

January 14, 2009

Mr. Peter W Smith
Director, Nuclear Development-Licensing 337 WCB
DTE Energy
One Energy Plaza
Detroit, MI 48226-1279

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 2 RELATED TO
THE SRP SECTIONS 02.04.13 FOR THE FERMI 3 COMBINED LICENSE
APPLICATION

Dear Mr. Smith:

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 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
ESBWR/ABWR Projects Branch 1
Division of New Reactor Licensing
Office of New Reactors

Docket Nos. 052-033

eRAI Tracking No. 1944

Enclosure:
Request for Additional Information

January 14, 2009

Mr. Peter W Smith
Director, Nuclear Development-Licensing 337 WCB
DTE Energy
One Energy Plaza
Detroit, MI 48226-1279

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 2 RELATED TO THE SRP
SECTIONS 02.04.13 FOR THE FERMI 3 COMBINED LICENSE APPLICATION

Dear Mr. Smith:

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 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.

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Docket Nos. 052-033

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Enclosure:
Request for Additional Information

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NRO-002

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DATE	01/09/2009	01/09/2009	01/09/2009	01/12/2009	01/15/2009

*Approval captured electronically in the electronic RAI system.

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Request for Additional Information No. 1944 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: FSAR Chapter 2 Section 2.4

QUESTIONS for Hydrologic Engineering Branch (RHEB)

02.04.13-1

Provide site-specific measured hydrologic parameters necessary to perform radionuclide transport analysis under the assumed release scenario as required in 10 CFR 100.20(c). More specifically, provide data and discussions about the hydrologic characteristics of the bedrock aquifer (Bass Islands Group) and the glacial overburden near Fermi Unit 3, including their thickness, depths to water tables, hydraulic conductivities, distribution coefficients, porosities; bulk mass densities, and retardation factors; the vertical and horizontal groundwater velocities of the overburden; suction heads; and the groundwater velocity of the bedrock aquifer.

02.04.13-2

Provide a description of the screening process used to determine the radioactive constituents in the drain collection tank considered for the failure analysis and how the inventory described in Table 12.2-13a of the ESBWR DCD was used to derive the radionuclide constituents for the subsequent radionuclide transport analysis.

02.04.13-3

Provide a discussion on the presence or absence of chelating agents and other chemical agents that would modify the transport characteristics of radionuclides at the site. The discussion needs to include whether these chemicals are to be used anywhere at the site and not limited to the tanks.

02.04.13-4

Provide a discussion on post-construction groundwater levels and their influence on the radionuclide pathways.

02.04.13-5

Provide an explanation of the "two possible sources" mentioned in the discussion of "Transport Considering Radioactive Decay Only" portion of the supplemental information.

02.04.13-6

Provide a description of the process followed to determine the conceptual models for surface and subsurface pathways and for site characteristics that affect transport of radioactive liquid effluents in ground and surface waters to ensure that the most conservative of plausible conceptual models has been identified pursuant to the guidance provided in SRP 2.4.13. Also provide analysis based on the most conservative of all the plausible models to demonstrate compliance with 10 CFR part 20 Appendix B Table 2 ECL limits. In the supplemental information that contained the analysis of radionuclide transport for an assumed failure, the results show exceedance of the ECL limits for 12 radionuclide isotopes for both assumed receptors (Lake Erie to the east and a receptor well to the west). The applicant also stated that even if the conservatism assumed in the analysis, more specifically the maximum groundwater velocity, dilution, assumption of continuous ingestion were to be relaxed, the resulting concentrations will still be above the ECL limits. Please include in the analysis the basis for the preceding conclusion of the applicant.