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

January 17, 2014

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 ADOPT TSTF-423, REVISION 1, "TECHNICAL SPECIFICATIONS END STATES, NEDC-32988-A" (TAC NO. MF0498)

Dear Mr. Plona:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 194 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 January 11, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13014A125).

The amendment revises the Fermi 2 TSs to risk-inform requirements regarding selected Required Action end states. Additionally, it would modify the TS Required Actions with a Note prohibiting the use of limiting condition for operation (LCO) 3.0.4.a when entering the preferred end state (Mode 3) on startup. The changes are consistent with NRC-approved Technical Specification Task Force (TSTF) traveler TSTF-423, Revision 1, "Technical Specifications End States, NEDC-32988-A," dated December 22, 2009 (ADAMS Accession No. ML093570241).

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,

Thomas J. Wengert, Senior 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.194 to NPF-43
2. Safety Evaluation

cc w/encls: Distribution via ListServ

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

DTE ELECTRIC COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 194
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 January 11, 2013, 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 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. 194, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this 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. Coincident with the implementation of this amendment, the licensee will follow the guidance established in TSTF-IG-05-02, Revision 2, "Implementation Guidance for TSTF-423, Revision 1, Technical Specification End States, NEDC-32988-A."

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 License and Technical Specifications

Date of Issuance: January 17, 2014

ATTACHMENT TO LICENSE AMENDMENT NO.194

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	REMOVE	INSERT
License Page 3	License Page 3	Page 3.7-11	Page 3.7-11
Page 3.3-74	Page 3.3-74	Page 3.7-14	Page 3.7-14
Page 3.5-2	Page 3.5-2	Page 3.8-2c	Page 3.8-2c
Page 3.5-3	Page 3.5-3	Page 3.8-16	Page 3.8-16
---	Page 3.5-3a	Page 3.8-27	Page 3.8-27
Page 3.5-12	Page 3.5-12		
Page 3.6-20	Page 3.6-20		
Page 3.6-23	Page 3.6-23		
Page 3.6-24	Page 3.6-24		
Page 3.6-25	Page 3.6-25		
Page 3.6-33	Page 3.6-33		
Page 3.6-35	Page 3.6-35		
Page 3.6-40	Page 3.6-40		
Page 3.6-47	Page 3.6-47		
Page 3.6-48	Page 3.6-48		
Page 3.7-2	Page 3.7-2		
Page 3.7-6	Page 3.7-6		
Page 3.7-8	Page 3.7-8		

(4) DTE Electric Company, 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) DTE Electric Company, 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) DTE Electric Company, 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

DTE Electric Company 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. 194 and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into this 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

3.3 INSTRUMENTATION

3.3.8.2 Reactor Protection System (RPS) Electric Power Monitoring

LCO 3.3.8.2 Two RPS electric power monitoring assemblies shall be OPERABLE for each inservice RPS motor generator set or alternate power supply.

APPLICABILITY: MODES 1, 2, and 3,
MODES 4 and 5 with any control rod withdrawn from a core cell containing one or more fuel assemblies, or with both residual heat removal shutdown cooling (RHR-SDC) isolation valves open.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or both inservice power supplies with one electric power monitoring assembly inoperable.	A.1 Remove associated inservice power supply(s) from service.	72 hours
B. One or both inservice power supplies with both electric power monitoring assemblies inoperable.	B.1 Remove associated inservice power supply(s) from service.	1 hour
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
E. HPCI System inoperable.	E.1	Verify by administrative means RCIC System is OPERABLE.	Immediately
	AND		
	E.2	Restore HPCI System to OPERABLE status.	14 days
F. HPCI System inoperable. AND Condition A, or Condition B, or Condition C entered.	F.1	Restore HPCI System to OPERABLE status.	72 hours
	OR		
	F.2	Restore low pressure ECCS injection/spray subsystem(s) to OPERABLE status.	72 hours
G. One ADS valve inoperable.	G.1	Restore ADS valve to OPERABLE status.	14 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION		COMPLETION TIME
H. One ADS valve inoperable. AND Condition A or Condition B entered.	H.1 OR H.2	Restore ADS valve to OPERABLE status. Restore low pressure ECCS injection/spray subsystem(s) to OPERABLE status.	72 hours 72 hours
I. Required Action and associated Completion Time of Condition E, F, G, or H not met.	I.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	 12 hours
J. Two or more ADS valves inoperable.	J.1 AND J.2	Be in MODE 3. Reduce reactor steam dome pressure to ≤ 150 psig.	12 hours 36 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
K. Two or more low pressure ECCS injection/spray subsystems inoperable for reasons other than Condition B or C. OR HPCI System and one or more ADS valves inoperable. OR Condition C and Condition G entered.	K.1 Enter LCO 3.0.3.	Immediately

3.5 EMERGENCY CORE COOLING SYSTEMS (ECCS) AND REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM

3.5.3 RCIC System

LCO 3.5.3 The RCIC System shall be OPERABLE.

APPLICABILITY: MODE 1,
MODES 2 and 3 with reactor steam dome pressure > 150 psig.

ACTIONS

NOTE
LCO 3.0.4.b is not applicable to RCIC.

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. RCIC System inoperable.	A.1	Verify by administrative means High Pressure Coolant Injection System is OPERABLE.	Immediately
	AND		
	A.2	Restore RCIC System to OPERABLE status.	14 days
B. Required Action and associated Completion Time not met.	B.1	NOTE LCO 3.0.4.a is not applicable when entering MODE 3.	
		Be in MODE 3.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.1.6 Low-Low Set (LLS) Valves

LCO 3.6.1.6 The LLS function of two safety/relief valves shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One LLS valve inoperable.	A.1	Restore LLS valve to OPERABLE status.	14 days
B. Required Action and associated Completion Time of Condition A not met.	B.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
C. Both LLS valves inoperable.	C.1 AND C.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and Associated Completion Time of Condition C not met.	D.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
E. Two lines with one or more reactor building-to-suppression chamber vacuum breakers inoperable for opening.	E.1 Restore all vacuum breakers in one line to OPERABLE status.	1 hour
F. Required Action and Associated Completion Time of Condition A, B, or E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

	SURVEILLANCE	FREQUENCY
SR 3.6.1.7.1	----------NOTES---------- 1. Not required to be met for vacuum breakers that are open during Surveillances. 2. Not required to be met for vacuum breakers open when performing their intended function. ---------- Verify each vacuum breaker is closed.	14 days
SR 3.6.1.7.2	Perform a functional test of each vacuum breaker.	31 days
SR 3.6.1.7.3	Verify the opening setpoint of each vacuum breaker is ≤ 0.5 psid.	18 months

3.6 CONTAINMENT SYSTEMS

3.6.1.8 Suppression Chamber-to-Drywell Vacuum Breakers

LCO 3.6.1.8 Twelve suppression chamber-to-drywell vacuum breakers shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One suppression chamber-to-drywell vacuum breaker inoperable for opening.	A.1	Restore vacuum breaker to OPERABLE status.	72 hours
B. Required Action and associated Completion Time of Condition A not met.	B.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
C. One or more suppression chamber-to-drywell vacuum breaker not closed.	C.1	Close the open vacuum breaker(s).	2 hours
D. Required Action and associated Completion Time of Condition C not met.	D.1 AND D.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

3.6 CONTAINMENT SYSTEMS

3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

LCO 3.6.2.3 Two RHR suppression pool cooling subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One RHR suppression pool cooling subsystem inoperable.	A.1	Restore RHR suppression pool cooling subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met.	B.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
C. Two RHR suppression pool cooling subsystems inoperable.	C.1	Restore one RHR suppression pool cooling subsystem to OPERABLE status.	8 hours
D. Required Action and associated Completion Time of Condition C not met.	D.1 AND D.2	Be in MODE 3. Be in MODE 4.	12 hours 36 hours

3.6 CONTAINMENT SYSTEMS

3.6.2.4 Residual Heat Removal (RHR) Suppression Pool Spray

LCO 3.6.2.4 Two RHR suppression pool spray subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One RHR suppression pool spray subsystem inoperable.	A.1 Restore RHR suppression pool spray subsystem to OPERABLE status.	7 days
B. Two RHR suppression pool spray subsystems inoperable.	B.1 Restore one RHR suppression pool spray subsystem to OPERABLE status.	8 hours
C. Required Action and associated Completion Time not met.	C.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment

LCO 3.6.4.1 The secondary containment shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of recently irradiated fuel assemblies in the secondary containment,

During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary Containment inoperable due to one railroad bay access door inoperable.	A.1 Restore railroad bay door to OPERABLE status.	7 days
B. Secondary containment inoperable in MODE 1, 2, or 3 for reasons other than Condition A.	B.1 Restore secondary containment to OPERABLE status.	4 hours
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.4.3 Standby Gas Treatment (SGT) System

LCO 3.6.4.3 Two SGT subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,
During movement of recently irradiated fuel assemblies in the secondary containment,

During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One SGT subsystem inoperable.	A.1 Restore SGT subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met in MODE 1, 2, or 3.	B.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
C. Required Action and associated Completion Time of Condition A not met during movement of recently irradiated fuel assemblies in the secondary containment or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- C.1 Place OPERABLE SGT subsystem in operation. OR C.2.1 Suspend movement of recently irradiated fuel assemblies in secondary containment. AND C.2.2 Initiate action to suspend OPDRVs.	 Immediately Immediately Immediately
D. Two SGT subsystems inoperable in MODE 1, 2, or 3.	D.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	 12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time of Condition A, B, or C not met.	D.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
E. Both RHRSW subsystems inoperable for reasons other than Condition B.	E.1 --------NOTE-------- Enter applicable Conditions and Required Actions of LCO 3.4.8 for RHR shutdown cooling made inoperable by RHRSW System. ---------- Restore one RHRSW subsystem to OPERABLE status.	8 hours
F. Required Action and associated Completion Time of Condition E not met.	F.1 Be in MODE 3. AND F.2 Be in MODE 4.	12 hours 36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.1.1	Verify each RHRSW manual, power operated, and automatic valve in the flow path, that is not locked, sealed, or otherwise secured in position, is in the correct position or can be aligned to the correct position.	31 days

3.7 PLANT SYSTEMS

3.7.3 Control Room Emergency Filtration (CREF) System

LCO 3.7.3 The CREF System shall be OPERABLE.

----------NOTE----------
The control room boundary may be opened intermittently under administrative control.

