

**DTE Energy**



10 CFR 50.71(e)  
10 CFR 52.3

February 14, 2013  
NRC3-13-0001

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington D C 20555-0001

- References: 1) Fermi 3  
Docket No. 52-033
- 2) Letter from Jack M. Davis (Detroit Edison) to USNRC, "Detroit Edison Company Submittal of Application for a Combined License for Fermi 3 (NRC Project No. 757)," NRC3-08-0003, dated September 18, 2008
  - 3) Letter from Peter W. Smith (Detroit Edison) to USNRC, "Detroit Edison Company Application for a Combined License for Fermi 3 Update," NRC3-12-0002, dated February 14, 2012
  - 4) Letter from Peter W. Smith (Detroit Edison) to USNRC, "Detroit Edison Company Application for a Combined License for Fermi 3 Update and Establishment of the Licensing-Basis Information Freeze Point for the Fermi 3 COLA," NRC3-11-0005, dated February 14, 2011

Subject: DTE Electric Company Application for a Combined License for Fermi 3 Update

In Reference 2, DTE Electric Company submitted a Combined License Application (COLA) for Fermi 3 that incorporated the General Electric-Hitachi (GEH) design certification application for the Economic Simplified Boiling Water Reactor (ESBWR) and the associated Design Control Document (DCD). The Fermi 3 COLA was most recently updated in Reference 3. This letter transmits an update to the Fermi 3 COLA, satisfying the annual Final Safety Analysis Report (FSAR) update required by 10 CFR 50.71(e), and also updates Fermi 3 COLA Part 10, "Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)," as identified below.

Changes to the Fermi 3 COLA have primarily originated from NRC staff requests for additional information (RAIs) and follow up questions. The COLA changes associated with DTE Electric responses to RAIs and follow up questions have been provided to the NRC staff previously via COLA markups within DTE Electric correspondence (see revision summary in Enclosure 2 of this letter). DTE Electric has incorporated COLA markups submitted to the NRC through November 2012 into this COLA update. Additional changes are provided in this submittal resulting from discussion with NRC staff as identified in the revision summary provided in Enclosure 2 of this letter. DTE Electric has not included any changes in this update other than those initiated in response to requests from the NRC staff. As stated in Reference 4, DTE

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Electric established the licensing-basis freeze point for the Fermi 3 COLA as defined in Interim Staff Guidance DC/COL-ISG-011, "Finalizing Licensing-Basis Information."

This 2013 update of the Fermi 3 COLA is comprised of the following parts:

- Part 1: General and Administrative Information – Revision 2
- Part 2: Final Safety Analysis Report (FSAR) – Revision 5
- Part 3: Environmental Report (ER) – Revision 2
- Part 4: Technical Specifications (TS) – Revision 4
- Part 5: Emergency Plan (E-Plan) – Revision 4
- Part 6: Not Used (reserved for Limited Work Authorization / Site Redress Information)
- Part 7: Departures Report – Revision 4
- Part 8: Security Plan – Revision 3
- Part 9: Proprietary and Sensitive Unclassified Non-Safeguards Information – Revision 2
- Part 10: Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) – Revision 4

Part 1, "General and Administrative Information," has not been updated in this submittal. The entire document is denoted as Revision 2, and is included in this update as a reference document collection.

Part 2, "Final Safety Analysis Report," was revised to incorporate the changes resulting from DTE Electric responses to NRC RAI letters and discussions with NRC staff. The entire document (Part 2) is denoted as Revision 5, with the changes between Revision 4 and Revision 5 identified by revision bars in the margins. A detailed revision summary for the changes to Part 2 is contained in Enclosure 2.

Part 3, "Environmental Report," has not been updated in this submittal. The entire document is denoted as Revision 2, and is included in this update as a reference document collection.

Part 4, "Technical Specifications," has not been updated in this submittal. The entire document is denoted as Revision 4, and is included in this update as a reference document collection.

