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

May 24, 2018

Mr. Keith J. Polson
Senior Vice President and
Chief Nuclear Officer
DTE Electric Company
Fermi 2 – 260 TAC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT TO REVISE TECHNICAL SPECIFICATIONS 5.5.7, "VENTILATION FILTER TESTING PROGRAM (VFTP)," TO BE CONSISTENT WITH STANDARD TECHNICAL SPECIFICATIONS (CAC NO. MG0104, EPID L-2017-LLA-0271)

Dear Mr. Polson:

The U.S. Nuclear Regulatory Commission (NRC or Commission) has issued the enclosed Amendment No. 208 to Renewed Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment is in response to your application dated August 14, 2017, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17226A277).

The amendment modifies Fermi 2 Technical Specifications 5.5.7, "Ventilation Filter Testing Program (VFTP)" by adopting the format and language of NUREG-1433, "Standard Technical Specifications for General Electric BWR/4 Plants," Revision 4.

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,

Sujata Goetz

Sujata Goetz, Project Manager
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures:
1. Amendment No. 208 to NPF-43
2. Safety Evaluation

cc w/encls: Listserv

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Renewed 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. 208, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this renewed license. DTE Electric Company 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

David J. Wrona, Chief
Plant Licensing Branch III
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Facility Operating License
and Technical Specifications

Date of Issuance: May 24, 2018

UNITED STATES
NUCLEAR REGULATORY COMMISSION
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DTE ELECTRIC COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 208
License No. NPF-43

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

   A. The application for amendment by the DTE Electric Company (DTE, the licensee) dated August 14, 2017, 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.

ATTACHMENT TO LICENSE AMENDMENT NO. 208

FERMI 2

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following pages of the Facility Operating License and 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
4	4

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
5.0-12	5.0-12
5.0-13	5.0-13
5.0-14	5.0-14

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 208, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this renewed license. DTE Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

DTE Electric Company 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 DTE Electric Company and Consumers Power Company as specified in a letter from The Detroit Edison Company to the Director of Regulation, dated August 13, 1971, and the letter from Richard W. McLaren, Assistant Attorney General, Antitrust Division, U.S. Department of Justice, to Bertram H. Schur, Associate General Counsel, Atomic Energy Commission, dated August 16, 1971.

(4) Deleted

(5) Deleted

(6) Deleted

(7) Deleted

(8) Deleted

(9) Modifications for Fire Protection (Section 9.5.1, SSER #5 and SSER #6)*

DTE Electric Company shall implement and maintain in effect all provisions of the approved fire protection program as described in its Final Safety Analysis Report for the facility through Amendment 60 and as approved in the SER through Supplement No. 5, subject to the following provision:

(a) DTE Electric Company may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

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* The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report (SER) and/or its supplements wherein the license condition is discussed.

5.5 Programs and Manuals (continued)

5.5.7 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2, and in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1980.

a. Demonstrate for each of the ESF systems that an inplace test of the HEPA filters shows a penetration and system bypass < specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1980 at the system flowrate specified below ± 10%.

ESF Ventilation System	Flowrate (cfm)	Penetration and System Bypass
Standby Gas Treatment	3800	0.05%
Control Room Emergency Filtration	1800 (makeup filter) 3000 (recirculation filter)	1.0%

b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1980 at the system flowrate specified below ± 10%.

ESF Ventilation System	Flowrate (cfm)	Penetration and System Bypass
Standby Gas Treatment	3800	0.05%
Control Room Emergency Filtration	1800 (makeup filter) 3000 (recirculation filter)	1.0%

(continued)

5.5 Programs and Manuals

5.5.7 Ventilation Filter Testing Program (VFTP) (continued)

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C (86°F) and the relative humidity specified below.

ESF Ventilation System	Penetration	RH
Standby Gas Treatment	0.100%	70%
Control Room Emergency Filtration	1.0%	70%

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1980 at the system flowrate specified below ± 10%.

ESF Ventilation System	Delta P (inches water gauge)	Flowrate (cfm)
Standby Gas Treatment	11.0	3800
Control Room Emergency Filtration (CREF)	3.0 (makeup train) 4.2 (recirculation train)	1800 3000

(continued)

5.5 Programs and Manuals

5.5.7 Ventilation Filter Testing Program (VFTP) (continued)

e. Demonstrate that the heaters for each of the ESF systems dissipate the value specified below when tested in accordance with ASME N510-1980.