APPLICABILITY: MODES 1, 2, and 3,
During movement of recently irradiated fuel assemblies in the secondary containment,

During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One CREF subsystem inoperable.	A.1	Restore CREF subsystem to OPERABLE status.	7 days
B. Two CREF subsystems inoperable due to inoperable control room boundary in MODE 1, 2, or 3.	B.1	Restore control room boundary to OPERABLE status.	24 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
E. Two CREF subsystems or a non-redundant component or portion of the CREF System inoperable in MODE 1, 2, or 3 for reasons other than Condition B.	E.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours
F. Two CREF subsystems or a non-redundant component or portion of the CREF System inoperable during movement of recently irradiated fuel assemblies in the secondary containment, or during OPDRVs.	----------NOTE---------- LCO 3.0.3 is not applicable. ---------- F.1 Initiate action to suspend OPDRVs. AND ----------NOTE---------- Not required for a CREF System or subsystem inoperable due to failure to provide the required filtration efficiency, or due to replacement of charcoal filtration media. ---------- F.2 Suspend movement of recently irradiated fuel assemblies in the secondary containment.	Immediately Immediately

3.7 PLANT SYSTEMS

3.7.4 Control Center Air Conditioning (AC) System

LCO 3.7.4 Two control center AC subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.
During movement of recently irradiated fuel assemblies in the secondary containment,

During operations with a potential for draining the reactor vessel (OPDRVs).

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One control center AC subsystem inoperable.	A.1	Restore control center AC subsystem to OPERABLE status.	30 days
B. Two control center AC subsystems inoperable.	B.1	Verify control room area temperature <90°F.	Once per 4 hours
	AND		
	B.2	Restore one control center AC subsystem to OPERABLE status.	72 hours
C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.	C.1	--------NOTE------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

3.7 PLANT SYSTEMS

3.7.5 Main Condenser Offgas

LCO 3.7.5 The gross radioactivity rate of the noble gases measured at the discharge of the 2.2 minute delay piping shall be ≤ 340 mCi/second after decay of 30 minutes.

APPLICABILITY: MODE 1,
MODES 2 and 3 with any main steam line not isolated and steam jet air ejector (SJAE) in operation.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. Gross radioactivity rate of the noble gases not within limit.	A.1	Restore gross radioactivity rate of the noble gases to within limit.	72 hours
B. Required Action and associated Completion Time not met.	B.1	Isolate all main steam lines.	12 hours
	OR		
	B.2	Isolate SJAE.	12 hours
	OR		
	B.3	--------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ----------	
		Be in MODE 3.	12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. One offsite circuit inoperable. AND One or both EDGs in one Division inoperable.	----------NOTE---------- Enter applicable Conditions and Required Actions of LCO 3.8.7, "Distribution Systems - Operating," when Condition F is entered with no AC power source to one or more 4160 V buses 64B, 64C, 65E or 65F. ---------- F.1 Restore offsite circuit to OPERABLE status. OR F.2 Restore both EDGs in the Division to OPERABLE status.	 12 hours 12 hours
G. Required Action and Associated Completion Time of Condition A, B, C, D, E or F not met.	G.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	 12 hours

3.8 ELECTRICAL POWER SYSTEMS

3.8.4 DC Sources-Operating

LCO 3.8.4 The Division I and Division II DC electrical power subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One battery charger inoperable.	A.1 Restore battery charger to OPERABLE status.	4 hours
B. One DC electrical power subsystem inoperable for reasons other than Condition A.	B.1 Restore DC electrical power subsystem to OPERABLE status.	2 hours
C. Required Action and Associated Completion Time not met.	C.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	12 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
B. One or more required DC electrical power distribution subsystems inoperable.	B.1 Restore DC electrical power distribution subsystem(s) to OPERABLE status.	2 hours AND 16 hours from discovery of failure to meet LCO
C. Required Action and associated Completion Time of Condition A or B not met.	C.1 --------NOTE-------- LCO 3.0.4.a is not applicable when entering MODE 3. ---------- Be in MODE 3.	 12 hours
D. Two or more required electrical power distribution subsystems inoperable that result in a loss of function.	D.1 Enter LCO 3.0.3.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.8.7.1	Verify correct breaker alignments and voltage to required AC and DC electrical power distribution subsystems.	7 days

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 194 TO FACILITY OPERATING LICENSE NO. NPF-43

DTE ELECTRIC COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By application dated January 11, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13014A125), DTE Electric Company (DTE, the licensee) submitted a license amendment request (LAR), that proposed changes to the Technical Specifications (TS) for Fermi 2 nuclear facility. The proposed amendment would modify the TSs to risk-inform requirements regarding selected Required Action end states. Additionally, it would modify the TS Required Actions with a Note prohibiting the use of limiting condition for operation (LCO) 3.0.4.a when entering the preferred end state (Mode 3) on startup. The licensee states that the changes are consistent with the U.S. Nuclear Regulatory Commission (NRC)-approved Technical Specification Task Force (TSTF) traveler TSTF-423, Revision 1, "Technical Specifications End States, NEDC-32988-A," dated December 22, 2009 (ADAMS Accession No. ML093570241). The *Federal Register* Notice published on February 18, 2011 (76 FR 9614) announced the availability of this TS improvement as part of the consolidated line item improvement process (CLIIP).

TSTF-423 BACKGROUND

TSTF-423 is one of the industry's initiatives developed under the Risk Management Technical Specifications program. These initiatives are intended to maintain or improve safety through the incorporation of risk assessment and management techniques in TS, while reducing unnecessary burden and making TS requirements consistent with the Commission's other risk-informed regulatory requirements, in particular the Maintenance Rule.

Title 10 of the *Code of Federal Regulations*, (10 CFR) Section 50.36(c)(2)(i), "Technical Specifications," states: "When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow the remedial action permitted by the technical specification until the condition can be met." The Standard Technical Specifications (STS) and most plant TSs provide, as part of the remedial action, a completion time (CT) for the plant to either comply with remedial actions or restore compliance with the LCO. If the LCO or the remedial action cannot be met, then the reactor is required to be shutdown. When the STS and individual plant TSs were written, the shutdown condition, or end state specified, was usually cold shutdown.

Topical Report (TR) NEDC-32988-A, Revision 2, (ADAMS Accession No. ML030170060) (Reference 1) provides the technical basis to change certain required "end states" when the TS Actions for remaining in power operation cannot be met within the CTs. Most of the requested TS changes permit an end state of hot shutdown (Mode 3) if risk is assessed and managed, rather than an end state of cold shutdown (Mode 4), contained in the current TS. The request was limited to those end states where: (1) entry into the shutdown mode is for a short interval, (2) entry is initiated by inoperability of a single train of equipment or a restriction on a plant operational parameter, unless otherwise stated in the applicable TS, and (3) the primary purpose is to correct the initiating condition and return to power operation as soon as is practical.

The TSs for Fermi 2 define five operational modes:

- Mode 1 - Power Operation: The reactor mode switch is in run position.
- Mode 2 - Reactor Startup: The reactor mode switch is in refuel position (with all reactor vessel head closure bolts fully tensioned) or in startup/hot standby position.
- Mode 3 - Hot Shutdown: The reactor coolant system (RCS) temperature is above 200°F and the reactor mode switch is in shutdown position (with all reactor vessel head closure bolts fully tensioned).
- Mode 4 - Cold Shutdown: The RCS temperature is equal to or less than 200°F and the reactor mode switch is in shutdown position (with all reactor vessel head closure bolts fully tensioned).
- Mode 5 – Refueling: The reactor mode switch is in shutdown or refuel position, and one or more reactor vessel head closure bolts are less than fully tensioned.

Modifying the Fermi 2 TS to be consistent with TSTF-423 allows a Mode 3 end state rather than a Mode 4 end state for selected initiating conditions in order to perform short duration repairs. Short duration repairs are on the order of 2 to 3 days, but not more than a week. The licensee stated that the information in the topical report and TSTF-423, Revision 1, as well as the model safety evaluation (SE) prepared by the NRC, were applicable to Fermi 2 and provided justification for incorporation of the proposed changes into the Fermi 2 TS.

2.0 REGULATORY EVALUATION

In 10 CFR 50.36, the Commission established its regulatory requirements related to the content of TS. Pursuant to 10 CFR 50.36(c), TS are required to include items in the following eight specific categories related to station operation: (1) safety limits, limiting safety system settings, and limiting control settings; (2) LCOs; (3) surveillance requirements (SRs); (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notification; and (8) written reports. The NRC staff did not review the LAR with respect to decommissioning, initial notification and written reports, as the licensee did not propose any changes to these specific requirements. The rule does not specify the particular requirements to be included in a plant's TSs. As stated in 10 CFR 50.36(c)(2)(i), the "Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a

limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications." In describing the basis for changing end states, NEDC-32988-A (Reference 1) states:

> Cold shutdown is normally required when an inoperable system or train cannot be restored to an operable status within the allowed time. Going to cold shutdown results in the loss of steam-driven systems, challenges the shutdown heat removal systems, and requires restarting the plant. A more preferred operational mode is one that maintains adequate risk levels while repairs are completed without causing unnecessary challenges to plant equipment during shutdown and startup transitions.

In the end state changes under consideration in this LAR, a problem with a component or train has, or will, result in a failure to meet TS, and a controlled shutdown is directed because a TS Action requirement cannot be met within the TS CT.

Most of today's TSs and design basis analyses were developed under the perception that putting a plant in cold shutdown would result in the safest condition and the design basis analyses would bound credible shutdown accidents. In the late 1980s and early 1990s, the NRC and licensees recognized that this perception was incorrect and took corrective actions to improve shutdown operation. At the same time, standard TSs were developed and many licensees improved their TSs. Since enactment of a shutdown rule was expected, almost all TS changes involving power operation, including a revised end state requirement, were postponed (see, for example, the Final Policy Statement on TS Improvements, Reference 2). However, in the mid-1990s, the Commission decided a shutdown rule was not necessary in light of industry improvements. Controlling shutdown risk encompasses control of conditions that can cause potential initiating events and responses to those initiating events that do occur. Initiating events are a function of equipment malfunctions and human error. Responses to events are a function of plant sensitivity, ongoing activities, human error, defense-in-depth, and additional equipment malfunctions.

In practice, the risk during shutdown operations is often addressed via voluntary actions and application of 10 CFR 50.65 (Reference 3), the Maintenance Rule. Section 50.65(a)(4) states:

> Before performing maintenance activities ..., the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. The scope of the assessment may be limited to structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety.

Regulatory Guide (RG) 1.182 (Reference 4) provides guidance on implementing the provisions of 10 CFR 50.65(a)(4) by endorsing the revised Section 11 (published separately) to NUMARC 93-01, Revision 2. The changes in TSTF-423 are consistent with the rules, regulations and associated regulatory guidance, as noted above.

3.0 TECHNICAL EVALUATION

The changes proposed in the amendment request are consistent with the changes proposed and justified in Topical Report GE NEDC-32988-A, Revision 2 (Reference 1), and have already been approved by the associated NRC SE for TSTF-423 (Reference 5). The evaluation

included in Reference 5, as appropriate and applicable to the changes of TSTF-423, Rev. 1 (Reference 7), is reiterated here, and differences from the SE are justified. In its application, the licensee commits to TSTF-IG-05-02, "Implementation Guidance for TSTF-423, Revision 0, 'Technical Specifications End States, NEDC-32988-A,'" (Reference 8), which addresses a variety of issues such as considerations and compensatory actions for risk-significant plant configurations. An overview of the generic evaluation and associated risk assessment is provided below, along with a summary of the associated TS changes justified by TR NEDC-32988-A (Reference 1).