Part 5, "Emergency Plan," has not been updated in this submittal. The entire document is denoted as Revision 4, and is included in this update as a reference document collection.

Part 7, "Departures Report," has not been updated in this submittal. The entire document is denoted as Revision 4, and is included in this update as a reference document collection.

Part 8, "Security Plan," has not been updated in this submittal. The entire document is denoted as Revision 3, and is included in this update as a reference document collection.

Part 9, "Proprietary and Sensitive Unclassified Non-Safeguards Information," has not been updated in this submittal. The entire document is denoted as Revision 2, and is included in this update as a reference document collection.

Part 10, "Inspections, Tests, Analyses, and Acceptance Criteria," was revised to incorporate changes resulting from DTE Electric responses to NRC RAI letters and discussions with NRC staff. The entire document is denoted as Revision 4 with the changes between Revision 3 and Revision 4 identified by revision bars in the margins. A detailed revision summary for the changes to Part 10 is contained in Enclosure 2.

A revision summary has been provided in Enclosure 2, containing detailed descriptions of the changes made for Part 2 and Part 10 of the COLA, which have been revised in this submittal. The revision summary includes details regarding changes made between the Fermi 3 COLA submitted in Reference 3 and this submittal.

A complete set of application documents is provided in electronic file format on the enclosed disc. Fermi 3 COLA Part 9, "Proprietary and Sensitive Unclassified Non-Safeguards Information," has not been revised in this submittal and is included as a reference document collection only; therefore, the enclosed disc contains no proprietary or SUNSI information. Included with the disc is a "packing slip" describing its contents, pursuant to NRC instructions for electronic filing. Appropriate pre-submission checks have been successfully performed on the files of the disc to ensure conformance with "Guidance for Electronic Submissions to the NRC." The disc has been found acceptable for electronic submittal.

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 14<sup>th</sup> day of February 2013.

Sincerely,



Peter W. Smith,  
Nuclear Development - Licensing and Engineering  
DTE Electric Company

Enclosures: 1) Fermi 3 COLA DVD, 2013 Update  
2) Fermi 3 COLA, 2013 Update Revision Summary

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

**ENCLOSURE 1 TO  
NRC3-13-0001**

**FERMI 3 COLA DVD, 2013 UPDATE**

One DVD titled "Fermi 3 Combined License Application 2013 Update, Submittal 11 Docket Number 52-033" containing the following:

Fermi 3 Combined License Application Update, February 2013

DVD Packing Slip as Required by NRC for Electronic Submittals

**ENCLOSURE 2 TO  
NRC3-13-0001**

**FERMI 3 COLA, 2013 UPDATE, REVISION SUMMARY  
(8 pages)**

Revision summaries follow for each part identified below:

- Part 2: Final Safety Analysis Report (FSAR) – Revision 4 to Revision 5
- Part 10: Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC) – Revision 3 to Revision 4

