

January 14, 2013

Mr. Peter W. Smith, Director  
Nuclear Development  
Licensing and Engineering  
337 WCB  
DTE Electric Company<sup>1</sup>  
One Energy Plaza  
Detroit, MI 48226-1221

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 81 RELATED TO  
CHAPTER 01 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 Title 10 of the *Code of Federal Regulations* (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. In order to minimize delays to the current licensing schedule, we request that you respond within 30-days of receipt of this RAI.

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 301-415-3104 or by e-mail at [michael.eudy@nrc.gov](mailto:michael.eudy@nrc.gov).

Sincerely,

/RA/

Michael Eudy, Project Manager  
Licensing Branch 3  
Division of New Reactor Licensing  
Office of New Reactors

Docket No.: 052-033

eRAI Tracking No. 6978, 6983, 6984

Enclosure: Request for Additional Information

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<sup>1</sup> On December 21, 2012, the Detroit Edison company sent the NRC a letter indicating that, effective January 1, 2013, the name of the company would be changed to "DTE Electric Company." The legal entity will remain the same (see ML12361A437).

Mr. Peter W. Smith, Director  
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One Energy Plaza  
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SUBJECT: REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 81 RELATED TO  
CHAPTER 01 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* (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. In order to minimize delays to the current licensing schedule, we request that you respond within 30-days of receipt of this RAI.

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DATE	1/3/13	1/8/13	1/8/13	01/14/2013	01/14/2013

\*Approval captured electronically in the electronic RAI system.

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## **Request for Additional Information 81**

Application Title: Fermi Unit 3 - Docket Number 52-033

Operating Company: Detroit Edison

Review Section: 01 - Introduction and Interfaces

Application Sections: 1.9, 1.11 and Appendix 1C

### QUESTIONS

01-8

The requirements of 10 CFR 52.79(a)(41) specify that COL applications for a light-water-cooled nuclear power plant should evaluate the facility against the NRC's application and review guidance in effect 6 months before the docket date of the application. The evaluation required by this section must include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for the facility and those corresponding features, techniques, and measures in the acceptance criteria in the application and review guidance. In FSAR Table 1.9-201, the applicant evaluates conformance with the Standard Review Plan (SRP) (NUREG-0800) sections and Branch Technical Positions (BTPs) guidance and acceptance criteria in effect 6 months before the COL application docket date (i.e., September 18, 2008). With respect to FSAR Table 1.9-201, the staff has noted the following inconsistencies and requests for the applicant to address these inconsistencies and to also check for any additional inconsistencies in this table and revise the FSAR accordingly:

- A. In Table 1.9-201, the applicant labels one of the evaluation outcome as "Not applicable," which means that the section/acceptance criteria does not apply to the ESBWR or Fermi 3. The staff's review noted that the applicant does not always provide clarifying statement on why a section/acceptance criterion is not applicable. It is not obvious why a specific acceptance criterion is not applicable to the ESBWR or Fermi 3. The staff's comparisons of not applicable SRP sections/acceptance criteria in Table 1.9-201 with those listed in ESBWR DCD Tier 2 Table 1.9-20 and in SRP sections (in NUREG-0800) concluded that additional clarifying statements are needed. Therefore, the staff requests for the applicant to provide clarifying statements on non applicability of the following SRP sections/acceptance criteria and BTPs:
- SRP Section 2.0, SRP Acceptance Criteria II.1, and II.3
  - BTP 5-4
  - SRP Section 6.3, SRP Acceptance Criteria II.5 and II.9
  - SRP Section 9.5.1, SRP Acceptance Criteria II.1, II.2, II.4
  - SRP Section 10.3, SRP Acceptance Criterion II.4
  - SRP Section 13.1.2-13.1.3, SRP Acceptance Criterion II.1D
  - SRP Section 15.2.1-15.2.5, SRP Acceptance Criterion II.2C
  - SRP Section 15.2.6, SRP Acceptance Criterion II.3
  - SRP Section 15.2.7, SRP Acceptance Criterion II.2C
  - SRP Section 15.4.4-15.4.5, SRP Acceptance Criterion II.C
- B. The staff found discrepancies in versions and/or publication dates of the following SRP sections (shown here with corrected revision numbers and dates) listed in FSAR Table 1.9-201 that were in effect 6 months before the submittal date of the application. The staff requests for the applicant to clarify these discrepancies and revise the FSAR

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accordingly:

- SRP Section 1 Revision 1, dated November 2007
- SRP Section 17.6 Revision 1, dated August 2007
- SRP Section 19.2 Initial issuance, dated June 2007

- C. The staff found that the referencing to the specific acceptance criteria in Table 1.9-201 is not always consistent. Because SRP acceptance criteria are in Section II of each SRP section, the referencing to a specific criterion should always start with "II." The staff requests for the applicant to correct the inconsistency in referencing acceptance criteria for SRP Sections 15.2.1-15.2.5, 15.2.7, 15.4.1, 15.4.2, 15.4.4-15.4.5, and 15.8.