The licensee's application states, "DTE has concluded that the information in Topical Report NEDC-32988-A, TSTF-423, and the NRC staff's model SE are applicable to Fermi 2 and justify this LAR for the incorporation of the changes to the Fermi 2 TS."

3.1 Risk Assessment

The objective of the Boiling Water Reactor Owners Group (BWROG) topical report NEDC-32988-A (Reference 1), risk assessment was to show that any risk increases associated with the proposed changes in TS end states are either negligible or negative (i.e., a net decrease in risk). The BWROG topical report documents a risk-informed analysis of the proposed TS change. Probabilistic risk assessment (PRA) results and insights are used, in combination with results of deterministic assessments, to identify and propose changes in "end states" for all BWR plants. This is in accordance with guidance provided in RG 1.174 (Reference 9) and RG 1.177 (Reference 10). The three-tiered approach documented in RG 1.177, "An Approach for Plant-Specific, Risk-Informed Decision Making: Technical Specifications," was followed. The first tier of the three-tiered approach includes the assessment of the risk impact of the proposed change for comparison to acceptance guidelines consistent with the Commission's Safety Goal Policy Statement, as documented in RG 1.174. The first tier aims at ensuring that there are no unacceptable temporary risk increases as a result of the TS change, such as when equipment is taken out of service. The second tier addresses the need to preclude potentially high-risk configurations that could result if equipment is taken out of service concurrently with the equipment out of service, as allowed by this TS change. The third tier addresses the application of 10 CFR 50.65(a)(4) of the Maintenance Rule for identifying risk-significant configurations resulting from maintenance related activities and taking appropriate compensatory measures to avoid such configurations.

This TS invokes a risk assessment because 10 CFR 50.65(a)(4) is applicable to maintenance related activities and does not cover other operational activities beyond the effect they may have on existing maintenance related risk.

BWROG's risk assessment approach was found comprehensive and acceptable in the SE for the topical report. In addition, the analyses show that the three-tiered approach criteria for allowing TS changes are met as follows:

- Risk Impact of the Proposed Change (Tier 1): The risk changes associated with the TS changes in TSTF-423, in terms of mean yearly increases in core damage frequency (CDF) and large early release frequency (LERF), are risk neutral or risk beneficial. In addition, there are no significant temporary risk increases, as defined by RG 1.177 criteria, associated with the implementation of the TS end state changes.

- Avoidance of Risk-Significant Configurations (Tier 2): The performed risk analyses, which are based on single LCOs, indicates that there are no high-risk configurations associated with the TS end state changes. The reliability of redundant trains is normally covered by a single LCO. When multiple LCOs occur, which affect trains in several systems, the plant's risk-informed configuration risk management program, or the risk assessment and management program implemented in response to the Maintenance Rule, 10 CFR 50.65 (a)(4), shall ensure that high-risk configurations are avoided. As part of the implementation of TSTF-423, the licensee has committed to follow Section 11 of NUMARC 93-01, Revision 3, and include guidance in appropriate plant procedures and/or administrative controls to preclude high-risk plant configurations when the plant is at the proposed end state. The NRC staff finds that such guidance is adequate for preventing risk-significant plant configurations.

- Configuration Risk Management (Tier 3): The licensee has a commitment in place (as described below) to comply with 10 CFR 50.65(a)(4) to assess and manage the risk from maintenance activities. This program can support the licensee's decision in selecting the appropriate actions to control risk for most cases in which a risk-informed TS is entered.

The generic risk impact of the end state mode change was evaluated subject to the following assumptions, which are incorporated into the TS, TS Bases, and TSTF-IG-05-02 (References 8 and 9):

1. The entry into the end state is initiated by the inoperability of a single train of equipment or a restriction on a plant operational parameter, unless otherwise stated in the applicable technical specification.

2. The primary purpose of entering the end state is to correct the initiating condition and return to power as soon as is practical.

3. When Mode 3 is entered as the repair end state, the time the reactor coolant pressure is above 500 psig will be minimized. If reactor coolant pressure is above 500 psig for more than 12 hours, the associated plant risk will be assessed and managed.

These assumptions are consistent with typical entries into Mode 3 for short duration repairs, which is the intended use of the TS end state changes. The NRC staff concludes that, going to Mode 3 (hot shutdown) instead of going to Mode 4 (cold shutdown) to carry out equipment repairs that are of short duration, does not have any adverse effect on plant risk.

By letter dated January 11, 2013 (Reference 11), the licensee committed to follow the guidance established in Section 11 of NUMARC 93-01, "Industry Guidance for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Nuclear Management and Resource Council, Revision 3, July 2000. In addition, the Fermi 2 updated final safety analysis report (UFSAR), Revision 18, Appendix A, Section A.1.160, states in part:

> The Fermi 2 plant is in compliance with Regulatory Guide 1.160 [Monitoring the Effectiveness of Maintenance at Nuclear Power Plants]. Regulatory Guide 1.160 endorses the use of NUMARC 93-01 as acceptable guidance for implementing the

Maintenance Rule (10 CFR 50.65). [...]

Fermi 2 has utilized NUMARC 93-01 as the base document for implementing the Maintenance Rule. [...]

NUMARC 93-01 provides guidance on implementing the provisions of 10 CFR 50.65(a)(4).

Also, as stated in its January 11, 2013, letter, the licensee will follow the guidance established in TSTF-IG-05-02, "Implementation Guidance for TSTF-423, Revision 0, "Technical Amendment Specifications End States, NEDC-32988-A, Revision 1, March 2007". A requirement is included in Section 3, "Implementation Requirements," of the NRC amendment associated with this SE to ensure that this Implementation Guidance is incorporated coincident with the licensee's implementation of the amendment. By following the Implementation Guidance, the licensee will ensure that defense-in-depth is maintained for key safety functions by ensuring availability of Tier 2 systems/equipment necessary for safe shutdown. Therefore, the NRC staff finds the licensee's commitments to be acceptable.

3.2 The Licensee's Optional Changes and Variations

Section 2.2 of the licensee's application states, "DTE is proposing variations or deviations from TR NEDC-32988-A, the TS changes described in the TSTF-423, Revision 1, or the NRC staff's model SE referenced in the *Federal Register* on February 18, 2011 (76 FR 34), as part of the CLIIP Notice of Availability." The application lists the proposed variations/deviations as follows:

No.	Fermi TS #	Title/Description	Variations/Deviations	Comments
1	3.4.3	Safety Relief Valves (SRVs)	No changes to TS 3.4.3 are proposed.	The Standard TS, Condition A is optional and is not included in the current Fermi TS. Fermi TS, Condition A, is for one or more required SRVs inoperable. It requires being in Mode 3 in 12 hours and Mode 4 in 36 hours, which is similar to the proposed Condition C in TSTF-423; therefore, no changes are proposed to this TS.

No.	Fermi TS #	Title/Description	Variations/Deviations	Comments
2	3.5.1	Emergency Core Cooling Systems (ECCS) - Operating	Condition D in the Fermi TS is proposed to be revised per TSTF-423; however, it applies when Conditions A, B, or C are not met. Conditions in the Fermi TS are numbered differently from the Standard TS Conditions.	The Standard TS, Condition A, is for one low pressure ECCS injection/spray subsystem or one [low pressure coolant injection (LPCI)] pump in both LPCI subsystems inoperable. Fermi TS has separate Conditions: Condition A for one low pressure ECCS injection/spray subsystem inoperable and Condition B for one LPCI pump in both LPCI subsystems inoperable. Additionally, the Fermi TS includes Condition C for one Core Spray subsystem inoperable and one LPCI subsystem concurrently inoperable. The justification provided in the topical report and model SE for this change is also applicable to Condition C of the Fermi TS.
3	3.6.1.9	Main Steam Isolation Valve (MSIV) Leakage Control System (LCS)	No changes to TS 3.6.1.9 are proposed	Fermi TS does not include a specification for MSIV LCS.
4	3.6.4.1	Secondary Containment	Condition C in the Fermi TS is to be revised per TSTF-423; however, it applies when Conditions A or B are not met.	The Standard TS, Condition A, is for secondary containment inoperable. Fermi TS has Condition A for secondary containment inoperable due to one railroad bay access door inoperable; and Condition B for secondary containment inoperable for reasons other than Condition A.
5	3.7.2	Emergency Equipment Cooling Water (EECW) / Emergency Equipment Service Water (EESW)	No changes to TS 3.7.2 are proposed.	The proposed changes in TSTF-423 affect Conditions A and B of the Standard TS. Condition A is for one pump inoperable and Condition B is for one pump in each subsystem inoperable. The Fermi TS does not include

No.	Fermi TS #	Title/Description	Variations/Deviations	Comments
		System and Ultimate Heat Sink (UHS)		Conditions for pump inoperability. It includes Condition A for UHS inoperable due to inoperable cross-tie line(s); Condition B for one reservoir inoperable; and Condition C for one EECW/EESW subsystem inoperable for reasons other than Conditions A and B. Therefore, the proposed changes in TSTF-423 are not applicable to the Fermi TS.
6	3.7.3	Control Room Emergency Filtration (CREF) System	An obsolete footnote is proposed to be deleted.	The footnote on the current Fermi TS, page 3.7-6, describes a onetime allowed extension of the completion time that is no longer applicable; therefore, the footnote and the associated asterisk are proposed to be deleted.
7	3.7.4	Control Center Air Conditioning (AC) System	The proposed change is consistent with TSTF-423; however, it is applied to Condition C which is entered when Conditions A or B are not met. The Fermi TS incorporates TSTF-477; therefore, the proposed Fermi TS change reflects the TSTF-423 change as it applies after TSTF-477 has been incorporated.	The Standard TS, Condition A, is for one [control room AC] subsystem inoperable. This Condition is included in the Fermi TS. The change in TSTF-423 when Required Action and Completion Time of Condition A are not met is applied with no variation. Condition D of the Standard TS requires entering LCO 3.0.3 immediately for two [control room AC] subsystems inoperable. The Fermi TS Condition B is for two control center AC subsystems inoperable. It requires verifying control room area temperature < 90°F once per 4 hours and restoring one subsystem to operable within 72 hours. The change to the Standard TS in TSTF-423 requires being in Mode 3 within 12 hours of entering Condition D. This change is applied to the Fermi

No.	Fermi TS #	Title/Description	Variations/Deviations	Comments
				TS when Required Action and Completion Time of Condition B are not met.
8	3.8.1	AC Sources – Operating	The proposed change is consistent with TSTF-423; however, the Conditions in the Fermi TS are numbered differently from the Standard TS Conditions.	The Fermi TS contains all the Conditions in the Standard TS with the exception of the optional Condition F for one automatic load sequencer inoperable. The Fermi TS also includes Condition B for both emergency diesel generators (EDGs) in one division inoperable. The associated Required Actions and Completion Times are consistent with those for Condition B of the Standard TS (One EDG inoperable). The justification provided in the topical report and model SE for this change is also applicable to Condition B of the Fermi TS.
9	N/A	Inverters – Operating	No changes are proposed.	Fermi TS does not include a specification for Inverters.
10	3.8.4 / 3.8.7	DC Sources - Operating / Distribution Systems - Operating	Conditions in the Fermi TS are numbered differently from the Standard TS Conditions.	Optional Conditions in the Standard TS are not included in the Fermi TS.

