

February 29, 2012

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. 72 RELATED TO
CHAPTER 2.0 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 Title 10 of the *Code of Federal Regulations* (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 30 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/

Jerry Hale, Project Manager
Licensing Branch 3
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 052-033

eRAI Tracking No. 6305 and 6314

Enclosure:
Request for Additional Information

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

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Dear Mr. Davis:

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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 30 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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Enclosure:
Request for Additional Information

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NRO-002

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NAME	JHale	SGreen	MCarpentier	RKaras	JHale
DATE	02/29/2012	02/29/2012	1/31/12	1/30/12	02/29/2012

*Approval captured electronically in the electronic RAI system.
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Request for Additional Information No. 6305

Fermi Unit 3
Detroit Edison
Docket No. 52-033
SRP Section: 02.05.02 - Vibratory Ground Motion
Application Section: 02.05.02

Question: 02.05.02-19

The Fermi 3 site amplification functions (SAFs) are shown in FSAR Revision 3 Figures 2.5.2-270, -273, -274, and -275 and FSAR Figures 3.7.1-209, -210, and -211 provided in DTE Letter NRC3-11-0020, attachment 3. In accordance with NUREG-0800, Standard Review Plan, Chapter 2.5.2 "Vibratory Ground Motion," Chapter 3.7.1 "Seismic Design Parameters," Regulatory Guide (RG) 1.208 "A Performance-Based Approach to Define the Site-Specific Earthquake Ground Motion," and RG 1.60 "Design Response Spectra for Seismic Design of Nuclear Power Plants," please clarify the following:

- a) The SAFs shown in the listed figures show values greater than 1.0 at frequencies at and below 0.1 Hz. Since SAFs are expected to be unity at low frequency, please explain the cause of these values greater than 1.0 at frequencies at and below 0.1 Hz.
- b) Many of the plotted SAFs show a sharp change in slope at 50 Hz that looks like a "V". When the vertical axis is limited to 0 to 3.5, this change is most apparent on the ground motion response spectra (GMRS) SAFs and appears artificial and not a natural phenomenon. Please clarify the source of this seemingly artificial phenomenon in the SAFs at 50 Hz.

Request for Additional Information No. 6314

SRP Section: 02.05.04 - Stability of Subsurface Materials and Foundations
Application Section: 2.5.4

Question: 02.05.04-41

EF3 FSAR Sections 2.5.4.2.1.2.1 and 2.5.4.2.1.2.2 indicated that the rock quality designation (RQD) of the Bass Island Group and Salina Group Unit F are low with average RQD of 54 % and 13%, respectively, indicating that in-situ rock masses in these layers are highly fractured. Further, in these FSAR Sections, Poisson's ratios were calculated based on mean V_p and V_s to vary from 0.33 to 0.34 for the Bass Islands Group and from 0.39 to 0.40 for Salina Group Unit F. In accordance with 10 CFR 100.23, please justify whether the ranges of Poisson's ratio of 0.33 to 0.34 and 0.39 to 0.40 are appropriate for such highly fractured rocks.