

The Detroit Edison Company  
One Energy Plaza, Detroit, MI 48226-1279



10 CFR 52.79

August 15, 2011  
NRC3-11-0033

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, DC 20555-0001

References: 1) Fermi 3  
Docket No. 52-033  
2) Letter from Jerry Hale (USNRC) to Jack M. Davis (Detroit Edison), "Request for Additional Information Letter No. 65 Related to the Section 1.0 for the Fermi 3 Combined License Application," dated August 2, 2011

Subject: Detroit Edison Company Response to NRC Request for Additional Information Letter No. 65

In Reference 2, the NRC requested additional information to support the review of certain portions of the Fermi 3 Combined License Application (COLA). The response to the Request for Additional Information (RAI) associated with Reference 2 is provided as Attachment 1 of this letter. Information contained in this response will be incorporated into a future COLA submission as described in the attachment.

If you have any questions, or need additional information, please contact me at (313) 235-3341.

I state under penalty of perjury that the foregoing is true and correct. Executed on the 15<sup>th</sup> day of August 2011.

Sincerely,

A handwritten signature in black ink, appearing to read "PWS", with a horizontal line extending to the right.

Peter W. Smith, Director  
Nuclear Development – Licensing & Engineering  
Detroit Edison Company

Attachment: 1) Response to RAI Letter No. 65, RAI Question No. 01-6

cc: Adrian Muniz, NRC Fermi 3 Project Manager  
Jerry Hale, NRC Fermi 3 Project Manager  
Raj Anand, NRC Fermi 3 Project Manager  
Michael Eudy, NRC Fermi 3 Project Manager  
Bruce Olson, NRC Fermi 3 Environmental Project Manager (w/o attachments)  
Fermi 2 Resident Inspector (w/o attachments)  
NRC Region III Regional Administrator (w/o attachments)  
NRC Region II Regional Administrator (w/o attachments)  
Supervisor, Electric Operators, Michigan Public Service Commission (w/o attachments)  
Michigan Department of Natural Resources & Environment, Radiological Protection  
Section (w/o attachments)

**Attachment 1**  
**NRC3-11-0033**  
(following 7 pages)

**Response to RAI Letter No. 65**  
**(eRAI Tracking No. 5932)**

**RAI Question No. 01-6**

**NRC RAI 01-6**

*Once the protected area (PA) is operational, the applicant can receive special nuclear material (SNM) in the form of new fuel assemblies. On occasion, the applicant may have to ship damaged fuel rods or fuel assemblies back to the manufacturer. When this happens, the requirements of part 73.67(g)(1) must be followed. The applicant will receive this fuel under the auspices of part 73.67(g)(2). Each licensee, either shipper or receiver, who arranges for the physical protection of SNM shall; establish and maintain response procedures for dealing with threats or thefts of SNM, arrange for notification of arrival, loss, or unaccountability of any such shipment, and conduct a trace investigation of any lost or unaccounted shipment and notification of the NRC Operations Center of the loss or recovery on any such shipment in accordance with part 73.67(g)(3). Therefore, DTE is requested to provide a transportation security plan (TSP) that addresses the security requirements for shipping and receiving SNM in accordance with 10 CFR 73.67(g)(1), g(2), and g(3).*

**Response**

A New Fuel Shipping Plan summarizing the procedures and the written agreement that the applicant will have in place prior to shipment of new fuel back to the fuel manufacturer has been developed for inclusion in Part 2, Chapter 13 Appendix 13DD, of the Combined License (COL) application. A discussion of the New Fuel Shipping Plan will be included in Section 13.5.2.2.8, Security Procedures, of the Final Safety Analysis Report (FSAR).

**Proposed COLA Revision**

The following markups for the COLA are provided:

1. Update to FSAR Section 13.5.2.2.8, Security Procedures, by inserting the following paragraph at the end of this subsection.

The New Fuel Shipping Plan addresses the applicable 10 CFR 73.67 requirements in the event that unirradiated new fuel assemblies or components are returned to the supplying fuel manufacturer(s) facility.

2. Update to include a description of the New Fuel Shipping Plan as Appendix 13DD in FSAR Chapter 13.

**Markup of Detroit Edison COLA Part 2**  
(following 5 pages)

The following markup represents how Detroit Edison intends to reflect this RAI response in the next submittal of the Fermi 3 COLA. However, the same COLA content may be impacted by other COLA RAIs, other COLA changes, plant design changes, editorial or typographical corrections, etc. As a result, the final COLA content that appears in a future submittal may be different than presented here.

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**STD SUP 13.5-35**      13.5.2.2.6.5    **Heavy Load Handling Procedures**

This topic is discussed in Subsection 9.1.5.8.

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**STD SUP 13.5-36**      13.5.2.2.7      **Material Control Procedures**

The QAPD provides a description of procedural requirements for material control.

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**STD SUP 13.5-37**      13.5.2.2.8      **Security Procedures**

A discussion of security procedures is provided in the Security Plan.

