



10 CFR 52.79

June 15, 2012  
NRC3-12-0021

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. 33 Related to the SRP Section 14.2 for the Fermi 3 Combined License Application," dated May 27, 2010
  - 3) Letter from Jerry Hale (USNRC) to Jack M. Davis (Detroit Edison), "Request for Additional Information Letter No. 42 Related to the SRP Section 12.03-04, 14.03.03 and 02.04.13 for the Fermi 3 Combined License Application," dated September 16, 2010
  - 4) Letter from Peter W. Smith (Detroit Edison) to USNRC, "Detroit Edison Company Response to NRC Request for Additional Information Letter No. 33," NRC3-10-0026, dated July 9, 2010
  - 5) Letter from Peter W. Smith (Detroit Edison) to USNRC, "Detroit Edison Company Response to NRC Requests for Additional Information (RAI) Letter No. 42 and RAI 02.04.13-11 of Letter No. 40," NRC3-10-0046, dated October 19, 2010

Subject: Detroit Edison Company Supplemental Response to NRC Request for Additional Information Letter Nos. 33 and 42

In References 2 and 3, the NRC requested additional information to support the review of certain portions of the Fermi 3 Combined License Application (COLA). Responses to those Requests for Additional Information (RAIs) were provided in References 4 and 5, respectively. Attachments 1 and 2 of this letter provide supplemental responses to portions of References 4 and 5.

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

DO95  
NRO

I state under penalty of perjury that the foregoing is true and correct. Executed on the 15<sup>th</sup> day of June 2012.

Sincerely,



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

Attachments:      1) Supplemental Response to RAI Letter No. 33 (Question No. 14.02-4)  
                             2) Supplemental Response to RAI Letter No. 42 (Question No. 14.03.03-1)

cc:      Adrian Muniz, NRC Fermi 3 Project Manager  
            Jerry Hale, NRC Fermi 3 Project Manager  
            Michael Eudy, NRC Fermi 3 Project Manager (w/o attachments)  
            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 and Environment  
                 Radiological Protection Section (w/o attachments)

**Attachment 1**  
**NRC3-12-0021**  
(8 pages)

**Response to RAI Letter No. 33**  
**(eRAI Tracking No. 4733)**

**RAI Question No. 14.02-4**

**NRC RAI 14.02-4**

*Consistent with the guidance in RG 1.206, Regulatory Position C.III.4.3, "Combined License Information Items That Cannot Be Resolved Before the Issuance of a License," the COL applicant identified in Fermi Units 3 FSAR Table 13.4-201, "Operational Programs Required by NRC Regulation," Item 19, Initial Test Program (ITP), activities that will be subject to a license condition. In addition to the ITP activities identified in Table 13.4-201, the NRC staff identified the following post COL items in FSAR Sections 14.2.9, "Site Specific Preoperational and Startup Tests," and 14.2.10, "COL Information Items" as license conditions:*

**License Conditions for Post Combined License (COL) Items**

**License Condition for the Startup Administrative Manual, Standard (STD) COL 14.2.2-A (COM 14.2-001)**

*Prior to initiating the plant's ITP, a site specific startup administration manual (SAM) (procedures), which includes administrative procedures and requirements that govern the activities associated with the plant ITP is to be provided to on-site NRC inspectors 60 days prior to their intended use.*

**License Condition for Preoperational and Startup Test Procedures, STD COL 14.2.3-A (COM 14.2-002)**

*During the post-licensing period, preoperational and startup test procedures will be subject to a license condition for NRC inspections to verify that the licensee implements the ITP. This process will allow for the performance of necessary plant as-built inspections and walk downs. The licensee will make available to on-site NRC inspectors preoperational and startup test procedures 60 days prior to their intended use.*

**License Condition for Site-Specific Preoperational and Startup Test Procedures, Enrico Fermi Unit 3 (EF3) COL 14.2-6-A (COM 14.2-004)**

*During the post-licensing period, site-specific preoperational and startup test procedures will be subject to a license condition for NRC inspections to verify that the licensee implements the ITP. This process will allow for the performance of necessary plant as-built inspections and walk downs. The licensee will make available to on-site NRC inspectors site-specific preoperational and startup test procedures 60 days prior to their intended use.*

**License Condition for the Test Program Schedule and Sequence, STD COL 14.2-4-A (COM 14.2-003)**

*Prior to initial fuel load, the licensee shall submit a schedule, no later than 12 months after issuance of the COL, and updated every 6 months until 12 months before scheduled fuel loading, and every month thereafter until either the operational program for the ITP in Fermi Units 3 COL FSAR Table 13.4-201, Item 19, has been fully implemented or the plant has been placed in commercial service, whichever comes first. This schedule shall support implementation details of the ITP and planning for the conduct of NRC inspections of operational programs listed in the operational program Fermi COL FSAR Table 13.4-201, Item 19.*

License Condition for the Power Ascension Test Phase Reports, STD SUP 14.2.2-A  
(COM 14.2-005)