ESF Ventilation System	Wattage (kW)
Standby Gas Treatment	≥ 24
Control Room Emergency Makeup Inlet Air	12.0 ± 2.0

The provisions of SR 3.0.2 and SR 3.0.3 are applicable to the VFTP test frequencies.

(continued)

UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 208 TO

RENEWED FACILITY OPERATING LICENSE NO. NPF-43

DTE ELECTRIC COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By application dated August 14, 2017, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17226A277), DTE Electric Company (DTE, or the licensee), submitted a license amendment request for Fermi 2. The amendment modifies Fermi 2 technical specification (TS) 5.5.7, "Ventilation Filter Testing Program (VFTP)" by adopting the format and language of NUREG-1433, "Standard Technical Specifications [STS] for General Electric BWR/4 Plants," Revision 4, (April 2012) (ADAMS Accession No. ML12104A192). Specifically, the amendment inserts new text supported by the current licensing basis and STS as well as removing redundant testing frequency statements.

2.0 REGULATORY EVALUATION

The standby gas treatment (SGT) system consists of two separate and parallel 100 percent capacity equipment and filter trains. On detection of radioactivity or conditions that could lead to a release of radioactivity, the SGT system functions to minimize the release related offsite dose rates by permitting the venting and purging of both the primary and secondary containment atmospheres under accident or abnormal conditions, and at the same time containing any airborne particulate or halogen contamination that might be present. Each SGT equipment train consists of a moisture separator, a prefilter, an electric heater, a high efficiency particulate air (HEPA) filter, a charcoal adsorber, a second HEPA filter, an exhaust fan, and a cooling air fan installed in parallel with the exhaust fan.

The control room emergency filtration (CREF) system provides a protected environment from which occupants can control the unit following an uncontrolled release of radioactivity, hazardous chemicals, or smoke. CREF is a single system that performs its safety function with redundant active components and nonredundant passive components, including a control room envelope boundary that limits the inleakage of unfiltered air. The CREF system is designed to maintain a habitable environment in the control room envelope for a 30-day continuous occupancy after a design basis accident without exceeding 5 rem total effective dose

equivalent. During emergency operation of CREF, two emergency filter trains are automatically put in operation. The emergency makeup filter train consists of a mist eliminator, redundant divisional electric heater, a HEPA filter, a 2-inch deep charcoal adsorber, and a second HEPA filter. The emergency recirculation filter train consists of a prefilter, a HEPA filter, a 4-inch deep charcoal adsorber, and a second HEPA filter. Air is drawn through these emergency filters by one of two redundant divisional emergency recirculation air fans.

The VFTP described in TS 5.5.7 establishes the required testing of engineered safety feature (ESF) filter ventilation systems, specifically, the SGT and the CREF systems in accordance with Regulatory Guide (RG) 1.52, Revision 2, and the American Society of Mechanical Engineers (ASME) N510-1980. The existing format for the VFTP description in TS 5.5.7 was established during the licensee's TS conversion to NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 1, (April 1995) (ADAMS Accession No. ML13196A477).

3.0 TECHNICAL EVALUATION

3.1 Technical Specifications and Changes

Title 10 of the *Code of Federal Regulations* (10 CFR) 50.36 (b) states, in part:

> The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to §50.34.

10 CFR 50.36 (c)(5), "Administrative controls" states:

> Administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.

The U.S. Nuclear Regulatory Commission's (NRC or Commission) "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" was published in the *Federal Register* on July 22, 1993, (58 FR 39132). In reference to the four criteria listed in 10 CFR 50.36(c)(2)(ii), the policy states: "LCOs [limiting conditions for operations] which do not meet any of the criteria below may be proposed for removal from the Technical Specifications and relocation to licensee-controlled documents, such as the FSAR [final safety analysis report.]" The policy statement further states:

> If a licensee elects to apply these criteria, the requirements of the removed specifications will be relocated to the FSAR or other licensee-controlled documents. Licensees are to operate their facilities in conformance with the descriptions of their facilities and procedures in their FSAR. Changes to the facility or to procedures described in the FSAR are to be made in accordance with 10 CFR 50.59.