The licensee's Optional Changes and Variations stated above are addressed in the licensee's proposed changes to its specific TS LCOs identified below, and in the NRC's assessment of the changes.

3.3 Assessment of TS Changes

Adoption of TSTF-423 requires the following NOTE be added to each Required Action where the end state is changed to Mode 3: "LCO 3.0.4.a is not applicable when entering Mode 3." The addition of the NOTE is acceptable because it prevents an inappropriate use of the LCO 3.0.4.a allowance to go up in Mode with the specified system being inoperable. Since the basis for the NOTE is the same for all affected LCOs, the NRC staff's discussion on the basis for acceptance is not repeated in each assessment below.

3.3.1 LCO 3.3.8.2: Reactor Protection System (RPS) Electric Power Monitoring

The RPS Electric Power Monitoring System is provided to isolate the RPS bus from the normal uninterruptible power supply or an alternate power supply in the event of over voltage, under voltage, or under frequency. This system protects the load connected to the RPS bus against unacceptable voltage and frequency conditions and forms an important part of the primary success path of the essential safety circuits. Some of the essential equipment powered from the RPS buses include the RPS logic, scram solenoids, and various valve isolation logic. The TS change allows the plant to remain in Mode 3 until the repairs are completed.

LCO: For Modes 1, 2, 3, and Modes 4 and 5 (with any control rod withdrawn from a core cell containing one or more fuel assemblies or with both residual heat removal shutdown cooling (RHR-SDC) isolation valves open), two RPS electric power monitoring assemblies shall be OPERABLE for each in-service RPS motor generator set, or alternate power supply.

Condition Requiring Entry into End State: If the LCO cannot be met, the associated in-service power supply(s) must be removed from service within 1 hour (Required Action B.1). In Modes 1, 2, and 3, if the in-service power supply(s) cannot be removed from service within the allotted time, the plant must be placed in Mode 3 within 12 hours and Mode 4 within 36 hours (Required Actions C.1 and C.2).

Modification for End State Required Actions: The change allows the plant to remain in Mode 3 until the repair actions are completed. Required Action C.2, which required the plant to be in Mode 4, is deleted allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action for C.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: To reach Mode 3, per the TS, there must be a functioning power supply with degraded protective circuitry in operation. However, the over voltage, under voltage, or under frequency condition must exist for an extended time period to cause damage. There is a low probability of this occurring in the short period of time that the plant would remain in Mode 3 without this protection.

The specific failure condition of interest is not risk significant for BWR PRAs. If the required restoration actions cannot be completed within the specified time, going into Mode 4 at Fermi 2 would cause loss of the high pressure reactor core isolation cooling system (RCIC) and loss of the power conversion system (condenser/feedwater), and would require activating the residual heat removal (RHR) system.

In addition, emergency operating procedures (EOPs) direct the operator to take control of the depressurization function if low pressure injection/spray systems are needed for reactor pressure vessel (RPV) water makeup and cooling.

3.3.2 LCO 3.5.1: Emergency Core Cooling Systems (ECCS) - Operating

The ECCS provide cooling water to the core in the event of a loss-of-coolant accident (LOCA). This set of ECCS TS provides the operability requirements for the various ECCS subsystems as

described below. This TS change would delete the secondary actions. The plant can remain in Mode 3 until the required repair actions are completed. The reactor is not depressurized.

LCO: Each ECCS injection/spray subsystem and the Automatic Depressurization System (ADS) function of five safety/relief valves shall be OPERABLE.

Condition Requiring Entry into End State: If the LCO cannot be met, the following actions must be taken for the listed conditions:

a. If one low-pressure ECCS injection/spray subsystem is inoperable, the subsystem must be restored to operable status in 7 days (Condition A)

b. If one LPCI pump in both LPCI subsystems is inoperable, both LPCI pumps to be restored to operable status within 7 days (Condition B).

c. If one CSS subsystem and one LPCI subsystem are inoperable, one CSS subsystem or one LPCI subsystem must be restored to operable status within 72 hours (Condition C).

d. If the Required Action and associated Completion Time of Condition A, B, or C is not met, then place the plant in Mode 3 within 12 hours and in Mode 4 within 36 hours (Condition D).

e. If the HPCI System is inoperable, immediately verify by administrative means RCIC System is operable, and restore HPCI system to operable status within 14 days (Condition E).

f. If HPCI System is inoperable and Condition A or Condition B or Condition C entered, restore HPCI System to operable status within 72 hours or restore low pressure ECCS injection/spray subsystem(s) to operable status within 72 hours (Condition F).

g. If one ADS valve is inoperable, it must be restored to operable status within 14 days (Condition G).

h. If one ADS valve is inoperable and Condition A or Condition B entered, the ADS valve must be restored to operable status within 72 hours or the low-pressure ECCS injection/spray subsystem must be restored to operable status within 72 hours (Condition H).

i. If two or more ADS valves become inoperable, or the Required Action and associated Completion Time of Condition E, F, G, or H is not met, the plant must be placed in Mode 3 within 12 hours and the reactor steam dome pressure reduced to less than or equal to 150 psig within 36 hours (Condition I).

j. If two or more low pressure ECCS injection/spray subsystems are inoperable for reasons other than Condition B or C, or the HPCI System and one or more ADS valves are inoperable, or Condition C and Condition G entered, LCO 3.0.3 must be entered immediately (Condition J).

Modification for End State Required Actions:

a. No change in Required Actions for Conditions A through C

b. If the Required Action, and associated Completion Time of Condition A, B, or C is not met, then place the plant in Mode 3 within 12 hours (Condition D.1). Required Action D.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action D.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

c. No change in Required Actions for Conditions E through H.

d. A new Condition I specifies that if Required Action and associated Completion Time of Condition E, F, G, or H not met, be in MODE 3 within 12 hours. A Note is included in the TS Required Action I.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

e. Old Condition I is renumbered to J, which states that if two or more ADS valves become inoperable, the plant must be placed in Mode 3 within 12 hours (Condition J.1). An OR statement in old Condition I stated, "Required Action and associated Completion Time of Condition E, F, G, or H not met," is deleted since it is now new Condition I.

f. Old Condition J is renumbered to Condition K with no changes in the Condition.

Assessment: The BWROG performed a comparative PRA evaluation in TR NEDC-32988-A (Reference 1) of the core damage risks of operation in the current end state and the Mode 3 end state. The NRC staff's conclusion described in the SE for the TR (Reference 5) on BWROG's PRA evaluation, indicates that the core damage risks are lower in Mode 3 than in the current end state Mode 4. For Fermi 2, going to Mode 4 for one ECCS subsystem or one ADS valve would cause loss of the high pressure core cooling RCIC system, and loss of the power conversion system (condenser/feedwater), and would require activating the RHR system. In addition, plant EOPs direct the operator to take control of the depressurization function if low-pressure injection/spray systems are needed for RPV water makeup and cooling.

The licensee's Variation/Deviation #2 states:

> Condition D in the Fermi TS is proposed to be revised per TSTF-423; however, it applies when Conditions A, B, or C are not met. Conditions in the Fermi TS are numbered differently from the Standard TS Conditions. The Standard TS, Condition A is for one low pressure ECCS injection/spray subsystem or one LPCI pump in both LPCI subsystems inoperable. Fermi TS has separate Conditions: Condition A for one low pressure ECCS injection/spray subsystem inoperable and Condition B for one LPCI pump in both LPCI subsystems inoperable. Additionally, the Fermi TS includes Condition C for one Core Spray subsystem inoperable and one LPCI subsystem concurrently inoperable. The justification provided in the topical report and model SE for this change is also applicable to Condition C of the Fermi TS.

The licensee's above deviation describes plant specific ECCS Required Actions that have no adverse effect on the NRC's assessment for the subject change.

3.3.3 LCO 3.5.3: RCIC System

The function of the RCIC system is to provide reactor coolant makeup during loss of feedwater and other transient events. This TS provides the operability requirements for the RCIC system as described below. The TS change allows the plant to remain in Mode 3 until the repairs are completed.

LCO: The RCIC system shall be OPERABLE during Mode 1 and must be OPERABLE in Modes 2, and 3 when the reactor steam dome pressure is greater than 150 psig.

Condition Requiring Entry into End State: If the LCO cannot be met, the following actions must be taken: (a) verify immediately by administrative means that the HPCI System is operable, and (b) restore the RCIC System to operable status within 14 days. If either or both actions cannot be completed within the allotted time, the plant must be placed in Mode 3 within 12 hours and the reactor steam dome pressure reduced to less than or equal to 150 psig within 36 hours.

Modification for End State Required Actions: This TS change keeps the plant in Mode 3 (hot shutdown) until the required repairs are completed. The reactor steam dome pressure is not reduced to less than or equal to 150 psig. A Note is added to the TS Required Action B.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: This change would allow the inoperable RCIC system to be repaired in a plant operating mode with lower risk and without challenging the normal shutdown systems. The BWROG did a comparative PRA evaluation in TR NEDC-32988-A (Reference 1) of the core damage risks of operation in the current end state and in the Mode 3 end state. The evaluation indicates that the core damage risks are lower in Mode 3 than in Mode 4. Going to Mode 3 with reactor steam dome pressure less than 150 psig for inoperability of RCIC would also cause loss of the high-pressure steam-driven injection system (RCIC/HPCI) and loss of the power conversion system (condenser/feedwater), and would require activating the RHR system. In addition, EOPs direct the operator to take control of the depressurization function if low pressure injection/spray systems are needed for RPV water makeup and cooling. Based on the low probability of loss of the necessary overpressure protection function and the number of systems available in Mode 3, the NRC staff concludes that the risks of staying in Mode 3 are approximately the same as, and in some cases lower than, the risks of going to the Mode 4 end state.

3.3.4 LCO 3.6.1.6: Low-Low Set (LLS) Valves

The function of the LLS valves are to prevent excessive short-duration safety relief valve (SRV) cycling during an overpressure event. This TS provides operability requirements for the two LLS SRVs as described below. The TS change allows the plant to remain in Mode 3 until the repairs are completed.

LCO: The LLS function of two safety/relief valves shall be OPERABLE.

