03-4

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. The potential toxic chemicals identified from onsite sources are addressed and summarized in the Fermi 3 FSAR Section 2.2.3.1.4.1 and Table 2.2-205. Of these chemicals, some are analyzed by the applicant for potential control room habitability, but the information in the FSAR is limited. Please provide a discussion of how the analyses are performed and what the resulting concentrations of chemicals are in order to demonstrate that the calculated chemical concentration is lower than the respective chemical

limiting concentration (toxicity limit). Include a discussion of the model used, modeling assumptions, input values, and calculated chemical concentrations at the intake and inside the control room. This information is required for the staff's review and independent confirmatory analysis for toxic chemicals for control room habitability.

02.02.03-5

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. In Fermi 3 FSAR Section 2.2.3.1.4.2, the applicant stated "only potentially toxic chemicals require evaluation". Please provide the list of all toxic chemicals evaluated. For large quantities of chemicals on site, provide rationale and how RG 1.78 methodology is applied for evaluating and screening out the following chemicals: sodium hypochlorite, hydrofluosilicic acid, anhydrous ammonia, propane and sulfuric acid (Fermi 3 FSAR Table 2.2-202). If RG 1.78 methodology was not used, describe and justify the methodology employed.

Request for Additional Information No. 3407 Revision 0

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 02.02.03 - Evaluation of Potential Accidents
Application Section: 2.2.3

02.02.03-6

RG 1.206 provides guidance regarding the information that is needed to ensure potential hazards in the site vicinity are identified and evaluated to meet the siting criteria in 10 CFR 100.20 and 10 CFR 100.21. In Fermi 3 FSAR Section 2.2.3.1.4.3, the applicant stated without further discussion "Transportation of toxic chemicals in the vicinity is not a concern for Fermi 3 control room habitability analysis". Please provide the basis for this statement, its rationale, and the methodology applied to reach this conclusion. The information is needed for staff's review and independent confirmatory analysis.

Request for Additional Information No. 3570 Revision 0

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 02.04.02 - Floods
Application Section: 02.04.02

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.02-2

During the site audit, DTE indicated that storm orientation and size adjustment was not conducted in the derivation of the probable maximum precipitation (PMP) in the FSAR. Additionally, the derivation of PMP for the Swan Creek watershed is not clear in the FSAR. There is no discussion that orientation and size was addressed during the determination of the PMP.

Please provide additional discussion and/or justification that the PMP water depth provided in the FSAR would meet the methodology specified in method HMR52.

Request for Additional Information No. 3422 Revision 0

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 02.04.13 - Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Waters
Application Section: 2.4.13

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.13-7

The staff has reviewed the FSAR Section 2.4.13, Accidental Releases of Radioactive Liquid Effluents in Ground and Surface Water. In accordance with 100.20(c) and 52.79(a)(1)(iii), the NRC staff requests additional explanation and justification for the selection of the release point in the accidental release analysis. The applicant identified the release point as the Radwaste Building in FSAR Section 2.4.12. The applicant should provide a discussion for its rationale for selecting distances to potential receptors from the center of the Reactor Building, or else provide a transport analysis based on the actual release point that is assumed. Additionally, the applicant should provide justification that the use of the porosity of 1% is appropriate in the transport analysis.

Request for Additional Information No. 3410 Revision 1

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 13.03 - Emergency Planning
Application Section: Part 5

QUESTIONS for Licensing and Inspection Branch (NSIR/DPR/LIB) (EP)

13.03-18

ITAAC- Fermi Unit 3 COLA
Regulatory Basis: 10 CFR 52.80 (a)
SRP Acceptance Criteria: Requirement E; Acceptance Criterion 23

13.03-017-01 NUREG-0800, "Standard Review Plan," Table 14.3.10-1, "Emergency Planning Generic Inspections, Tests, Analyses, and Acceptance Criteria," describes an acceptable set of generic emergency planning ITAAC. The following generic ITACC items were not included in Table 2.3-1, "ITAAC For Emergency Planning" in Part 10 “ITAAC” of the COL Application for Fermi unit 3: EP Program Elements 1.1, 2.1, 8.1 (Acceptance criteria 8.1.2, 8.1.3 and 8.1.5), 8.2 (Acceptance criteria 8.2.2 and 8.2.4), 8.3, 8.4, 8.5, 8.6, 9.5, 9.6, 10.2, 10.3, 10.4, 11.1, 11.2, 11.3, 11.4, 12.1, 12.2, 12.3, 14.1, 15.1, 16.1 and 17.1. Provide missing ITAAC elements or an explanation for why the missing ITAAC are not required.

13.03-017-02 Table 2.3-1 Acceptance Criterion 2.1.1 does not include language regarding notification of State and local agencies within 15 minutes. The corresponding NUREG-0800, Table 14.3.10-1, Acceptance Criteria 5.1 describes the ability to notify the State and local agencies within 15 minutes. Revise Acceptance Criterion 2.1.1 to be consistent with Table 14.3.10-1 Acceptance Criterion 5.1 or propose an acceptable alternative.

