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

May 13, 2013

Mr. Joseph H. Plona
Senior Vice President and Chief Nuclear Officer
DTE Electric Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-522, USING CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (TAC NO. ME9906)

Dear Mr. Plona:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No.192 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment consists of changes to the technical specifications (TSs) in response to your application dated November 13, 2012.

The amendment revises surveillance requirements (SRs) which currently require operating the ventilation system for at least 10 continuous hours with the heaters operating every 31 days for SR 3.6.4.3.1 and 31 days on a staggered test basis for SR 3.7.3.1. The SRs would be changed to require at least 15 continuous minutes of ventilation system operation every 31 days and include TS Bases changes that summarize and clarify the purpose of the TS in accordance with TS Task Force Traveler (TSTF)-522, "Revise Ventilation System Surveillance Requirements to operate for 10 Hours per Month."

A copy of our safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

Mahesh L. Chawla, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures:
1. Amendment No. 192 to NPF-43
2. Safety Evaluation

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

DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 192
License No. NPF-43

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Detroit Edison Company (DECo, the licensee) dated November 13, 2012, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is hereby amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-43 is hereby amended to read as follows:

Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No.192, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert D. Carlson, Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical Specifications

Date of Issuance: May 13, 2013

ATTACHMENT TO LICENSE AMENDMENT NO.192

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following pages of the Facility Operating License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
License Page 3	License Page 3

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE	INSERT
Page 3.6-50	Page 3.6-50
Page 3.7-9	Page 3.7-9

(4) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material such as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(5) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(6) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

DECo is authorized to operate the facility at reactor core power levels not in excess of 3430 megawatts thermal (100% power) in accordance with conditions specified herein and in Attachment 1 to this license. The items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 192 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

DECo shall abide by the agreements and interpretations between it and the Department of Justice relating to Article I, Paragraph 3 of the Electric Power Pool Agreement between Detroit Edison Company and

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.3.1	Operate each SGT subsystem for ≥ 15 continuous minutes with heaters operating.	31 days
SR 3.6.4.3.2	Perform required SGT filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.6.4.3.3	Verify each SGT subsystem actuates on an actual or simulated initiation signal.	18 months
SR 3.6.4.3.4	Verify each SGT filter cooler bypass damper can be opened and the fan started.	18 months

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.7.3.1	Operate each CREF subsystem for ≥ 15 continuous minutes with heaters operating.	31 days
SR 3.7.3.2	----------NOTE---------- When the CREF system is made inoperable in MODE 1, 2, or 3 solely for VFTP required surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours. ---------- Perform required CREF filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.3.3	Visually inspect silicone sealant on accessible portions of CREF system duct work outside the control room that are at negative pressure during accident conditions and for which potential in-leakage would not receive full filtration.	12 months
SR 3.7.3.4	Verify each CREF subsystem actuates on an actual or simulated initiation signal.	18 months

(continued)

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO.192 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated November 13, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12318A337) Detroit Edison (the licensee) requested changes to the technical specifications (TSs) for Fermi 2. Specifically, the licensee requested to adopt U.S. Nuclear Regulatory Commission (NRC or Commission)-approved Technical Specifications Task Force (TSTF) Standard Technical Specifications (STS) Change Traveler TSTF-522, "Revise Ventilation System Surveillance Requirements to Operate for 10 hours per Month" (ADAMS Accession No. ML100890316), dated March 30, 2010.

Changes were proposed for TS 3.6.4.3, "Standby Gas Treatment (SGT) System," and TS 3.7.3, "Control Room Emergency Filtration (CREF) System." In particular, surveillance requirements (SRs) 3.6.4.3.1 and 3.7.3.1, which currently require operating the respective systems for at least 10 continuous hours with heaters operating every 31 days for SR 3.6.4.3.1 and 31 days on a staggered test basis for SR 3.7.3.1, would be changed to require at least 15 continuous minutes of ventilation system operation with heaters operating every 31 days.

The licensee stated that the license amendment request is consistent with NRC-approved Traveler TSTF-522. The availability of this TS improvement was announced in the *Federal Register* on September 20, 2012 (77 FR 58421), as part of the consolidated line item improvement process.