Condition Requiring Entry into End State: If one LLS valve is inoperable, it must be returned to operability within 14 days. If the LLS valve cannot be returned to operable status within the allotted time, the plant must be placed in Mode 3 within 12 hours and in Mode 4 within 36 hours.

Modification for End State Required Actions: The TS change would keep the plant in Mode 3 until the required repair actions are completed. The plant would not be taken into Mode 4 (cold shutdown) (delete Required Action B.2). A Note is added to the TS Required Action B.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3. Required Action for both LLS valves inoperable was changed from Condition B to new Condition C without changing the Required Action End State.

Assessment: The BWROG performed a comparative PRA evaluation in TR NEDC-32988-A (Reference 1) of the core damage risks of operation in the current end state and the Mode 3 end state. The NRC staff's conclusion described in the SE for the TR (Reference 5) on BWROG's PRA evaluation, indicates that the core damage risks are lower in Mode 3 than in Mode 4, the current end state. For Fermi 2, going to Mode 4 for one LLS inoperable SRV would cause loss of the high pressure RCIC system, and loss of the power conversion system (condenser/feedwater), and would require activating the RHR system. With one LLS valve inoperable, the remaining valves are adequate to perform the required function. The plant EOPs direct the operator to take control of the depressurization function if low pressure injection/spray systems are needed for RPV water makeup and cooling. The NRC staff finds that this change allows repairs of the inoperable SRV to be performed in a plant operating mode with lower risks.

3.3.5 LCO 3.6.1.7: Reactor Building-to-Suppression Chamber Vacuum Breakers

The reactor building-to-suppression chamber vacuum breakers relieve vacuum when the primary containment depressurizes below the pressure of the reactor building, thereby serving to preserve the integrity of the primary containment.

LCO: Each reactor building-to-suppression chamber vacuum breaker shall be OPERABLE.

Condition Requiring Entry into End State: If one line has one or more reactor building-to-suppression chamber vacuum breakers inoperable for opening, the breaker(s) must be returned to operability within 72 hours (Required Action C.1). If the vacuum breaker(s) cannot be returned to operability within the allotted time, the plant must be placed in Mode 3 within 12 hours (Required Action E.1) and in Mode 4 within 36 hours (Required Action E.2).

Modification for End State Required Actions:

The licensee modifies the Required Actions by (a) adding a new Condition D, which relates to Condition C only, and (b) renumbering Conditions D and E to E and F. Condition F applies to Required Action and associated Completion Times of Condition A, B or E not met. In addition, a Note is added to the new TS Required Action D.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The BWROG (in Reference 1) has demonstrated that the specific failure condition of interest is not risk significant in BWR PRAs. The reduced end state would only be applicable to the situation where the vacuum breaker(s) in one line are inoperable for opening, with the remaining operable vacuum breakers capable of providing the necessary vacuum relief function. The existing end state remains unchanged, as established by new Condition F, for conditions

involving more than one inoperable line or vacuum breaker since they are needed in Modes 1, 2, and 3. In Mode 3, for other accident considerations, HPCI, RCIC, and the power conversion system (condensate/ feedwater) remain available for water makeup and decay heat removal. Additionally, the EOPs direct the operators to take control of the depressurization function if low pressure injection/spray systems are needed for reactor coolant makeup and cooling. Therefore, the NRC staff finds this change to be acceptable because defense-in-depth is maintained with respect to water makeup and decay heat removal while remaining in Mode 3.

The NRC staff has noted that the licensee's proposed changes to the LCO Conditions and associated Required Actions are numbered differently from those shown in TSTF-423, however, the specific LCO requirements are similar to those in TSTF-423. Therefore, the changes are acceptable.

3.3.6 LCO 3.6.1.8: Suppression Chamber-to-Drywell Vacuum Breakers

The function of the suppression chamber-to-drywell vacuum breakers is to relieve vacuum in the drywell, thereby preventing an excessive negative differential pressure across the wetwell/drywell boundary.

LCO: Twelve suppression chamber-to-drywell vacuum breakers shall be OPERABLE.

Condition Requiring Entry into End State: If one suppression chamber-to-drywell vacuum breaker is inoperable for opening, the breaker must be returned to operability within 72 hours (Required Action A.1). If the vacuum breaker cannot be returned to operability within the allotted time, the plant must be placed in Mode 3 within 12 hours (Required Action C.1) and in Mode 4 within 36 hours (Required Action C.2).

Modification for End State Required Actions:

The licensee modifies the Required Actions by (a) adding a new Condition B, which relates to Condition A only, and (b) renumbering Conditions B and C to C and D. Condition D applies to Required Action and associated Completion Time of Condition C not met. In addition, a Note is added to the TS Required Action B.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3. These changes are similar to the changes in the Model SE.

Assessment: The BWROG (in Reference 1) has demonstrated that the specific failure of interest is not risk significant in BWR PRAs. The reduced end state would only be applicable to the situation where one suppression chamber-to-drywell vacuum breaker is inoperable for opening, with the remaining operable vacuum breakers capable of providing the necessary vacuum relief function, since they are required in Modes 1, 2, and 3. By remaining in Mode 3, HPCI, RCIC, and the power conversion system (condensate/feedwater) remain available for water makeup and decay heat removal. Additionally, the EOPs direct the operators to take control of the depressurization function if low pressure injection/spray systems are needed for RCS makeup and cooling. Therefore, the NRC staff finds this change to be acceptable because defense-in-depth is maintained with respect to water makeup and decay heat removal by remaining in Mode 3. The existing end state remains unchanged for conditions involving any suppression chamber-to-drywell vacuum breakers that are stuck open, as established by new Condition D.

The NRC staff has noted that the licensee's proposed changes to the LCO Conditions and associated Required Actions are numbered differently from those shown in TSTF-423, however, the specific LCO requirements are similar to those in TSTF-423. Therefore, the changes are acceptable.

3.3.7 LCO 3.6.2.3: Residual Heat Removal (RHR) Suppression Pool Cooling

Some means must be provided to remove heat from the suppression pool so that the temperature inside the primary containment remains within design limits. This function is provided by two redundant RHR suppression pool cooling subsystems.

LCO: Two RHR suppression pool cooling subsystems shall be OPERABLE.

Condition Requiring Entry into End State: If one RHR suppression pool cooling subsystem is inoperable (Condition A), it must be restored to operable status within 7 days (Required Action A.1). If two RHR suppression pool cooling subsystems are inoperable (Condition B), restore one RHR suppression pool cooling subsystem to OPERABLE status within 8 hours. If the RHR suppression pool cooling subsystem cannot be restored to operable status within the allotted time (Condition C), the plant must be placed in Mode 3 within 12 hours (Required Action C.1), and in Mode 4 within 36 hours (Required Action C.2).

Modification for End State Required Actions: Required Action C.2 is deleted allowing the plant to stay in Mode 3 while completing repairs. Condition B and Required Action B.1 are retained for one RHR suppression pool cooling subsystem inoperable. A new Condition D is added with Required Actions D.1 and D.2, identical to existing Condition C, with Required Actions C.1 and C.2, to maintain existing requirements unchanged for two RHR suppression pool cooling subsystems inoperable (Condition C). A Note is added to the TS Required Action B.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The BWROG completed a comparative PRA evaluation of the core damage risks of operation in the current end state versus operation in the Mode 3 end state. The results described in TR NEDC-32988-A (Reference 1) and as evaluated by the NRC staff in the associated SE (Reference 5), indicated that the core damage risks while operating in Mode 3 (assuming the individual failure conditions) are lower or comparable to the current end state. One loop of the RHR suppression pool cooling system is sufficient to accomplish the required safety function. By remaining in Mode 3, HPCI, RCIC, and the power conversion system (condensate/feedwater) remain available for water makeup and decay heat removal. Additionally, the plant EOPs direct the operators to take control of the depressurization function if low pressure injection/spray are needed for RCS makeup and cooling. Therefore, the NRC staff finds this change to be acceptable because defense-in-depth is improved with respect to water makeup and decay heat removal by remaining in Mode 3.

3.3.8 LCO 3.6.2.4: Residual Heat Removal (RHR) Suppression Pool Spray System

Following a DBA, the RHR suppression pool spray system removes heat from the suppression chamber airspace. A minimum of one RHR suppression pool spray subsystem is required to

mitigate potential bypass leakage paths from the drywell and maintain the primary containment peak pressure below the design limits.

LCO: Two RHR suppression pool spray subsystems shall be OPERABLE.

Condition Requiring Entry into End State: If one RHR suppression pool spray subsystem is inoperable (Condition A), it must be restored to operable status within 7 days (Required Action A.1). If two RHR suppression pool spray subsystems are inoperable (Condition B), one of them must be restored to operable status within 8 hours (Required Action B.1). If the RHR suppression pool spray system cannot be restored to operable status within the allotted time, the plant must be placed in Mode 3 within 12 hours (Required Action C.1) and in Mode 4 within 36 hours (Required Action C.2).

Modification for End State Required Actions: Required Action C.2 is deleted allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action C.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment:

The main function of the RHR suppression spray system is to remove heat from the suppression chamber so that the pressure and temperature inside primary containment remain within analyzed design limits. The RHR suppression spray system was designed to mitigate potential effects of a postulated DBA, that is a large LOCA which is assumed to occur concurrently with the most limiting single failure and conservative inputs, such as for initial suppression pool water volume and temperature. Under the conditions assumed in the DBA, steam blown down from the break could bypass the suppression pool and end up in the suppression chamber air space and the RHR suppression spray system could be needed to condense such steam so that the pressure and temperature inside primary containment remain within analyzed design basis limits. However, the frequency of a DBA is very small and the containment has considerable margin to failure above the design limits. For this reason, the unavailability of one or both RHR suppression spray subsystems has no significant impact on CDF or LERF, even for accidents initiated during operation at power. Therefore, it is very unlikely that the RHR suppression spray system will be challenged to mitigate an accident occurring during power operation. This probability becomes extremely unlikely for accidents that would occur during a small fraction of the year (less than three days) during which the plant would be in Mode 3 (associated with lower initial energy level and reduced decay heat load as compared to power operation) to repair the failed RHR suppression spray system.

Section 6 of the NRC staff's SE of TR NEDC-32988-A (Reference 5) summarizes the NRC staff's risk basis for approval of Topical Report Section (TRS) 4.5.1.11 and LCO 3.6.2.4, "Residual Heat Removal (RHR) Suppression Pool Spray." The basis for staying in Mode 3 instead of going to Mode 4 to repair the RHR suppression pool spray system (one or both trains) is also supported by defense-in-depth considerations. Section 6.2 of the staff's evaluation (Reference 5) makes a comparison between the current (Mode 4) and the proposed (Mode 3) end state, with respect to the means available to perform critical functions (i.e., functions contributing to the defense-in-depth philosophy) whose success is needed to prevent core damage and containment failure, and to mitigate radiation releases.