*Certain milestones in the startup testing phase of the ITP (e.g., pre-critical testing, criticality testing, and low-power testing) should be controlled through this license condition to ensure that the designated licensee management reviews, evaluates, and approves relevant test results before proceeding to the power ascension test phase. Accordingly, the licensee shall perform the following:*

- (a) Complete all pre-critical and criticality testing and confirm that the test results are within the range of values predicted in the FSAR acceptance criteria. After completing and evaluating criticality test results, the licensee will conduct low-power tests and will operate the facility at reactor steady-state core power levels not in excess of 5 percent power, in accordance with the conditions of the license.*
- (b) Complete all low-power testing and confirm that the test results are within the range of values predicted in the acceptance criteria in the facility's FSAR. After completing and evaluating low-power test results, the licensee will conduct power ascension testing and will operate the facility at reactor steady-state core power levels not in excess of 100 percent power, in accordance with the conditions of the license.*

*The licensee is responsible for the review and evaluation of the adequacy of test results in these reports, as well as final review of overall test results in these reports. Test results, which do not meet acceptance criteria, are identified and corrective actions and retests are performed. These reports shall be made available to on-site NRC inspectors.*

License Condition for Test Changes

*Within one month of any ITP changes described in Fermi Units 3 FSAR Section 14.2, the licensee shall evaluate these changes in accordance with the provisions of 10 CFR 50.59 or the change process defined in the ESBWR Appendix to 10 CFR Part 52 for the certification design and report them in accordance with 10 CFR 50.59(d).*

*Please inform the NRC staff as to whether or not the proposed license conditions are considered appropriate to support the Fermi Unit 3 COL.*

**Supplemental Response**

Detroit Edison initially provided a response to NRC RAI 14.02-4 in Detroit Edison letter NRC3-10-0026, dated July 9, 2010 (ML101960646). The following is a supplement to that response.

As requested, Part 10 of the Fermi 3 COLA was revised in the initial response to this RAI to include several license conditions for post-combined license activities. Some of the COL items associated with these license conditions were recently found to be incorrect. The attached markup provides the following changes to COL items in Part 10:

- Subsection 3.2.1, "Startup Administrative Manual." The COL item associated with this license condition is revised from "STD COL 14.2.2-A" to "STD COL 14.2-2-A."

- Subsection 3.2.2, "Preoperational and Startup Test Procedures." The COL item associated with this license condition is revised from "STD COL 14.2.3-A" to "STD COL 14.2-3-A."
- Subsection 3.2.4, "Power Ascension Test Phase Reports." The COL item associated with this license condition is removed.

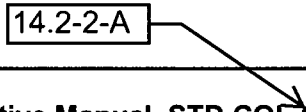
**Proposed COLA Revision**

Part 10, Subsections 3.2.1, 3.2.2, and 3.2.4 are revised as shown on the attached markup.

**Markup of Detroit Edison COLA**  
(following 3 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 responses to 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.

14.2-2-A

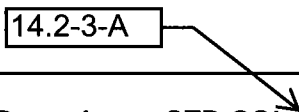


---

**3.2.1 Startup Administrative Manual, STD COC ~~14.2-2-A~~**

Prior to initiating the plant's initial test program (ITP), a site specific startup administration manual (SAM) (procedures), which includes administrative procedures and requirements that govern the activities associated with the plant ITP is to be provided to on-site NRC inspectors 60 days prior to their intended use.



14.2-3-A

---

**3.2.2 Preoperational and Startup Test Procedures, STD COL ~~14.2.3-A~~**

During the post-licensing period, preoperational and startup test procedures will be subject to a license condition for NRC inspections to verify that the licensee implements the ITP. This process will allow for the performance of necessary plant as-built inspections and walk downs. The licensee will make available to on-site NRC inspectors preoperational and startup test procedures 60 days prior to their intended use.

#### **3.2.4 Power Ascension Test Phase Reports, ~~STD SUP 14.2.2-A~~**

Certain milestones in the startup testing phase of the ITP (e.g., pre-critical testing, criticality testing, and low-power testing) should be controlled to ensure that the designated licensee management reviews, evaluates, and approves relevant test results before proceeding to the power ascension test phase. Accordingly, the licensee shall perform the following:

- (a) Following completion of all pre-critical and criticality testing, the licensee shall confirm that the test results are within range of values predicted in the acceptance criteria in the facility's FSAR. Following these licensee confirmations; the licensee may conduct low power testing and operate the facility at reactor steady-state core power levels not in excess of 5 percent power, in accordance with the conditions of the license.
- (b) Following completion of all low-power testing the licensee shall confirm that the test results are within the range of values predicted in the acceptance criteria in the facility's FSAR. After completing and evaluating low-power test results, the licensee may conduct power ascension testing and will operate the facility at reactor steady-state core power levels not in excess of 100 percent power, in accordance with the conditions of the license.

The licensee is responsible for the review and evaluation of the adequacy of test results presented in the Power Ascension Test Phase reports, as well as final review of overall test results in these reports. Test results, which do not meet acceptance criteria, are identified and corrective actions and retests are performed. The Power Ascension Test Phase reports shall be made available to on-site NRC inspectors.

