

May 11, 2010

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. 32 RELATED TO  
THE SRP SECTION 9.1.5 AND 13.3 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](mailto: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 Nos. 4648 and 4667

Enclosure:  
Request for Additional Information

May 11, 2010

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. 32 RELATED TO THE SRP SECTION 9.1.5 and 13.3 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 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](mailto: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

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Enclosure:

Request for Additional Information

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OFFICE	NSIR	NRO/SBPB	OGC	NGE1/LPM
NAME	JGrant	SLee	M. Carpentier	JHale
DATE	4/27/10	4/26/10	4/29/10	5/11/10

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

**OFFICIAL RECORD COPY**

## Request for Additional Information No. 4648 Revision 2

### SRP Section: 13.03 - Emergency Planning

#### Supplemental RAI 13.03-07: Assignment of Responsibilities (Organizational Control)

RAI 13.03-01-05 asked that the certification letters referenced in Appendix 2 be included in the Plan and that the applicant provide indication of the specific nature of emergency response arrangements to be established in the agreements. In response, the applicant stated the Letters of Agreement (LOA) supporting the proposed Fermi 3 COL Emergency Plan have not yet been executed and that the letters will be executed prior to operation as verified by Emergency Planning ITAAC item 1.0. A review of the applicants Emergency Planning ITAAC table was performed but did not note any ITAAC item(s) that described the execution of LOAs in support of Fermi Unit 3. The applicant provided copies of the LOA's executed for Fermi Unit 2 and state the Fermi 3 LOAs will be similar. The LOAs provided by the applicant do not include any reference to the potential new unit. Revise the Emergency Plan to include copies of the LOAs or signature pages that identify the potential Fermi 3 unit and describe concept of operations, emergency measures, implementation criteria and information exchange arrangements or provide a Licensee Condition that addresses the inclusion of the LOAs in the Emergency Plan prior to loading fuel.

#### Supplemental RAI 13.03-08: On-site Emergency Response Organization

RAI 13.03-02-07 asked the applicant to explain why Table II.B.1 "Minimum Staffing Requirements for Emergencies," describes the Notification/Communication function staffing as "may be provided by shift personnel assigned other functions and not included in the total." The applicant's response explained that Non-Licensed Operators are assigned the Notifications/Communications function, and as Non-Licensed Operators, these individuals are assigned other functions. Clarify and document in the Fermi 3 Emergency Plan that one of the on-shift Non-Licensed Operators is dedicated to the Notification/Communication function and not assigned other emergency response functions.

#### Supplemental RAI 13.03-09: Onsite Emergency Organization

RAI 13.03-02-09 asked the applicant to address the fact that Table II.B-1 "Minimum Staffing Requirements for Emergencies" did not list in the "Plant System Engineering, Repair and Corrective Actions" section expertise in Core/Thermal Hydraulics, maintenance expertise for Electrical, I&C, and Mechanical and Rad Waste Operator, or individuals to fill these functions. In response to the applicant explained that the staffing identified in Table II.B-1 is based on enhancements gained from years of experience from the operation of the existing Fermi Unit 2, and that the effectiveness of the proposed emergency response organization staffing has been proven through the organization's response to multiple drills, exercises, and emergency events. Provide a discussion that describes the enhancements resulting from experience and the effectiveness achieved by the response organization that justifies that the proposed reduced staffing is sufficient. In addition provide the effectiveness reduction evaluation(s) performed that describe how the reduced staffing does not reduce the effectiveness of the emergency response plan, or provide an acceptable justification for why this is not needed.

#### Supplemental RAI 13.03-10: On-site Emergency Response Organization

RAI 13.03-02-11 asked the applicant to explain the Table II.B-I asterisk footnote that describes its notation, in the table, to mean "May be provided by shift personnel assigned other functions and not included in the total" with no further description of who the other shift personnel would be or what their qualifications to allow them to perform the given function. In response, the applicant explained that the primary functions assigned to Damage Control and Rescue Teams are fulfilled by on-shift Operations and Maintenance personnel, with support provided by RP Technicians. On-shift Maintenance personnel are also assigned to complete the "Repair and Corrective Actions" task.

- a. Revise the emergency response plan to describe the On-shift Maintenance personnel as being qualified in first aid to perform the Table II.B-1 Damage Control and Rescue Team functions, or provide an acceptable justification for why this is not needed.
- b. Clarify the apparent inconsistency between Table II.B-1 and footnote 3. The "Emergency Response Organizational Title" section of Table II.B-1 for "Damage Control and Rescue Team Members" describes the "OnShift" team as consisting of 2 personnel and foot note 3 to this same section describes the "Damage Control and Rescue Team Members" as consisting of maintenance personnel to support Mechanical, Electrical and Instrumentation/Controls, 3 personnel, or provide an acceptable justification for why this is not needed.

#### Supplemental RAI 13.03-11: On-site Emergency Response Organization

RAI 13.03-02-12 asked the applicant to explain Figure II.B-1 "Control Room" position block diagram description of on-shift Maintenance personnel, since there was no description in the Plan of on-shift maintenance personnel. In response to the applicant explained that on-shift Maintenance personnel are assigned to the Damage Control and Rescue Team and the major tasks of this team are identified in Table II.B.1, "Minimum Staffing Requirements for Emergencies." The applicant's Table II.B.1 describes two on-shift maintenance personnel, but describes coverage for Mechanical, Electrical and Instrumentation/Controls disciplines. Provide additional information regarding Table II.B.1, that describes the maintenance personnel on-shift that match those identified in Figure II.B-1 "Control Room" position block diagram and Table II.B-1, or provide an acceptable justification for why this is not needed.