In addition, the probability of a DBA (large break LOCA) is much smaller during shutdown as compared to power operation. A DBA in Mode 3 would be considerably less severe than a DBA occurring during power operation since Mode 3 is associated with lower initial energy level and reduced decay heat load. Under these extremely unlikely conditions, an alternate method that can be used to remove heat from the primary containment (in order to keep the pressure and temperature within the analyzed design basis limits) is containment venting. For more realistic accidents that could occur in Mode 3, several alternate means are available to remove heat from the primary containment, such as the RHR system in the suppression pool cooling mode and the containment spray mode.

The risk and defense-in-depth arguments, used according to the "integrated decision-making" process of RGs 1.174 and 1.177, support the conclusion that Mode 3 is as safe as Mode 4 (if not safer) for repairing an inoperable RHR suppression spray system.

3.3.9 LCO 3.6.4.1: Secondary Containment

Following a DBA, the function of the secondary containment is to contain, dilute, and stop radioactivity (mostly fission products) that may leak from primary containment. Its leak tightness is required to ensure that the release of radioactivity from the primary containment is restricted to those leakage paths and associated leakage rates assumed in the accident analysis and that fission products entrapped within the secondary containment structure will be treated by the standby gas treatment system prior to discharge to the environment.

LCO: The secondary containment shall be OPERABLE.

Condition Requiring Entry into End State: If the secondary containment is inoperable due to one railroad bay access door inoperable, it must be restored to operable status within 7 days (Required Action A.1). If the secondary containment is inoperable in Modes 1, 2, or 3 for reasons other than Condition A, it must be restored to operable status within 4 hours . If it cannot be restored to operable status within the allotted time, the plant must be placed in Mode 3 within 12 hours (Required Action C.1), and in Mode 4 within 36 hours (Required Action C.2).

Modification for End State Required Actions: Required Action C.2 is deleted allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action C.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: This LCO entry condition does not include gross leakage through an unisolable release path. The BWROG concluded (Reference 1) that previous generic PRA work related to Appendix J requirements has shown that containment leakage is not risk significant. The primary containment and all other primary and secondary containment-related functions would still be operable, including the standby gas treatment system, thereby minimizing the likelihood of an unacceptable release. By remaining in Mode 3, HPCI, RCIC, and the power conversion system (condensate/feedwater) remain available for water makeup and decay heat removal. Additionally, the plant EOPs direct the operators to take control of the depressurization function if low pressure injection/spray are needed for RCS makeup and cooling. Therefore, the NRC staff finds this change to be acceptable because defense-in-depth is improved with respect to water makeup and decay heat removal by remaining in Mode 3.

The licensee's Variation/Deviation #4 states:

> Condition C in the Fermi TS is proposed to be revised per TSTF-423; however, it applies when Conditions A or B are not met." The licensee further states, "The Standard TS, Condition A, is for secondary containment inoperable. Fermi TS has Condition A for secondary containment inoperable due to one railroad bay access door inoperable; and Condition B for secondary containment inoperable for reasons other than Condition A.

The NRC staff has noted that the licensee's proposed changes to the LCO Conditions and associated Required Actions are numbered differently from those shown in TSTF-423, however, the specific LCO requirements are similar. Therefore, the changes are acceptable.

3.3.10 LCO 3.6.4.3: Standby Gas Treatment (SGT) System

The function of the SGT system is to ensure that radioactive materials that leak from the primary containment into the secondary containment following a DBA are filtered and adsorbed prior to exhausting to the environment.

LCO: Two SGT subsystems shall be OPERABLE.

Condition Requiring Entry into End State: If one SGT subsystem is inoperable, it must be restored to operable status within 7 days (Required Action A.1). If the SGT subsystem cannot be restored to operable status within the allotted time, the plant must be placed in Mode 3 within 12 hours (Required Action B.1) and in Mode 4 within 36 hours (Required Action B.2). In addition, if two SGT subsystems are inoperable in Mode 1, 2, or 3, LCO 3.0.3 must be entered immediately (Required Action D.1).

Modification for End State Required Actions: Required Action B.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. Required Action D.1 is changed to "Be in Mode 3" with a Completion Time of "12 hours." A Note is added to the TS Required Actions B.1 and D.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The unavailability of one or both SGT subsystems has no impact on CDF or LERF, irrespective of the mode of operation at the time of the accident. Furthermore, the challenge frequency of the SGT system (i.e., the frequency with which the system is expected to be challenged to mitigate offsite radiation releases resulting from materials that leak from the primary to the secondary containment above TS limits) is less than 1.0E-6/yr. Consequently, the conditional probability that this system will be challenged during the repair time interval while the plant is at either the current or the proposed end state (i.e., Mode 4 or Mode 3, respectively) is less than 1.0E-8. This probability is considerably smaller than probabilities considered "negligible" in RG 1.177 for much higher consequence risks, such as large early release.

Section 6 of the NRC staff's SE of TR NEDC-32988-A (Reference 5) evaluates the NRC staff's risk basis for approval of TRS 4.5.1.13, TRS 4.5.2.11, and LCO 3.6.4.3, "Standby Gas

Treatment (SGT) System." According to this evaluation which applies to BWR-4 design, (Fermi 2 is a BWR-4 facility), staying in Mode 3 instead of going to Mode 4 to repair the SGT system (one or both trains) is also supported by defense-in-depth considerations. Section 6.2 of the staff's SE for the TR (Reference 5) details a comparison between the Mode 3 and the Mode 4 end state, with respect to the means available to perform critical functions (i.e., functions contributing to the defense-in-depth philosophy) whose success is needed to prevent core damage and containment failure, and to mitigate radiation releases. The risk and defense-in-depth arguments, used according to the "integrated decision-making" process of RGs 1.174 and 1.177, support the conclusion that Mode 3 is as safe as Mode 4 for repairing an inoperable SGT system. This change is, therefore, acceptable.

3.3.11 LCO 3.7.1: Residual Heat Removal Service Water (RHRSW) System

The RHRSW system is designed to provide cooling water for the RHR system heat exchangers, which are required for safe shutdown following a normal shutdown or DBA or transient.

LCO: Two RHRSW subsystems shall be OPERABLE.

Condition Requiring Entry into End State: If the LCO cannot be met, the following actions must be taken for the listed conditions:

(a) If one RHRSW pump is inoperable (Condition A), it must be restored to operable status within 30 days (Required Action A.1).

(b) If one RHRSW pump in each subsystem is inoperable (Condition B), one RHRSW pump must be restored to operable status within seven days (Required Action B.1).

(c) If one RHRSW subsystem is inoperable for reasons other than Condition A (Condition C), the RHRSW subsystem must be restored to operable status within seven days (Required Action C.1).

(d) If the required action and associated completion time cannot be met within the allotted time (Condition E), the plant must be placed in Mode 3 within 12 hours (Required Action E.1) and in Mode 4 within 36 hours (Required Action E.2). {NOTE: Condition D addresses both RHRSW subsystems inoperable for reasons other than Condition B, and its Required Action D.1 is not affected by this change.}

Modification for End State Required Actions: Renumber Conditions D (and Required Action D.1) and E (and Required Actions E.1 and E.2) to Conditions E (and Required Action E.1) and F (and Required Actions F.1 and F.2), respectively. Modify new Condition F to address new Condition E, which maintains the existing requirements with respect to both RHR subsystems being inoperable for reasons other than Condition B. Add a new Condition D, which establishes requirements for existing Conditions A, B, and C, that are similar to existing Condition E but without Required Action E.2. A Note is added to the TS Required Action D.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The BWROG performed a comparative PRA evaluation of the core damage risks when operating in the current end state versus the proposed Mode 3 end state. The results indicated that the core damage risks while operating in Mode 3 (assuming the individual failure conditions) are lower or comparable to the current end state. By remaining in Mode 3, HPCI, RCIC, and the power conversion system (condensate/feedwater) remain available for water makeup and decay heat removal. Additionally, the EOPs direct the operators to take control of the depressurization function if low pressure injection/spray is needed for RCS makeup and cooling. Therefore, the change is acceptable because defense-in-depth is improved with respect to water makeup and decay heat removal by remaining in Mode 3, and the required safety function can still be performed with the RHRSW subsystem components that are still operable.

3.3.12 LCO 3.7.3: Control Room Emergency Filtration (CREF) System

The CREF system provides a radiologically controlled environment from which the plant can be safely operated following a DBA.

LCO: The CREF System shall be OPERABLE.

Condition Requiring Entry into End State: If one CREF subsystem is inoperable, it must be restored to operable status within seven days (Required Action A.1). If two CREF subsystems are inoperable due to inoperable control room boundary in MODE 1, 2, or 3, the control room boundary must be restored to operable status within 24 hours (Required Action B.1). If the CREF subsystems cannot be restored to operable status within the allotted time, the plant must be placed in Mode 3 within 12 hours (Required Action C.1) and in Mode 4 within 36 hours (Required Action C.2). If two CREF subsystems or a non-redundant component or portion of the CREF System is inoperable in Mode 1, 2, or 3, for reasons other than Condition B, LCO 3.0.3 must be entered immediately (Required Action E.1).

Modification for End State Required Actions: Delete Required Action C.2, and change Required Action E.1 to "Be in Mode 3" with a Completion Time of "12 hours." A Note is added to the TS Required Actions C.1 and E.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The unavailability of one or both CREF subsystems has no significant impact on CDF or LERF, irrespective of the mode of operation at the time of the accident. Furthermore, the challenge frequency of the CREF system (i.e., the frequency with which the system is expected to be challenged to provide a radiologically controlled environment in the main control room following a DBA that leads to core damage and leaks of radiation from the containment that can reach the control room) is less than 1.0E-6/yr. Consequently, the conditional probability that this system will be challenged during the repair time interval while the plant is at either the current or the proposed end state (i.e., Mode 4 or Mode 3, respectively) is less than 1.0E-8. This probability is considerably smaller than probabilities considered negligible in RG 1.177 for much higher consequence risks, such as large early release.

Section 6 of the NRC staff's SE of TR NEDC-32988-A (Reference 5) summarizes the staff's risk basis for approval of TRS 4.5.1.16, and LCO 3.7.4, "Main Control Room Environmental Control (MCREC) System," which is similar to the CREF System at Fermi 2. The basis for staying in Mode 3 instead of going to Mode 4 to repair the MCREC system (one or both trains) is also

supported by defense-in-depth considerations. Section 6.2 of the staff's SE of the TR (Reference 5) makes a comparison between the Mode 3 and the Mode 4 end state with respect to the means available to perform critical functions (i.e., functions contributing to the defense-in-depth philosophy) whose success is needed to prevent core damage and containment failure, and to mitigate radiation releases. The risk and defense-in-depth arguments, used according to the integrated decision-making process of RGs 1.174 and 1.177, support the conclusion that Mode 3 is as safe as Mode 4 for repairing an inoperable MCREC or CREF system.