01-9

The requirements of 10 CFR 52.79(a)(4)(i) specify that the content of a COL application must include information on the design of the facility, including its principal design criteria. In general, regulatory guides describe methods that the NRC staff considers acceptable for implementing the general design criteria (GDC) specified in Appendix A to 10 CFR Part 50. Thus, COL applicants should provide an evaluation of conformance with the guidance in NRC regulatory guides in effect 6 months before the submittal date of the COL application. In FSAR Tables 1.9-202 and 1.9-203, the applicant evaluates conformance with Division 1, 4, 5, and 8 regulatory guides in effect 6 months before the COL application docket date. With respect to FSAR Tables 1.9-202 and 1.9-203, the staff has noted the following inconsistencies and requests for the applicant to address these inconsistencies and to also check for any additional inconsistencies in these tables and revise the FSAR accordingly:

- A. The staff found that FSAR Table 1.9-202 does not include the following regulatory guides, which ESBWR DCD Tier 2 Table 1.9-21 identifies as either the COL responsibility or applicable to the ESBWR design:
- RG 5.7, Revision 1, dated May 1980
  - RG 5.12, Revision 0, dated November 1973
  - RG 7.10, Revision 2, dated March 2005

Therefore, the staff requests for the applicant to add these regulatory guides to the list in Table 1.9-203, or justify their exclusions.

- B. The staff found discrepancies in versions and/or publication dates of the following regulatory guides (shown here with corrected revision numbers and dates) listed in FSAR Table 1.9-202 that were in effect 6 months before the submittal date of the application:
- RG 1.68, Revision 3, dated March 2007
  - RG 1.101, Revision 5, dated Jun 2005
  - RG 1.145, Revision 1, dated February 1983
  - RG 1.169, Revision 0, dated September 1997
  - RG 1.178, Revision 1, dated September 2003
  - RG 1.186, Revision 0, dated October 2000
  - RG 1.193, Revision 2, dated October 2007
  - RG 4.15, Revision 2, dated July 2007

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The staff requests for the applicant to correct the apparent discrepancies in the revision numbers and dates of RGs 1.68, 1.101, 1.145, 1.169, 1.178, 1.186, 1.193, and 4.15.

C. The staff found that the reason for an RG being “Not applicable” is not uniformly explained throughout Table 1.9-202. The staff’s comparisons of not applicable RGs in Table 1.9-202 with those listed in ESBWR DCD Tier 2 Table 1.9-21 found that the applicant has not provided sufficient information on why the following RGs are not applicable:

- RG 1.132, Revision 2, dated October 2003
- RG 1.135, Revision 0, dated September 1977
- RG 8.25, Revision 1, dated June 1992

The staff requests for the applicant to provide clarifying statements on why the above RGs are not applicable.

D. In FSAR Table 1.9-203, the applicant evaluates conformance with the FSAR content guidance in RG 1.206. The staff found that the applicant does not provide clarifying statements as to why the following regulatory positions are “Not applicable” to Fermi 3:

- C.III.1 / C.I.10.3.6 (6)
- C.III.1 / C.I.17.4.2

The staff requests for the applicant to provide clarifying statements on why the above regulatory positions are not applicable.

#### 01-10

The requirements of 10 CFR 52.79(a)(20) specify that a COL application must include the proposed technical resolutions for those unresolved safety issues (USIs) and medium- and high-priority generic safety issues (GSIs) that (1) are identified in the version of NUREG–0933 current on the date up to 6 months before the docket date of the application and (2) are technically relevant to the design. The applicant provides the required information in Table 1.11-201 to address items in ESBWR DCD Table 1.11-1 that require site-specific information.

The staff’s review noted that in the ESBWR DCD, the last new GSI evaluated was Issue 200. In mid- and late 2006, the staff added three additional GSIs (GSI 201 through 203) but all of these were eventually dropped as GSIs and required no further evaluation. However, these GSIs are not identified and included in FSAR Table 1.11-201 as dropped issues accordingly. For completeness, the staff requests for the applicant to add these three latest GSIs to Table 1.11-201 with applicable note (that is similar to that in the ESBWR DCD), or justify their exclusions.

#### 01-11

The requirements of 10 CFR 52.79(a)(37) specify that the COL application must include information to demonstrate how operating experience insights from generic letters and bulletins issued after the most recent revision of the applicable SRP and 6 months before the docket date of the application, or comparable international operating experience, have been incorporated into the plant design. In addition, RG 1.206 Regulatory Position C.I.1.9.4 states that the

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applicants are required to demonstrate how the operating experience insights from generic letters (GLs) and bulletins issued after the review guidance update (i.e., in or about March 2007) have been incorporated into the plant design (i.e., address those generic communications that are not incorporated in the SRP update). The applicant provides this review in Table 1C-201.

The staff's review noted that ESBWR DCD Table 1C-1 conforms to the applicable GLs up to June 2006. The staff's review of the GLs in effect 6 months before the submittal date of the Fermi 3 COL application identified GL 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients," as not listed in DCD Table 1C-1 or FSAR Table 1C-201. In addition, the staff found that SER Section 8.2 evaluates the applicability of GL 2007-01 to Fermi 3. According to SER Section 8.2, the applicant has revised FSAR Section 17.6.4 to include the underground cable monitoring program regardless of the voltage. For completeness, the staff requests for the application to update Table 1C-201 to add GL 2007-01 accordingly, or justify its exclusion.

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