

March 8, 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. 73 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* (10CFR) 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. 6345

Enclosure:
Request for Additional Information

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

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Request for Additional Information

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NRO-002

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DATE	03/08/2012	03/08/2012	03/07/2012	03/07/2012	03/08/2012

*Approval captured electronically in the electronic RAI system.

OFFICIAL RECORD COPY

Request for Additional Information No. 6345

Fermi Unit 3
Detroit Edison

Docket No. 52-033

SRP Section: 02.03.01 - Regional Climatology
Application Section: FSAR, Section 2.0 and Section 2.3.1

Question: 02.03.01-20

10 CFR 52.79(a)(1)(iii), *Contents of applications; technical information in the final safety analysis report*, states, in part, that final safety analysis reports should include the meteorological characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated. In addition, 10 CFR 100.20(c)(2), *Factors to be considered when evaluating sites*, states, in part, that the meteorological characteristics of the site that are necessary for safety analysis or that may have an impact upon plant design must be identified and characterized. 10 CFR 100.21(d), *Non-seismic siting criteria*, states, in part, that the meteorological characteristics of the site must be evaluated and site parameters established such that potential threats from such physical characteristics will pose no undue risk to the type of facility proposed to be located at the site.

Nuclear power plants must be designed so that they remain in a safe condition under extreme meteorological events, including events such as tornadoes and hurricanes, that could result in the most extreme wind events that could reasonably be predicted to occur at the site. Initially, the NRC's predecessor, the U.S. Atomic Energy Commission, considered tornadoes to be the bounding extreme wind events and issued RG 1.76, "Design-Basis Tornado for Nuclear Power Plants," in April 1974. The design-basis tornado wind speeds were chosen so that the probability that a tornado exceeding the design basis would occur was on the order of 10^{-7} per year per nuclear power plant.

In February 2007, the National Weather Service implemented the Enhanced Fujita Scale, which is a revised assessment relating tornado damage to wind speed. Relying on the Enhanced Fujita Scale, in March 2007, the NRC issued Revision 1 of RG 1.76, "Design-Basis Tornado and Tornado Missiles for Nuclear Power Plants." In Revision 1 of RG 1.76, the NRC decreased the design-basis tornado wind speed criteria. Since design-basis tornado wind speeds were decreased as a result of the analysis performed to update RG 1.76, it was no longer clear that the revised tornado design basis wind speeds would bound design-basis hurricane wind speeds in all areas of the United States. This prompted an investigation into extreme wind gusts during hurricanes and their relation to design basis hurricane wind speeds. As a result, in October 2011, the NRC issued RG 1.221, "Design-Basis Hurricane and Hurricane Missiles for Nuclear Power Plants." RG 1.221 provides the design-basis hurricane wind speeds that correspond to an exceedance frequency of 10^{-7} per year.

In accordance with the requirements of 10 CFR Parts 52 and 100 and the guidance of RG 1.221, the staff is requesting that the applicant update the site characteristic values in the Fermi 3 COL FSAR to include new site characteristics called "Hurricane Wind Speed" and "Hurricane Missile Spectra." Alternatively, the applicant may provide a justification in the Fermi 3 COL FSAR as to why the FSAR is not updated to include these new site characteristics.

Enclosure