2.0 REGULATORY EVALUATION

One of the reasons air filtration and adsorption systems are required at nuclear power plants is to lower the concentration of airborne radioactive material that may be released from the site to the environment due to a design basis event. Lowering the concentration of airborne radioactive materials can mitigate doses to plant operators and members of the public in the event of a design basis event. A typical system consists of ventilation ductwork, fans, dampers, valves, instrumentation, prefilters or demisters, high efficiency particulate air (HEPA) filters, heaters, and activated charcoal adsorbers. These systems are tested by operating the systems and monitoring the response of the overall system as well as individual components.

Laboratory tests of charcoal adsorbers are also performed to ensure the charcoal adsorbs an acceptable amount of radioactive gasses.

Current testing requirements for the air filtration and adsorption systems state that the systems should be operated for at least 10 continuous hours with heaters operating every 31 days for SR 3.6.4.3.1 and 31 days on a staggered test basis for SR 3.7.3.1. These requirements are based on NRC staff guidance for testing air filtration and adsorption systems that has been superseded. The latest NRC staff guidance states at least 15 continuous minutes of ventilation system operation with heaters operating every 31 days is acceptable to justify operability of the system and all its components.

The licensee has proposed revising SRs which currently require operating the ventilation system for at least 10 continuous hours with the heaters operating every 31 days for SR 3.6.4.3.1 and 31 days on a staggered test basis for SR 3.7.3.1. The SRs would be changed to require at least 15 continuous minutes of ventilation system operation every 31 days.

The regulatory requirements for design and testing of these systems are contained in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.67, and Part 100, as well as, Part 50, Appendix A, "General Design Criteria for Nuclear Power Plants," General Design Criteria 19, 41, 42, 43, and 61. Fermi 2's updated final safety analysis report section 3.0, "Conformance with General Design Criteria," states that the design of Fermi 2 is in accordance with and satisfies the General Design Criteria.

Regulatory Guide (RG) 1.52, Revision 2, "Design, Testing, and Maintenance Criteria for Post-Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorbtion Units of Light-Water-Cooled Nuclear Power Plants" (ADAMS Accession No. ML003740139) was published in March 1978 to provide guidance and criteria acceptable to the NRC staff for licensees to implement the regulations in 10 CFR related to air filtration and adsorption systems.

Regulatory Position 4.d of Revision 2 of RG 1.52 stated that "Each ESF [engineered safety feature] atmosphere cleanup train should be operated at least 10 hours per month, with the heaters on (if so equipped), in order to reduce the buildup of moisture on the adsorbers and HEPA filters." The purpose of this position is to minimize the moisture content in the system and thereby enhance efficiency in the event the system is called upon to perform its design basis function. SRs 3.6.4.3.1 and 3.7.3.1 currently require operating the heaters in the respective ventilation and filtering systems for at least 10 continuous hours every 31 days and 31 days on a staggered test basis, respectively. The current STS Bases explain that operation of heaters for 10 hours would eliminate moisture on the charcoal adsorbers and HEPA filters.

Subsequently, the NRC staff was informed that 10 continuous hours of system operation would dry out the charcoal adsorber for a brief period of time but, following heater de-energization, the level of moisture accumulation in adsorbers would rapidly return to the pre-test level. The NRC staff found this information persuasive and subsequently issued NRC Generic Letter (GL) 99-02: "Laboratory Testing of Nuclear-Grade Activated Charcoal" (ADAMS Accession No. ML082350935 and errata sheet at Accession No. ML031110094). GL 99-02 requested licensees to confirm their charcoal testing protocols accurately reflect the adsorber gaseous

activity capture capability. GL 99-02 also requested the licensees to account for the effects of moisture accumulation in adsorbers.

The NRC staff updated RG 1.52 to include the new information (ADAMS Accession No. ML011710176). RG 1.52, Revision 3, Regulatory Position 6.1, states, "Each ESF atmosphere cleanup train should be operated continuously for at least 15 minutes each month, with the heaters on (if so equipped), to justify the operability of the system and all its components."