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

3.2 Standard Technical Specification

The licensee proposed adopting the STS format and content for Fermi 2 TS 5.5.7. Specifically, the licensee proposed changes that would revise the first sentence of TS 5.5.7 from, "The VFTP

shall establish the required testing of Engineered Safety Feature (ESF) filter ventilation systems," to "A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2, and in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1980." The licensee also proposed deleting "The following tests shall be performed:" and the associated detailed listing of the four performance frequencies for TS 5.5.7, parts a, b, and c. The licensee also proposed deleting the sentence, "The following tests shall be performed once per 18 months" from TS 5.5.7, parts d and e.

While the proposed adoption of STS formatting and content for the TS 5.5.7 results in a closer alignment between the Fermi 2 TS and the current version of the STS, it also results in the deletion of testing requirements. First, the requirements in TS 5.5.7a to test the HEPA filters after charcoal adsorber bank replacement and the TS 5.5.7b requirement to test the charcoal adsorber after HEPA filter bank replacement would no longer appear in the Fermi 2 TS. The licensee provided justification for this deletion:

> . . . these tests are not required by Regulatory Guide 1.52, Revision 2, or ASME N510-1980. The elimination of this testing requirement is justified since the HEPA filters would not be affected by a complete or partial replacement of the charcoal adsorber bank and the charcoal adsorber would not be affected by a complete or partial replacement of the HEPA filter bank.

The deletion of the sentence, "The following tests shall be performed once per 18 months." from TS 5.5.7, parts d and e, eliminate the detail of the testing frequencies for those parts. The licensee provided the following justification for the removal:

> The removal of the testing performance frequency details from TS 5.5.7 is acceptable because this type of information is not necessary to be included in the TS to provide adequate protection of public health and safety. The TS still retain the requirements to perform tests on the ventilation filters on a frequency and in a manner consistent with Regulatory Guide 1.52, Revision 2, and SR [surveillance requirement] 3.0.1. Also, this change is acceptable because these types of procedural details will be adequately controlled in [the] VFTP. The adequacy of the VFTP will be maintained in accordance with 10 CFR 50.59.

The NRC staff reviewed the proposed changes and the licensee's justifications for the changes. The staff determined that TS 5.5.7, as modified by the proposed changes, will continue to meet the regulatory requirements of 10 CFR 50.36(c)(5) because removal of the requirements to test HEPA filters after charcoal adsorber replacement and vice versa is not necessary to provide assurance of safe facility operation. Likewise, deletion of the testing frequency detail is acceptable because the details will be still be retained in the VFTP. The staff determined that the licensee will also meet the intent of NRC's "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" for removal of TS requirements because the licensee controlled VFTP will contain the required information related to the information being removed from the TS and changes to the VFTP will be made in accordance with 10 CFR 50.59. Therefore, the staff determined that the proposed changes are acceptable.

3.3 Editorial Changes

The licensee also proposed the following three editorial changes to further align the Fermi 2 TS with the current version of the STS:

- TS 5.5.7, Part c, will change the words "...at temperature of 30°C and at the relative

humidity ..." to "... at a temperature of 30°C (86°F) and the relative humidity ..."

- TS 5.5.7 Part d, will change the words "...at the system flowrate specified as follows ±10%." to "...at the system flowrate specified below ± 10%.",

- TS 5.5.7, Part e, will change "system" to "systems" and the colon following "ASME N510-1980" will be changed to a period.

The NRC staff reviewed the proposed changes and determined they are editorial and, therefore, the changes are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan official was notified of the proposed issuance of the amendment on April 9, 2018. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 published in the Federal Register on September 26, 2017 (82 FR 44851). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR Section 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: M. Hamm

Date of issuance: May 24, 2018

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT TO REVISE TECHNICAL SPECIFICATIONS 5.5.7 "VENTILATION FILTER TESTING PROGRAM (VFTP)," TO BE CONSISTENT WITH STANDARD TECHNICAL SPECIFICATIONS (CAC NO. MG0104, EPID L-2017-LLA-0271) DATED MAY 24, 2018

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