



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 7, 2016

Mr. Keith Polson  
Site Vice President – Nuclear Generation  
DTE Electric Company  
Fermi 2 – 210 NOC  
6400 North Dixie Highway  
Newport, MI 48166

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON SEVERE ACCIDENT  
MITIGATION ALTERNATIVES FOR THE REVIEW OF THE FERMI 2 NUCLEAR  
POWER PLANT, LICENSE RENEWAL APPLICATION ENVIRONMENTAL  
REVIEW (CAC NO. MF4064)

Dear Mr. Polson:

By letter dated April 24, 2014, DTE Electric Company (DTE or the applicant) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 51 and 10 CFR Part 54, to renew operating license NPF-43 for Fermi 2, for review by the U.S. Nuclear Regulatory Commission (NRC or the staff).

As a result of the NRC Commission's May 4, 2016, decision regarding severe accident mitigation alternatives (SAMA) analysis (CLI-16-07, May 4, 2016, ADAMS Accession No. ML16125A150), the NRC staff has identified additional information that is needed to complete the environmental review. Specifically, the Commission held that documentation was lacking for two inputs (TIMDEC and CDNFRM) used in the MACCS computer analyses, and that uncertainties in those input values could potentially affect the SAMA analysis cost-benefit conclusions. The Commission therefore directed the NRC staff to perform additional sensitivity analyses. As a result, the staff has identified, in the enclosure, areas where additional information is needed to address the Commission's direction.

K. Polson

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As discussed with Lynne Goodman of your staff, we request that you provide your responses no later than 30 days from the date of this letter. If you have any questions on this revised environmental review schedule, please contact me by telephone at 301-415-8517 or by e-mail at [Elaine.Keegan@nrc.gov](mailto:Elaine.Keegan@nrc.gov).

Sincerely,

*/RA/*

Elaine M. Keegan, Sr. Project Manager  
Environmental Review and Projects Branch  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosure:  
Revised Schedule

cc w/encl: Listserv

K. Polson

- 2 -

As discussed with Lynne Goodman of your staff, we request that you provide your responses no later than 30 days from the date of this letter. If you have any questions on this revised environmental review schedule, please contact me by telephone at 301-415-8517 or by e-mail at [Elaine.Keegan@nrc.gov](mailto:Elaine.Keegan@nrc.gov).

Sincerely,

*/RA/*

Elaine M. Keegan, Sr. Project Manager  
Environmental Review and Projects Branch  
Division of License Renewal  
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosure:  
Revised Schedule

cc w/encl: Listserv

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**ADAMS Accession No.:** ML16188A192

<b>OFFICE</b>	LA:DLR:	PM:RPB2:DLR	BC:RPB2:DLR
<b>NAME</b>	IBetts	EKeegan	JDanna
<b>DATE</b>	7/ 7 /16	7/ 7/16	7/7 /16

**OFFICIAL RECORD COPY**

Letter to K. Polson from E. Keegan dated July 7, 2016

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON SEVERE ACCIDENT  
MITIGATION ALTERNATIVES FOR THE REVIEW OF THE FERMI 2 NUCLEAR  
POWER PLANT, LICENSE RENEWAL APPLICATION ENVIRONMENTAL  
REVIEW (CAC NO. MF4064)

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Listserv

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D. Melendez-Colon

E. Keegan

J. Danna

D. McIntyre, OPA

C. Kanatas, OGC

B. Dickson, RIII

B. Kemker, RIII

V. Mityng, RIII

P. Chandrathil, RIII

**REQUEST FOR ADDITIONAL INFORMATION ON SEVERE ACCIDENT MITIGATION  
ALTERNATIVES FOR THE REVIEW OF THE FERMI 2 NUCLEAR POWER  
REGARDING CLI-16-07**

On May 4, 2016, the Commission issued a decision (CLI-16-07) in the Indian Point license renewal proceeding, in which it directed the Staff to supplement the Indian Point Severe Accident Mitigation Alternatives (SAMA) analysis with sensitivity analyses. Specifically, the Commission held that documentation was lacking for two inputs (TIMDEC and CDNFRM) used in the MACCS computer analyses, and that uncertainties in those input values could potentially affect the SAMA analysis cost-benefit conclusions. The Commission therefore directed the staff to perform additional sensitivity analyses.

The two inputs (TIMDEC and CDNFRM) are commonly used in the SAMA analyses performed for license renewal applications (LRAs). These two input values were generally based on the values provided in NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants" and NUREG/CR-3673, "Economic Risks of Nuclear Power Reactor Accidents." The TIMDEC input value defines the time required for completing decontamination to a specified degree. The CDNFRM input parameter defines the cost (on a per person basis) of decontaminating non-farmland by a specified decontamination factor. The CDNFRM values used in NUREG-1150 (\$3,000/person for decontamination factor of 3 and \$8,000/person for decontamination factor of 15) stem from decontamination cost estimates provided in NUREG/CR-3673, the same 1984 economic risk study referenced in support of the decontamination time inputs. These decontamination cost inputs are commonly escalated to account for inflation.

The NRC Staff believes the Commission's decision in CLI-16-07 may be applicable to the SAMA analysis performed for Fermi 2, inasmuch as that analysis may have also relied upon the NUREG-1150 values for TIMDEC and CDNFRM. We therefore request that DTE Electric Company (DTE) either justify why CLI-16-07 does not apply to the SAMA analysis performed for Fermi 2 or supplement the SAMA analysis with sensitivity analyses for the CDNFRM and TIMDEC values.

DTE is requested to review the input values specified in CLI-16-07 for the Indian Point LRA, and (1) to apply the maximum values specified by the Commission (one year (365 days) for TIMDEC and \$100,000 for the CDNFRM values for the decontamination factor of 15) or, in the alternative, (2) to explain, with sufficient justification, its rationale for choosing any other value(s) for its sensitivity analyses. In any event, DTE should execute sensitivity analyses for the release categories modeled that exceed  $10^{15}$  Becquerels of Cs-137 released. DTE is requested to evaluate how these sensitivity analyses may affect its identification of potentially cost-beneficial SAMAs. Finally, upon completing its sensitivity analysis, DTE is requested to submit the spreadsheet (or equivalent table if another method is used) that conveys the population dose and off-site economic cost for each release category and integrates the results into a Population Dose Risk and an Offsite Economic Cost Risk for Fermi 2.

Enclosure