**Fermi 3 COLA Part 2, FSAR Revision Summary (Revision 4 to Revision 5)**

<b>Location</b>	<b>Revision Summary</b>
Subsection 1.8.6	As discussed with NRC staff, FSAR Subsection 1.8.6, "Variances from the ESP and ESPA SSAR," has been deleted as this section is not applicable to the Fermi 3 COLA.
Table 1.9-202	Conformance with Regulatory Guides Table changes resulting from the response to NRC RAI Letter No. 73. See response to RAI 02.03.01-20 in letter NRC3-12-0010, dated 4/3/2012 (ML12095A283) for further information.
Table 1.9-204	Industrial Codes and Standards Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 02.05.04-39 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 1.9-204	Industrial Codes and Standards Table changes resulting from the response to NRC Information Notice 2011-20. See response to IN 2011-20 in letter NRC3-12-0012, dated 4/5/2012 (ML12097A556) for further information.
Table 1.9-204	Industrial Codes and Standards Table changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAIs 03.08.05-1 and 03.08.05-5 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.
Table 2.0-201	Evaluation of Site/Design Parameters and Characteristics Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 02.05.04-39 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.3.1.3.1.3	Tornadoes and Waterspouts Section changes resulting from the response to NRC RAI Letter No. 73. See response to RAI 02.03.01-20 in letter NRC3-12-0010, dated 4/3/2012 (ML12095A283) for further information.
Subsection 2.5.4.3	Foundation Interface Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.5.4.5.1	Source and Quantities of Backfill and Borrow Materials Section changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAI 03.07.02-5 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.
Subsection 2.5.4.5.4.2	Backfill Materials and Quality Control Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 02.05.04-39 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.5.4.5.4.2	Backfill Materials and Quality Control Section changes resulting from the response to NRC Information Notice. See response to IN 2011-20 in letter NRC3-12-0012, dated 4/5/2012 (ML12097A556) for further information.
Subsection 2.5.4.5.4.2	Backfill Materials and Quality Control Section changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAIs 03.07.02-5 and 03.08.05-5 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.

**Fermi 3 COLA Part 2, FSAR Revision Summary (Revision 4 to Revision 5)**

<b>Location</b>	<b>Revision Summary</b>
Subsection 2.5.4.7.6	Shear Modulus Reduction and Damping Curves for Granular Backfill and Fill Concrete Section changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAI 03.07.02-5 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.
Subsection 2.5.4.12	Techniques to Improve Subsurface Conditions Section changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAI 03.07.02-5 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.
Table 2.5.4-224	Foundation Elevations of Major Structures in the Power Block Area Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 2.5.4-227	Table 2.5.4-227, "Results of Bearing Capacity Analysis," was revised to address supplemental issues identified during the April 23 through 27, 2012, NRC audit. See letter NRC3-12-0019, dated 6/15/2012 (ML12173A407) for further information.
Appendix 2.5DD	As discussed with NRC staff, the Boring Logs, which had been inadvertently omitted in the previous Fermi 3 COLA submittal, are included in this submittal (original files as submitted in Fermi 3 COLA Revision 0, no changes to the logs).
Subsection 3.7.1.1.4.1.1	Dynamic Properties for the Full Soil Column Profile Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.1.1.4.4.2	Vertical PBSRS Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.1.1.4.5	SCOR FIRS Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.1.1.4.6	SSI FIRS Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.1.1.4.6	SSI FIRS Section changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAI 03.07.01-8 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.
Subsection 3.7.1.1.5	Site-Specific Design Ground Motion Time History Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.1.1	Design Ground Motion Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.

**Fermi 3 COLA Part 2, FSAR Revision Summary (Revision 4 to Revision 5)**

<b>Location</b>	<b>Revision Summary</b>
Subsection 3.7.1.2	Percentage of Critical Damping Values Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.1.3	Supporting Media for Seismic Category I Structures Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Figure 3.7.1-213	Various Seismic Design Parameter Figures Figure changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Figure 3.7.1-225	Various Seismic Design Parameter Figures Figure changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Figures 3.7.1-228 through -259	Various Seismic Design Parameter Figures changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 3.7.1-201	Full Soil Column Site Response Analysis Profile: Lower Range Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 3.7.1-202	Full Soil Column Site Response Analysis Profile: Intermediate Range Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 3.7.1-203	Full Soil Column Site Response Analysis Profile: Upper Range Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Tables 3.7.1-205 through -207	Various Seismic Design Parameter Tables changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Tables 3.7.1-210 through -219	Various Seismic Design Parameter Tables changes resulting from the response to NRC RAI Letter No. 70. See response to RAIs 03.07.01-6 and 03.07.01-8 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 3.7.2.4.1.1	Strain Compatible Dynamic Subsurface Material Section changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.