The licensee's Variation/Deviation #6 states:

> An obsolete footnote is proposed to be deleted.

The licensee further states:

> The footnote on the current Fermi TS, page 3.7-6, describes a onetime allowed extension of the completion time that is no longer applicable; therefore, the footnote and the associated asterisk are proposed to be deleted.

The licensee's above deviation clarifies its plant-specific Specification, and has no adverse effect on the NRC's assessment for the subject change. Therefore, the change is acceptable.

3.3.13 LCO 3.7.4: Control Center Air Conditioning (AC) System

The control center AC system provides temperature control for the control room following control room isolation during accident conditions.

LCO: Two control center AC subsystems shall be OPERABLE.

Condition Requiring Entry into End State: If one control center AC subsystem is inoperable, it must be restored to operable status within 30 days (Required Action A.1). If two control center AC subsystems are inoperable, verify control room area temperature < 90 °F once per 4 hours and restore one control center AC subsystem to operable status within 72 hours (Required Actions B.1 and B 2). If the required actions and associated completion times cannot be met (Condition C), the plant must be placed in Mode 3 within 12 hours (Required Action C.1) and in Mode 4 within 36 hours (Required Action C.2).

Modification for End State Required Actions: Required Action C.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action C.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The unavailability of one or both AC subsystems has no significant impact on CDF or LERF, irrespective of the mode of operation at the time of the accident. Furthermore, the challenge frequency of the AC system (i.e., the frequency with which the system is expected to be challenged to provide temperature control for the control room following control room isolation following a DBA that leads to core damage) is less than 1.0E-6/yr. Consequently, the conditional probability that this system will be challenged during the repair time interval while the plant is at either the current or the proposed end state (i.e., Mode 4 or Mode 3, respectively) is

less than 1.0E-8. This probability is considerably smaller than probabilities considered "negligible" in RG 1.177 for much higher consequence risks, such as large early release.

Section 6 of the NRC staff's SE of TR NEDC-32988-A (Reference 5) summarizes the staff's risk basis for approval of TRS 4.5.2.15 and LCO 3.7.4, "Control Room Air Conditioning (CRAC) System." (CRAC is similar to the Fermi's Control Center AC System.) The basis for staying in Mode 3 instead of going to Mode 4 to repair the CRAC system (one or both trains) is supported by defense-in-depth considerations. Section 6.2 of the staff's SE (Reference 5) makes a comparison between the Mode 3 and the Mode 4 end states, with respect to the means available to perform critical functions (i.e., functions contributing to the defense-in-depth philosophy) whose success is needed to prevent core damage and containment failure, and to mitigate radiation releases. The risk and defense-in-depth arguments, used according to the "integrated decision-making" process of RGs 1.174 and 1.177, support the conclusion that Mode 3 is as safe as Mode 4 for repairing an inoperable CRAC system.

The licensee's Variation/Deviation #7 states:

> The proposed change is consistent with TSTF-423; however, it is applied to Condition C which is entered when Conditions A or B are not met. The Fermi TS incorporates TSTF-477; therefore, the proposed Fermi TS change reflects the TSTF-423 change as it applies after TSTF-477 has been incorporated.

The licensee further states:

> The Standard TS, Condition A, is for one [control room AC] subsystem inoperable. This Condition is included in the Fermi TS. The change in TSTF-423 when Required Action and Completion Time of Condition A are not met is applied with no variation.
>
> Condition D of the Standard TS requires entering LCO 3.0.3 immediately for two [control room AC] subsystems inoperable. The Fermi TS Condition B is for two control center AC subsystems inoperable. It requires verifying control room area temperature < 90°F once per 4 hours and restoring one subsystem to operable within 72 hours. The change to the Standard TS in TSTF-423 requires being in Mode 3 within 12 hours of entering Condition D. This change is applied to the Fermi TS when Required Action and Completion Time of Condition B are not met.

The NRC approved TSTF-477 (ADAMS Accession No. ML070510176) relates changes to the Standard Technical Specifications (STS), Section 3.7.5 (STS 3.7.4 for BWR/6), "Control Room Air Conditioning (AC) System" for NUREG-1433 (BWR/4) and NUREG-1434 (BWR/6), Rev. 3.0. The changes add an Action Statement to LCO 3.7.5 for BWR/4 and LCO 3.7.4 for BWR/6. The new Action Statement allows a finite time to restore one control room AC subsystem to operable status and requires verification that control room temperature remains < 90°F every 4 hours. Fermi's (a BWR/4 reactor type) current TS LCO 3.7.4 reflects the TSTF-477 change.

The licensee's above deviation clarifies its plant-specific Specification requirement for a CONDITION when two control center AC subsystems are inoperable. The licensee's proposed

change is consistent with the approved TSTF-423 as well as Revision 4 of NUREG-1433 for BWR/4 plants for a such CONDITION. Since the required safety systems (as discussed above) would remain available to perform critical functions (i.e., functions contributing to the defense-in-depth philosophy), the licensee's deviation has no adverse effect on the NRC's assessment for the subject change. Therefore, the change is acceptable.

3.3.14 LCO 3.7.5: Main Condenser Offgas (MCOG)

The offgas from the main condenser normally includes radioactive gases. The gross gamma activity rate is controlled to ensure that accident analysis assumptions are satisfied and that offsite dose limits will not be exceeded during postulated accidents. The MCOG gross gamma activity rate is an initial condition of a DBA that assumes a gross failure of the MCOG system pressure boundary.

LCO: The gross radioactivity rate of the noble gases measured at the discharge of the 2.2 minute delay piping shall be ≤ 340 mCi/second after decay of 30 minutes.

Condition Requiring Entry into End State: If the gross radioactivity rate of the noble gases in the main condenser offgas is not within limits (Condition A), the radioactivity rate of the noble gases must be restored to within limits within 72 hours (Required Action A.1). If the Required Action and associated Completion Time cannot be met (Condition B), one of the following must occur:

a. All main steam lines must be isolated within 12 hours (Required Action B.1),

or

b. The steam jet air ejector (SJAE) must be isolated within 12 hours (Required Action B.2),

or

c. The plant must be placed in Mode 3 within 12 hours (Required Action B.3.1) and in Mode 4 within 36 hours (Required Action B.3.2).

Modification for End State Required Actions: Required Action B.3.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. Required Action B.3.1 is renumbered to Required Action B.3 and a Note is added to the TS Required Action B.3 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: The failure to maintain the gross gamma activity rate of the noble gases in the main condenser offgas (MCOG) within limits has no significant impact on CDF or LERF, irrespective of the mode of operation at the time of the accident. Furthermore, the challenge frequency of the MCOG system (i.e., the frequency with which the system is expected to be challenged to mitigate offsite radiation releases following a DBA) is less than 1.0E-6/yr. Consequently, the conditional probability that this system will be challenged during the repair time interval while the plant is at either the current or the proposed end state (i.e., Mode 4 or Mode 3, respectively) is less than 1.0E-8. This probability is considerably smaller than probabilities considered "negligible" in RG 1.177 for much higher consequence risks, such as large early release.

Section 6 of the NRC staff's SE of TR NEDC-32988-A (Reference 5) summarizes the staff's risk basis for approval of TR Section 4.5.1.18 and LCO 3.7.6, "Main Condenser Offgas." Staying in Mode 3 instead of going to Mode 4 to repair the MCOG system (one or both trains) is supported by defense-in-depth considerations. Section 6.2 of the staff's SE (Reference 5) makes a comparison between the Mode 3 and the Mode 4 end states, with respect to the means available to perform critical functions (i.e., functions contributing to the defense-in-depth philosophy) whose success is needed to prevent core damage and containment failure, and to mitigate radiation releases. The risk and defense-in-depth arguments, used according to the "integrated decision-making" process of RGs 1.174 and 1.177, support the conclusion that Mode 3 is as safe as Mode 4 for repairing an inoperable MCOG system. Therefore, the change is acceptable.

3.3.15 LCO 3.8.1: AC Sources - Operating

The purpose of the AC electrical system is to provide during all situations the power required to put and maintain the plant in a safe condition and prevent the release of radioactivity to the environment. Fermi 2 Class 1E AC Electrical Power Distribution System AC sources consist of the offsite power sources, and the onsite standby power sources EDGs 11, 12, 13, and 14). As required by 10 CFR 50, Appendix A, General Design Criterion 17, the design of the AC electrical power system provides independence and redundancy to ensure an available source of power to the Engineered Safety Features (ESF) systems.

Fermi's offsite power is supplied to the 120 kV and 345 kV switchyards from the transmission network by five transmission lines. From the 120 kV switchyard, an electrically and physically separated circuit provides AC power, through system service transformer 64, to 4.16 kV ESF buses 64B and 64C. From the 345 kV switchyard, an electrically and physically separated circuit provides AC power through system service transformer 65 to 4.16 kV buses 65E and 65F. In the event of a loss of normal power, the ESF electrical loads are automatically connected to the EDGs in sufficient time to provide for safe reactor shutdown and to mitigate the consequences of a DBA such as a LOCA.

LCO: The following AC electrical power sources shall be OPERABLE:

a. Two qualified circuits between the offsite transmission network and the onsite Class1E AC Electric Power Distribution System; and

b. Two emergency diesel generators (EDGs) per division.

Condition Requiring Entry into End State: The plant operators must bring the plant to Mode 3 within 12 hours (Required Action G.1) and Mode 4 within 36 hours (Required Action G.2) following the sustained inoperability of either or both required offsite circuits; one or two required EDGs; or one required offsite circuit and one or both required EDGs.

Modification for End State Required Actions: Required Action G.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. The plant will remain in Mode 3 (hot shutdown) (Required Action G.1). A Note is added to the TS Required Action G.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: Entry into any of the conditions for the AC power sources implies that the AC power sources have been degraded and the single-failure protection for the safe shutdown equipment may be ineffective. Consequently, as specified in TS 3.8.1 at present, the plant operators must bring the plant to Mode 4 when the required action is not completed by the specified time for the associated action.

The BWROG performed a comparative PRA evaluation (Reference 1) of the core damage risks of operation in the current end state and in the Mode 3 end state. Events initiated by the loss of offsite power are dominant contributors to CDF in most BWR PRAs, and the high pressure core cooling systems (RCIC and HPCI) play a major role in mitigating these events. The conclusion described in NRC staff's SE of TR NEDC-32988-A (Reference 5) on BWROG's PRA evaluation, indicates that the core damage risks are lower in Mode 3 than in Mode 4 for inoperable AC power sources. Going to Mode 4 for one inoperable AC power source would cause loss of high pressure RCIC system and loss of the power conversion system (condenser/feedwater), and would require activating the RHR system. In addition, plant EOPs direct the operator to take control of the depressurization function if low pressure injection/spray systems are needed for RPV water makeup and cooling.

The licensee's Variation/Deviation #8 states:

> The proposed change is consistent with TSTF-423; however, the Conditions in the Fermi TS are numbered differently from the Standard TS Conditions.