Insert 1 here



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**STD SUP 13.5-38**      13.5.2.2.9      **Refueling and Outage Planning Procedures**

Procedures provide guidance for the development of refueling and outage plans, and as a minimum address the following elements:

- An outage philosophy which includes safety as a primary consideration in outage planning and implementation
- Separate organizations responsible for scheduling and overseeing the outage and provisions for an independent safety review team that would be assigned to perform final review and grant approval for outage activities
- Control procedures, which address both the initial outage plan and safety-significant changes to schedule
- Provisions that activities receive adequate resources
- Provisions that defense-in-depth during shutdown and margins are not reduced or provisions that an alternate or backup system must be available if a safety system or a defense-in-depth system is removed from service
- Provisions that personnel involved in outage activities are adequately trained including operator simulator training to the extent practicable, and training of other plant personnel, including temporary personnel, commensurate with the outage tasks they are to perform
- The guidance described in NUMARC 91-06, "Guidelines for Industry Actions to Assess Shutdown Management," to reduce the potential for loss of reactor coolant system boundary and inventory during shutdown conditions (Reference 13.5-203)

Insert 1

The New Fuel Shipping Plan addresses the applicable 10 CFR 73.67 requirements in the event that unirradiated new fuel assemblies or components are returned to the supplying fuel manufacturer(s) facility.

11 and 12 are part of Appendix 13CC  
(See RAI response to Letter No. 61,  
ML11200A042)

### **11. System Review and Assessment**

Reviews of the SNM program are conducted periodically. The results of the reviews are documented and reported in accordance with the requirements of the quality assurance or self assessment program.

### **12. Physical Security**

Protection of SNM is in accordance with the requirements of 10 CFR 73.67 and DTE's Physical Security Plan.

← Insert 2 here

## Appendix 13DD New Fuel Shipping Plan

### 1. Scope of New Fuel Shipping Plan

The reactor licensee on occasion may have to arrange for shipment of new fuel assemblies to the fuel manufacturer. Such shipments are infrequent and would require the reactor licensee to be subject to the regulations in 10 CFR 73.67 (Ref. 5.1), as clarified by guidance provided in NRC Regulatory Issue Summary (RIS) 2005-22 (Ref. 5.2). In lieu of the reactor licensee developing and submitting its own transportation security plan, arrangements may be made for a special nuclear material (SNM) qualified licensee to accept delivery of the fuel at the reactor licensee's site and for the SNM qualified licensee to perform the return shipment under its transportation security plan (TSP).

This New Fuel Shipping Plan summarizes the procedures and the written agreement the reactor licensee shall have in place prior to a shipment of new fuel back to the fuel manufacturer. A written agreement acknowledges the responsibility of the reactor licensee and the SNM qualified licensee.

### 2. Definitions

In this plan the following definitions apply:

- 2.1 New fuel assembly - a group of fuel rods containing pellets of fissionable material that has not been irradiated in the nuclear reactor core.
- 2.2 In-transit Physical protection - protection provided by a licensee in accordance with a transportation security plan for special nuclear material that meets the requirements of 10 CFR 73.67(g)(3).
- 2.3 SNM qualified licensee - an entity that is licensed pursuant to the regulations in 10 CFR Part 70 to transport, deliver to a carrier, or take delivery of a single shipment and has received NRC approval of a Transportation Security Plan (TSP) addressing the physical protection of special nuclear material in transit pursuant to 10 CFR 73.67(c).
- 2.4 Receiver - the SNM qualified licensee that receives delivery of new fuel assemblies returned from the reactor licensee.

### 3. Reactor Licensee Responsibility

- 3.1 The reactor licensee shall have a written agreement in place that arranges for the physical protection of special nuclear material in transit to and from the reactor licensee's facility that meets the requirements of 10 CFR 73.67(g)(3).

The in-transit physical protection starts at the free on board (F.O.B.) point at which the new fuel is delivered to a carrier for transport. The agreement shall include

acknowledgement by the SNM qualified licensee that its TSP includes in-transit physical protection from the reactor licensee's site to the receiver's facility.

3.2 Reactor licensee procedures shall provide guidance regarding advance notification to the receiver of the new fuel shipment, confirmation the receiver is ready to accept shipment, performance of container integrity checks, and placement of tamper-safing devices prior to the commencement of planned shipment in accordance with 10 CFR 73.67(g)(1).

3.3 When the reactor licensee receives SNM from a shipper, procedures shall include inspections for the container integrity and tamper-safing devices and notifications to the shipper as required by 10 CFR 73.67(g)(2).

#### 4. Documentation

The records created as a result of this plan activity shall be retained in accordance with reactor licensee records administration and applicable requirements of 10 CFR 73.67(g). Records that would be created and retained under this plan, in the event of new fuel return shipments, include:

- Written agreements between the reactor licensee and the shipper/receiver for in-transit physical protection of the new fuel shipment,
- Documentation of advance notifications and receipt,
- Documentation of container integrity and tamper-safing device checks, and
- Copies of superseded response procedure materials.

#### 5. References

5.1 10 CFR 73.67 - Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance

5.2 NRC Regulatory Issue Summary (RIS) 2005-22 Requirements for the Transportation of Special Nuclear Material of Moderate and Low Strategic Significance: 10 CFR Part 73 vs. Regulatory Guide 5.59 (1983)