**Fermi 3 COLA Part 2, FSAR Revision Summary (Revision 4 to Revision 5)**

<b>Location</b>	<b>Revision Summary</b>
Subsection 3.7.2.4.1.3	Soil-Structure Interaction Analysis Method Section changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Subsection 3.7.2.4.1.6.1	SSI Enveloping Maximum Structural Loads Section changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Subsection 3.7.2.4.1.7	Conclusions Section changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Subsection 3.7.2.4.1	Fermi 3 Site-Specific Soil-Structure Interaction Analysis Section changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Subsection 3.7.2.4	Soil-Structure Interaction Section changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Subsection 3.7.2.8	Interaction of Non-Category I Structures with Seismic Category I Structures Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Figures 3.7.2-201 through -212b	Various Seismic System Analysis Figures changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Tables 3.7.2-203a through -206	Various Seismic System Analysis Tables changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Subsection 3.8.5.5.1	Foundation Stability Section changes resulting from the response to NRC RAI Letter No. 70. See supplemental response to RAI 03.08.05-2 in letter NRC3-12-0016, dated 5/22/2012 (ML12144A322) for further information.
Table 3.8.5-201	Factors of Safety for RB/FB Foundation Stability Table changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Table 3.8.5-202	Factors of Safety for CB Foundation Stability Table changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Table 3.8.5-203	Table 3.8.5-203, "Maximum Soil Dynamic Bearing Pressure Demand for RB/FB and CB," is revised to address supplemental issues identified during the April 23 through 27, 2012, NRC audit. See letter NRC3-12-0019, dated 6/15/2012 (ML12173A407) for further information.

**Fermi 3 COLA Part 2, FSAR Revision Summary (Revision 4 to Revision 5)**

<b>Location</b>	<b>Revision Summary</b>
Appendix 3A.5	Soil-Structure Interaction Analysis Method Appendix changes resulting from revised site-specific soil-structure interaction analyses. See revised analysis submitted in letter NRC3-12-0011, dated 3/30/2012 (ML12094A032) for further information.
Appendix 14.3A	Design Acceptance Criteria ITAAC Closure Process Appendix changes resulting from the response to NRC RAI Letter No. 42. See supplemental response to RAI14.03.03-1 in letter NRC3-12-0021, dated 6/15/2012 (ML12170A664) for further information.

**Fermi 3 COLA Part 10, ITAAC Revision Summary (Revision 3 to Revision 4)**

<b>Location</b>	<b>Revision Summary</b>
Table 2.4.1-1	ITAAC for Fill Concrete Under Seismic Category I Structures Table changes resulting from the response to NRC RAI Letter No. 71. See response to RAI 02.05.04-40 in letter NRC3-12-0006, dated 2/16/2012 (ML12052A031) for further information.
Subsection 2.4.1	ITAAC for Backfill Under Seismic Category I Structures Section changes resulting from the response to NRC RAI Letter No. 71. See response to RAI 02.05.04-40 in letter NRC3-12-0006, dated 2/16/2012 (ML12052A031) for further information.
Table 2.4.2-1	ITAAC for Backfill Surrounding Seismic Category I Structures Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 02.05.04-39 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.4.2	ITAAC for Backfill Surrounding Seismic Category I Structures Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 02.05.04-39 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 2.4.15-1	ITAAC For The Turbine Building Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.4.15	ITAAC for the Turbine Building Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 2.4.16-1	ITAAC For The Radwaste Building Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.4.16	ITAAC for the Radwaste Building Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 2.4.17-1	ITAAC For The Service Building Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Subsection 2.4.17	ITAAC for the Service Building Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.
Table 2.4.18-1	ITAAC For The Ancillary Diesel Building Table changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.

**Fermi 3 COLA Part 10, ITAAC Revision Summary (Revision 3 to Revision 4)**

<b>Location</b>	<b>Revision Summary</b>
Subsection 2.4.18	ITAAC for the Ancillary Diesel Building Section changes resulting from the response to NRC RAI Letter No. 70. See response to RAI 03.07.02-5 in letter NRC3-12-0003, dated 2/16/2012 (ML12052A059) for further information.