The licensee further states:

> The Fermi TS contains all the Conditions in the Standard TS with the exception of the optional Condition F for one automatic load sequencer inoperable. The Fermi TS also includes Condition B for both EDGs in one division inoperable. The associated Required Actions and Completion Times are consistent with those for Condition B of the Standard TS (One EDG inoperable).
>
> The justification provided in the topical report and model SE for this change is also applicable to Condition B of the Fermi TS.

The NRC concurs with the licensee's statement that the Conditions in the Fermi TS are numbered differently from the Standard TS Conditions and the proposed change is consistent with TSTF-423, therefore, the licensee's deviation has no adverse impact on the NRC's assessment for the subject change. Therefore, the change is acceptable.

3.3.16 LCO 3.8.4: Direct Current (DC) Sources - Operating

The purpose of the DC power system is to provide a reliable source of DC power for both normal and abnormal conditions. It must supply power in an emergency for an adequate length of time until normal supplies can be restored.

LCO: For Modes 1, 2 and 3, the Division I and Division II DC electrical power subsystems shall be OPERABLE.

Condition Requiring Entry into End State: The plant operators must bring the plant to Mode 3 within 12 hours and Mode 4 within 36 hours if Required Action and Associated Completion Time not met.

Modification for End State Required Actions: The TS change is to remove the requirement to place the plant in Mode 4 for Required Actions and Completion Times for Condition A or B not met. Required Action C.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action C.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: If one of the DC electrical power subsystems is inoperable, the remaining DC electrical power subsystems have the capacity to support a safe shutdown and to mitigate an accident condition. The BWROG performed a comparative PRA evaluation (Reference 1) of the core damage risks of operation in the current end state and in the Mode 3 end state, with one DC system inoperable. Events initiated by the loss of offsite power are dominant contributors to core damage frequency in most BWR PRAs, and the high pressure core cooling systems, RCIC and HPCI, play a major role in mitigating these events. The NRC staff's conclusion, described in the SE for TR NEDC-32988-A (Reference 5) on BWROG's PRA evaluation, indicates that the core damage risks are lower in Mode 3 than in Mode 4. Going to Mode 4 for one inoperable DC power source would cause loss of the RCIC system, and loss of the power conversion system (condenser/feedwater), and would require activating the RHR system. In addition, plant EOPs direct the operator to take control of the depressurization function if low pressure injection/spray systems are needed for RPV water makeup and cooling. Based on the low probability of loss of the DC power and the number of systems available in Mode 3, the NRC staff concludes in the SE for the BWR topical report that the risk of staying in Mode 3 are approximately the same or in some cases lower than the risk of going to the Mode 4 end state.

The licensee's Variation/Deviation #10 states:

> Conditions in the Fermi TS are numbered differently from the Standard TS Conditions.

The licensee further states:

> Optional Conditions in the Standard TS are not included in the Fermi TS.

The NRC concurs with the licensee's statement that Conditions in the Fermi TS are numbered differently from the Standard TS Conditions, therefore, the licensee's deviation has no adverse impact on the NRC's assessment for the subject change. Therefore, the change is acceptable.

3.3.17 LCO 3.8.7: Distribution Systems - Operating

At Fermi 2, the onsite Class 1E AC and DC electrical power distribution system is divided into redundant and independent AC and DC electrical power distribution subsystems. The primary AC distribution system consists of two divisions with four 4.16 kV ESF buses each. Each division is normally supplied from one of the two qualified offsite sources, as well as backup power from two dedicated onsite EDG sources. During a loss of the normal offsite power source to the 4.16 kV ESF buses, the onsite EDGs supply power to the 4.16 kV ESF buses.

The secondary AC distribution system includes 480 V motor control centers (MCCs) and 120 V power panels, and associated transformers, to lower voltage ESF equipment, which are not governed by the requirements of LCO 3.8.7.

There are two independent 130/260 VDC electrical power distribution subsystems, Division I and Division II (which includes 260 VDC MCC 2PA-1 and associated 130 VDC distribution cabinet 2PA-2 (Division I), and 260 VDC MCC 2PB-1 and associated 130 VDC distribution cabinet 2PB-2 (Division II)), that support the necessary power for ESF functions.

LCO: For Modes 1, 2, and 3, the AC and DC electrical power distribution subsystems as specified within the LCO, shall be OPERABLE.

Condition Requiring Entry into End State: The plant operators must bring the plant to Mode 3 within 12 hours and Mode 4 within 36 hours (Condition C) following the sustained inoperability of one or more required AC (Condition A) or DC (Condition B) electrical power distribution subsystems a for a period of 8 hours (Condition A) and 2 hours (Condition B), respectively (with a maximum 16 hour CT limit from initial discovery to failure to meet the LCO, to preclude being in the LCO indefinitely).

Modification for End State Required Actions: Required Action C.2 is deleted, allowing the plant to stay in Mode 3 while completing repairs. A Note is added to the TS Required Action C.1 stating that LCO 3.0.4.a is not applicable when entering Mode 3.

Assessment: If one of the AC/DC subsystems is inoperable, the remaining AC/DC subsystems have the capacity to support a safe shutdown and to mitigate an accident condition. The BWROG performed a comparative PRA evaluation (Reference 1) of the core damage risks of operation in the current end state and in the Mode 3 end state, with one of the AC/DC subsystems inoperable. Events initiated by the loss of offsite power are dominant contributors to CDF in most BWR PRAs, and the high pressure core cooling systems, RCIC and HPCI, play a major role in mitigating these events. The NRC staff's conclusion, described in the SE for TR NEDC-32988-A (Reference 5) on BWROG's PRA evaluation, indicates that the core damage risks are lower in Mode 3 than in Mode 4. Going to Mode 4 for one inoperable AC/DC subsystem would cause loss of the RCIC system, and loss of the power conversion system (condenser/feedwater), and would require activating the RHR system. In addition, plant EOPs direct the operator to take control of the depressurization function if low pressure injection/spray systems are needed for RPV water makeup and cooling.

The licensee's Variation/Deviation #10 states:

> Conditions in the Fermi TS are numbered differently from the Standard TS Conditions.

The licensee further states:

> Optional Conditions in the Standard TS are not included in the Fermi TS.

The licensee's deviation to this requirement has no adverse impact on the NRC's assessment for the subject change. Therefore, the change is acceptable.

The licensee's letter provides the following Regulatory Commitments:

REGULATORY COMMITMENTS	DUE DATE/EVENT
DTE will follow the guidance established in Section 11 of NUMARC 93-01, "Industry Guidance for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants" Nuclear Management and Resource Council, Revision 3, July 2000.	Ongoing
DTE will follow the guidance established in TSTF-IG-05- 02, Revision 2, "Implementation Guidance for TSTF-423, Revision 1, Technical Specifications End States, NEDC-32988-A."	To be implemented with amendment

3.4 Overall Assessment of the Proposed Changes

Based upon the above assessments, and because the time spent in Mode 3 to perform the repair on any of the systems described above would be infrequent and limited, and in light of defense-in-depth considerations (discussed above and in TR NEDC-32988-A (Reference 1), and as evaluated by the NRC staff's associated SE (Reference 5)), the proposed changes to the Fermi 2 TS described above are acceptable.

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 and 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 22565). 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.

7.0 REFERENCES

1. NEDC-32988-A, Revision 2, "Technical Justification to Support Risk-Informed Modification to Selected Required Action End States for BWR Plants," December 2002 (ADAMS Accession No. ML030170060).

2. *Federal Register*, Vol. 58, No. 139, p. 39136, "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Plants," July 22, 1993.

3. Title 10 of the *Code of Federal Regulations,* Section 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants."

4. Regulatory Guide 1.182, "Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants," May 2000 (ADAMS Accession No. ML003699426).

5. NRC Safety Evaluation for Topical Report NEDC-32988, Revision 2, September 27, 2002. (ADAMS Accession No. ML022700603).

6. NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Nuclear Management and Resource Council, Revision 3, July 2000.

7. TSTF-423, Revision 1, "Technical Specifications End States, NEDC-32988-A." (ADAMS Accession No. ML093570241)

8. TSTF-IG-05-02, Implementation Guidance for TSTF-423, Revision 0, "Technical Specifications End States, NEDC-32988-A," September 2005 (ADAMS Accession No. ML052700156)

9. Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decision Making on Plant Specific Changes to the Licensing Basis," USNRC, August 1998. (ADAMS Accession No. ML003740133).

10. Regulatory Guide 1.177, "An Approach for Pant Specific Risk-Informed Decision Making: Technical Specifications," USNRC, August 1998. (ADAMS Accession No. ML003740176).

11. Fermi 2, License Amendment Request for Adoption of Technical Specifications Task Force (TSTF) Traveler TSTF-423, Revision 1, "Technical Specifications End States, NEDC-32988-A," Using the Consolidated Line Item Improvement Process, dated January 11, 2013 (ADAMS Accession No. ML13014A125).

Principal Contributor: R. Grover, NRR/DSS/STSB
T. Wengert, NRR/DORL/LPL3-1

Date: January 17, 2014

January 17, 2014

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 ADOPT TSTF-423, REVISION 1, "TECHNICAL SPECIFICATIONS END STATES, NEDC-32988-A" (TAC NO. MF0498)

Dear Mr. Plona:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 194 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 January 11, 2013 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13014A125).

The amendment revises the Fermi 2 TSs to risk-inform requirements regarding selected Required Action end states. Additionally, it would modify the TS Required Actions with a Note prohibiting the use of limiting condition for operation (LCO) 3.0.4.a when entering the preferred end state (Mode 3) on startup. The changes are consistent with NRC-approved Technical Specification Task Force (TSTF) traveler TSTF-423, Revision 1, "Technical Specifications End States, NEDC-32988-A," dated December 22, 2009 (ADAMS Accession No. ML093570241).

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/
Thomas J. Wengert, Senior 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.194 to NPF-43
2. Safety Evaluation

cc w/encls: Distribution via ListServ

DISTRIBUTION:
PUBLIC LPL3-1 R/F
RidsAcrsAcnw_MailCTR Resource
RidsNrrDssStsb Resource
RidsNrrLAMHenderson Resource
RidsRgn3MailCenter Resource
RidsNrrDorlDpr Resource
RidsNrrDorlLpl3-1 Resource
RidsNrrPMFermi2 Resource
RGrover, NRR

ADAMS Accession No: ML13309A594 ***via memorandum dated 10/3/13**

OFFICE	LPL3-1/PM	LPL3-1/LA	DSS/STSB/BC	OGC	LPL3-1/BC	LPL3-1/PM
NAME	TWengert	MHenderson	RElliott*	AGhosh NLO w/comments	RCarlson	TWengert
DATE	01/07/14	01/08/14	12/20/13 reconcur	12/31/13	01/17/14	01/17/14

OFFICIAL RECORD COPY