13.03-017-03 Table 2.3-1 Acceptance Criterion for program element 3.1 describes the communication tests to be performed between ERFs. The tests described are not consistent with the capabilities described in Table 14.3.10-1 of NUREG-0800. The corresponding NUREG-0800 Acceptance Criteria for program element 6.1 describes communications capabilities among the control room, TSC, EOF, principal State and local EOCs, and radiological field assessment teams. Revise program element 3.1 to be consistent with Table 14.3.10-1 Acceptance Criterion 6.1 or propose an acceptable alternative.

13.03-017-04 Table 2.3-1 Acceptance Criterion 4.1 describes a Joint Information Center that has space for a limited number of news media. NUREG-0800, Table 14.3.10-1, corresponding Acceptance Criteria 7.1 states the applicant will specify the number of news media to be accommodated. Identify the specific number of news media

accommodated in Acceptance Criterion 4.1 in the COL Application to be consistent with NUREG-0800 Acceptance Criterion 7.1 or propose an acceptable alternative.

13.03-017-05 Table 2.3-1 Acceptance Criterion 5.1.1 describes a TSC of 1,875 square feet. NUREG-0800, Table 14.3.10-1, corresponding Acceptance Criteria 8.1.1 describes a TSC consistent with NUREG-0696, which details 75 square feet per person. The Fermi plan describes a TSC capable of supporting 26 people, which equates to 1,950 square feet. Revise the TSC square footage value or, explain the difference between Acceptance Criterion 5.1.1 TSC square footage in the COL Application and NUREG-0800 Acceptance Criterion 8.1.1.

13.03-017-06 Table 2.3-1 Acceptance Criterion 5.2.1 describes an EOF of 2,625 square feet. NUREG-0800, Table 14.3.10-1 corresponding Acceptance Criteria 8.2.1 describes an EOF consistent with NUREG-0696, which details 75 square feet per person. The Fermi plan describes an EOF capable of supporting 40 people which equates to 3,000 square feet. Revise the EOF square footage value or, explain the difference between Acceptance Criterion 5.2.1 EOF square footage in the COL Application and NUREG-0800 Acceptance Criterion 8.2.1.

13.03-017-07 Table 2.3-1 Acceptance Criterion 5.2.3 describes tests to be performed to demonstrate communications capabilities of the EOF. NUREG-0800, Table 14.3.10-1 corresponding Acceptance Criteria 8.2.3 describes communications capabilities among the control room, TSC, NRC, and State and local agencies. Revise Acceptance Criterion 5.2.3 to be consistent with Table 14.3.10-1 Acceptance Criterion 8.2.3 or propose an acceptable alternative.

13.03-017-08 Table 2.3-1 Acceptance Criterion 6.2.1 is missing a description of being able to determine the magnitude of a release of radioactive materials based on plant system parameters and effluent monitors. NUREG-0800, Table 14.3.10-1 corresponding Acceptance Criteria 9.2 describes the ability to determine the magnitude of a release of radioactive materials based on plant system parameters and effluent monitors. Revise Acceptance Criterion 6.2.1 to be consistent with Table 14.3.10-1 Acceptance Criterion 9.2 or propose an acceptable alternative.

13.03-017-09 Table 2.3-1 Acceptance Criterion 6.3 ends with the words "…for various radiological conditions." NUREG-0800, Table 14.3.10-1 corresponding Acceptance Criteria 9.3 ends with the words "…for various meteorological conditions." Revise Acceptance Criterion 6.3 to be consistent with Table 14.3.10-1 Acceptance Criterion 9.3 or propose an acceptable alternative.

13.03-017-10 Table 2.3-1 Acceptance Criterion 6.4 describes a test to be performed to demonstrate the ability to communicate meteorological data to the control room, TSC and EOF. NUREG-0800, Table 14.3.10-1 corresponding Acceptance

Criteria 9.4 describes the need to demonstrate the ability to communicate meteorological data to the control room, TSC, EOF, offsite NRC center and State. Revise Acceptance Criterion 6.4 to be consistent with Table 14.3.10-1 Acceptance Criterion 9.4 or propose an acceptable alternative.

13.03-017-11 Table 2.3-1 Acceptance Criterion 6.7 is missing the description of a means to compare estimated integrated dose from the projected and actual dose rates results to the EPA protective action guides (PAGs). NUREG-0800, Table 14.3.10-1 corresponding Acceptance Criteria 9.9 describes the need for a means to compare estimated integrated dose from the projected and actual dose rates results to the EPA protective action guides (PAGs). Revise Acceptance Criterion 6.7 to be consistent with Table 14.3.10-1 Acceptance Criterion 9.9 or propose an acceptable alternative.

13.03-017-12 Table 2.3-1 Acceptance Criterion 8.1.2.1 and 8.1.2.2 describe the conduct of the required licensee full participation evaluated exercise to be successfully performed prior to 5% reactor power. Missing from the description is the use of the term “successful” as it applies to ERO ERF staffing and performance. NUREG-0800, Table 14.3.10-1 corresponding Acceptance Criteria 14.1.2 states that the ERO ERF staffing and performance needs to be found “successful." Revise Acceptance Criterion 8.1.2.1 and 8.1.2.2 to be consistent with Table 14.3.10-1 Acceptance Criterion 14.1.2 or propose an acceptable alternative.