#### Supplemental RAI 13.03-12: Emergency Communications

RAI 13.03-06-01 asked the applicant to include a description of guaranteed power to the emergency communications equipment. In response the applicant stated Emergency Telecommunications System guaranteed power to the communications equipment capabilities are described in the ESBWR DCD Section 9.5.2, and FSAR Section 9.5.2.2. Revise the Emergency Plan, section II.F.1.a.5, to include a reference to the applicable sections of ESBWR DCD and the FSAR, or provide an acceptable justification for why this is not needed.

#### Supplemental RAI 13.03-13: Emergency Response Support and Resources

RAI 13.03-07-02 asked the applicant to include a letter of certification for Monroe County Community College that serves as Joint Information Center for the site and add it to the listing of letters of certification in Appendix 2 of the Emergency Response Plan. In response the applicant stated Letters of Agreement specifically supporting the proposed Fermi 3 COL

Emergency Plan have not yet been executed; that the letters will be executed prior to operation as verified by ITAAC for Emergency Planning and that the required Letters of Agreement will be similar to those executed for the existing Fermi Unit 2. A review of the applicants Emergency Planning ITAAC table was performed but did not note any ITAAC item(s) that described the execution of LOAs in support of Fermi Unit 3. Revise the plan to include the Monroe County Community College in Appendix 2 and provide a letter of agreement with the community college identifying the potential new unit, or provide a Licensee Condition that addresses the inclusion of the LOAs in the Emergency Plan prior to loading fuel.

#### Supplemental RAI 13.03-14: Protective Response

RAI 13.03-10-05 asked the applicant to address why there was no description of the potential use of sheltering affected areas if conditions make evacuation dangerous, or the consideration for the use of KI consistent with 10 CFR 50.47 (b)(10), RIS 2004-13 (ADAMS accession # ML041210046) and NUREG-0654, Supplement 3. In response the applicant stated that section II.J.7 of the Fermi 3 COL Emergency Plan refers to Table II.J-1, Protective Action Guides, which provides for both evacuation and sheltering. However, the Section II.J.7 paragraph that describes the Emergency Directors actions for a General Emergency declaration, in part, is in conflict with the Plans reference to Table II.J-1, this paragraph directs the Emergency Director to notify the off-site stakeholders with a PAR to *evacuate* the Protective Action Areas within a two-mile radius around the Fermi 3 site; evacuate five-miles downwind in affected areas and shelter-in-place the remainder of the Plume Exposure Pathway EPZ. Revise the Plan's description of the Emergency Directors expected PAR actions to be taken for a General Emergency declaration to be consistent with 10 CFR 50.47 (b)(10), RIS 2004-13 and NUREG-0654, Supplement 3, or provide an acceptable justification for why this is not needed.

#### Supplemental RAI 13.03-15: Protective Response

RAI 13.03-10.6.2 asked the applicant to include a map that identifies the pre-selected radiological sampling and monitoring points in accordance with NUREG-0654 evaluation criterion II.J.10.a. In response the applicant stated the protocol for off-site dose assessment does not include a requirement for use of pre-selected radiological sampling and monitoring points, and that the RETs are equipped with maps and Global Positioning System devices to provide assurance of proper sampling locations consistent with the directions provided. Revise the plan to include a description of how radiological off-site survey data is communicated, in a uniform, understandable and useable manner, to off-site stakeholders in accordance with NUREG-0654 evaluation criterion II.J.10.a, or provide an acceptable justification for why this is not needed.

#### Supplemental RAI 13.03-16: Exercises and Drills

RAI 13.03-14-02 asked the applicant to explain why the description of communications drills performed, and their frequency of testing did not include a communications test with Federal Emergency Response Organizations and States within the ingestion pathway. In response the applicant explained that under conditions requiring implementation of the Fermi 3 COL Emergency Plan, communications are not established or maintained with the State of Ohio. Revise the Emergency Plan to include a description of the testing of communications with the State of Ohio, consistent with NUREG-0654 evaluation criterion N.2.a, or provide an acceptable justification for why this is not needed.

## **Request for Additional Information No. 4667 Revision 0**

### SRP Section: 09.01.05 - Overhead Heavy Load Handling Systems

#### 09.01.05-1

For compliance with the requirements of GDC 4 for heavy load handling, the applicant must address the protection of essential safety-related equipment from missiles. SRP Section 9.1.5 and RIS 2005-25, Supplemental 1, provide guidance on the use of non-metallic slings to meet this criterion. Since non-metallic slings are particularly vulnerable to failure when unprotected and come in contact with objects with very small radius bends (sharp objects), the applicant should describe how the non-metallic slings used with single-failure-proof handling systems will be inherently prevented from unprotected exposure to very small radius bends and similar potential for failure. If the applicant proposes a different approach from the applicable SRP revision, the applicant must address how the alternative satisfies the underlying requirement.

Fermi COL application has proposed to address COL Information Item STD COL 9.1-5-A in Section 9.1.5.8, regarding the use of non-metallic slings with single failure proof lifting devices, by addressing the use of slings within the heavy load handling procedures. However, the update to Section 9.1.5.8 of the COL application does not provide an adequate description to ensure that sling use will meet the guidance of SRP Section 9.1.5.III.4.C.ii(2) and RIS 2005-25, Supplemental 1. For heavy load handling, NRC regulations specifically state that slings should be constructed of metallic material (chain or wire rope). Therefore, the applicant is requested to define the use of non-metallic slings that will be included into the heavy load procedures and update the COL accordingly. Otherwise, justify how the design meets the guidance for use of slings as indicated SRP Section 9.1.5.III.4.C.ii(2) and RIS 2005-25.