**Attachment 2**  
**NRC3-12-0021**  
(5 pages)

**Response to RAI Letter No. 42**  
**(eRAI Tracking No. 5016)**  
**RAI Question No. 14.03.03-1**

**NRC RAI 14.03.03-1**

*In Fermi 3 COLA, Part 2, item EF3 COL 14.3A-1-1, the applicant identified that piping DAC closure notification will be at least 6 months before scheduled completion of all ASME Code design reports for risk-significant piping packages.*

*In DCD Section 14.3A.2, GEH states that the piping design may be completed on a system-by-system basis for applicable systems and, in order to support closure of the Design Acceptance Criteria ITAAC, information will be made available for NRC review, inspection, and audit on a system basis.*

*10 CFR 52.99(a) states that "The licensee shall submit to the NRC, no later than 1 year after issuance of the combined license or at the start of construction as defined in 10 CFR 50.10(a), whichever is later, its schedule for completing the inspections, tests, or analyses in the ITAAC. The licensee shall submit updates to the ITAAC schedules every 6 months thereafter and, within 1 year of its scheduled date for initial loading of fuel, the licensee shall submit updates to the ITAAC schedule every 30 days until the final notification is provided to the NRC under paragraph (c)(1) of this section."*

*The staff noted that the risk-significant piping packages completion schedule does not support closure of the DAC ITAAC on a system basis and current proposed position does not meet 10 CFR 52.99(a). The staff is requesting the applicant to provide an acceptable alternative or clarify its position to support closure of DAC ITAAC.*

**Supplemental Response**

Detroit Edison initially provided a response to NRC RAI 14.03.03-1 in Detroit Edison letter NRC3-10-0046, dated October 19, 2010 (ML102940218). The following is a supplement to that response.

As requested, Detroit Edison clarified commitments for implementation schedules and updates to support closure of DAC ITAAC in the initial response to this RAI. At the staff's request, the descriptions of COM 14.3-001 and COM 14.3-002, found in FSAR Subsection 14.3A.1, have been revised as follows:

**COM 14.3-001**

For piping DAC ITAAC; (1) The ASME Code design reports for safety-related piping packages and (2) The as-designed Pipe Break Analysis Report will be completed per ESBWR DCD ITAAC Table 3.1-1 for all the applicable systems in order to support closure of the Design Acceptance Criteria ITAAC. Information will be made available for NRC review, inspection, and audit on a system basis. Information will be made available to the NRC to facilitate reviews, inspections, and audits throughout the process.

**COM 14.3-002**

For human factors engineering DAC, HFE Design Acceptance Criteria ITAAC consists of a series of results summary reports which verify that the specific associated Design

Commitment is met. The summary reports will be made available at each stage for NRC review, inspection, and audit on an element-by-element basis. Information (procedures and test programs) will be made available to the NRC to facilitate reviews, inspections, and audits throughout the process.

**Proposed COLA Revision**

FSAR Subsection 14.3A.1 is revised as shown on the attached markup.

**Markup of Detroit Edison COLA**  
(following 1 page)

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 responses to 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.

days until the final notification is provided to the NRC under paragraph (c)(1) of this section. **[END COM 3.10-003]**

- **[START COM 14.3-001]** For piping DAC; (1) The ASME Code design reports for risk significant piping packages and (2) The Pipe Break Analysis Report may be completed on a system by system basis for applicable systems in order to support closure of the Design Acceptance Criteria ITAGC. Information will be made available for NRC review, inspection, and audit on a system basis. Information will be made available to the NRC to facilitate reviews, inspections, and audits throughout the process. **[END COM 14.3-001]**

For piping DAC ITAAC; (1) The ASME Code design reports for safety-related piping packages and (2) The as-designed Pipe Break Analysis Report will be completed per ESBWR DCD ITAAC Table 3.1-1 for all the applicable systems in order to support closure of the Design Acceptance Criteria ITAAC.

- **[START COM 14.3-002]** For human factors engineering DAC, HFE Design Acceptance Criteria ITAAC consists of a series of results summary reports which verify that the specific associated Design Commitment is met. The summary reports will be made available at each stage for NRC review, inspection, and audit on a system basis. Information (procedures and test programs) will be made available to the NRC to facilitate reviews, inspections, and audits throughout the process. **[END COM 14.3-002]** an element-by-element

- **[START COM 14.3-003]** For instrumentation and controls DAC, the set of ESBWR digital I&C Design Acceptance Criteria ITAAC establishes a phased Design Acceptance Criteria ITAAC closure process. Procedures and test programs necessary to demonstrate that the Design Acceptance Criteria ITAAC requirements are met will be used at each phase to certify to the NRC that the design is in compliance with the certified design. Information will be made available for NRC review, inspection, and audit on a system basis. Information will be made available to the NRC to facilitate reviews, inspections, and audits throughout the process. **[END COM 14.3-003]**