One of the reasons for the previous 10-hour requirement for ventilation system operation with heaters operating was to minimize the effects of moisture on the adsorber's ability to capture gaseous activity. However, these effects are already accounted for in the Ventilation Filter Testing Program by performing testing at a relative humidity of 70 percent with heaters in operation. The Fermi 2 TS 5.5.7 Ventilation Filter Testing Program requires testing charcoal adsorbers in a manner to account for the effects of moisture on the adsorber's ability to capture gaseous activity.

The NRC's regulatory requirements related to the content of the TS are contained in 10 CFR 50.36. The regulations at 10 CFR 50.36 require that the TS include items in the following categories: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) SRs; (4) design features; and (5) administrative controls. SRs are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the LCOs will be met.

The NRC's guidance for the format and content of licensee TSs can be found in NUREG-1433, "Standard Technical Specifications General Electric Plants BWR/4."

3.0 TECHNICAL EVALUATION

The NRC staff evaluated the licensee's proposed change against the applicable regulatory guidance in RG 1.52, Revision 3, guidance in the STS as modified by TSTF-522, and the regulatory requirements of 10 CFR 50.36.

The NRC staff evaluated the licensee's proposed change against the applicable regulatory guidance in RG 1.52, Revision 3. The proposed change would require at least 15 minutes of system operation. The NRC staff found that the proposed change is consistent with guidance in RG 1.52, Revision 3.

The NRC staff evaluated the licensee's proposed change against the applicable regulatory guidance in the STS, as modified by TSTF-522. The proposed change adopted the TS format and content, to the extent practicable, contained in the changes made to NUREG-1433, "Standard Technical Specifications General Electric Plants BWR/4" by TSTF-522. The NRC staff found that the proposed change is consistent with guidance in the STS, as modified by TSTF-522.

The NRC staff compared the proposed change to the existing SRs, as well as the regulatory requirements of 10 CFR 50.36. The existing SRs provide assurance that the necessary quality

of ventilation systems and components will be maintained and that the LCOs will be met. The proposed change reduces the amount of required system operational time from 10 hours to 15 minutes. The 10-hour operational requirement for heaters was based on using the SR to eliminate moisture in the adsorbers and thus ensure the adsorbers would capture gaseous activity. As discussed in Section 2.0, the effects of moisture on the adsorber's ability to capture gaseous activity are now accounted for in the licensee's Ventilation Filter Testing Program by performing testing at a relative humidity of 70 percent with heaters in operation. Since the SRs are no longer relied upon to ensure the effects of moisture on the adsorber's ability to capture gaseous activity are accounted for, the 10-hour heater operational requirement is unnecessary. The NRC staff found that reducing the required minimum system operation time to 15 minutes, consistent with RG 1.52, Revision 3, in conjunction with the Ventilation Filter Testing Program, is sufficient to justify operability of the system and all its components. The NRC staff found that the proposed SRs meet the regulatory requirements of 10 CFR 50.36 because they provide assurance that the necessary quality of ventilation systems and components will be maintained and that the LCOs will be met. Therefore, the NRC staff finds the proposed change acceptable.

The regulation at 10 CFR 50.36 states: "A summary statement of the bases or reasons for such specifications... shall also be included in the application, but shall not become part of the technical specifications." The licensee may make changes to the TS Bases without prior NRC staff review and approval in accordance with the TS Bases Control Program TS 5.5.10. Accordingly, along with the proposed TS changes, the licensee also submitted TS Bases changes corresponding to the proposed TS changes. The NRC staff determined that TS Bases changes are consistent with the proposed TS changes and provide the purpose for each requirement in the specification consistent with the Commission's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," dated July 22, 1993 (58 FR 39132).

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes the surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (78 FR 4471). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: K. Bucholtz

Date of issuance: May 13, 2013

May 13, 2013

Mr. Joseph H. Plona
Senior Vice President and Chief Nuclear Officer
DTE Electric Company
Fermi 2 - 210 NOC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT TO REVISE TECHNICAL SPECIFICATIONS TO ADOPT TSTF-522, USING CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (TAC NO. ME9906)

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A copy of our safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,
/RA/
Mahesh L. Chawla, Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

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2. Safety Evaluation

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Amendment Accession Number: ML13112A142 *concurred via memo

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