

October 25, 2004

Mr. William T. O'Connor, Jr.  
Vice President - Nuclear Generation  
Detroit Edison Company  
6400 North Dixie Highway  
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT RE: ADDITION OF A LICENSE  
CONDITION AND DELETION OF CONTROL ROOM EMERGENCY FILTRATION  
SYSTEM TECHNICAL SPECIFICATION SURVEILLANCE REQUIREMENT  
3.7.3.6 (TAC NO. MC3922)

Dear Mr. O'Connor:

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Amendment No. 162 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment consists of changes to the Technical Specifications and the addition of a license condition in response to your application dated July 30, 2004.

The amendment adds License Condition 2.C.(22) requiring an integrated tracer gas test of the control room envelope, and deletes Surveillance Requirement 3.7.3.6, which requires verification that unfiltered inleakage from control room emergency filtration system duct work outside the control room envelope is within limits.

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

Sincerely,

**/RA/**

David P. Beaulieu, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures: 1. Amendment No. 162 to NPF-43  
2. Safety Evaluation

cc w/encls: See next page

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DATE	10/22/04	10/22/04	10/13/04	9/28/04	10/21/04	10/22/04

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Fermi 2

cc:

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Detroit Edison Company  
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December 2002

DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 162

License No. NPF-43

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by the Detroit Edison Company (the licensee) dated July 30, 2004, 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. 162, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

In addition, the license is amended to add paragraph 2.C.(22) to Facility Operating License No. NPF-43 as follows:

- (22) DECo shall perform an integrated tracer gas test to measure Control Room inleakage using methods described in ASTM E741-00, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution." This test will be performed by March 31, 2005. Further periodic assessments and testing will be performed in accordance with the guidance provided in NRC Regulatory Guide 1.197, (May 2003) "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Section D, Implementation, using the six year cycle described. In accordance with the Regulatory Guide, a self assessment will be performed after three years and a periodic test after 6 years.
3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

L. Raghavan, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications and  
Operating License

Date of Issuance: October 25, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 162

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following page of Facility Operating License No. NPF-43 with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE

6

INSERT

6

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

REMOVE

3.7-7  
3.7-8  
3.7-10

INSERT

3.7-7  
3.7-8  
3.7-10

(21) The schedule for performing surveillance requirements (SRs) that are new or revised in Amendment No. 134 shall be as follows:

- For SRs that are new in this amendment, the first performance is due at the end of the first surveillance interval that begins on the date of implementation of this amendment.
- For SRs that existed prior to this amendment whose intervals of performance are being reduced, the first reduced surveillance interval begins upon completion of the first surveillance performed after implementation of this amendment.
- For SRs that existed prior to this amendment that have modified acceptance criteria, the first performance is due at the end of the first surveillance interval that began on the date the surveillance was last performed prior to the implementation of this amendment.
- For SRs that existed prior to this amendment whose intervals of performance are being extended, the first extended surveillance interval begins upon completion of the last surveillance performed prior to the implementation of this amendment.

(22) DECo shall perform an integrated tracer gas test to measure Control Room inleakage using methods described in ASTM E741-00, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution." This test will be performed by March 31, 2005. Further periodic assessments and testing will be performed in accordance with the guidance provided in NRC Regulatory Guide 1.197, (May 2003) "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Section D, Implementation, using the six year cycle described. In accordance with the Regulatory Guide, a self assessment will be performed after three years and a periodic test after 6 years. \*

**[NEXT PAGE IS PAGE 8]**

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 162 FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI 2

DOCKET NO. 50-341

## 1.0 INTRODUCTION

By application dated July 30, 2004, the Detroit Edison Company (DECo or the licensee) requested changes to the Technical Specifications (TSs) and the addition of a license condition for Fermi 2. The proposed changes would add License Condition 2.C.(22) requiring an integrated tracer gas test of the control room envelope, and would delete Surveillance Requirement (SR) 3.7.3.6, which requires verification that unfiltered inleakage from control room emergency filtration system duct work outside the control room envelope is within limits.

## 2.0 REGULATORY EVALUATION

The Nuclear Regulatory Commission (NRC) staff considered the following regulatory documents in developing its finding on this license amendment application:

10 CFR 50.2 provides the definition for the term "design bases."

10 CFR Part 50, Appendix A, General Design Criterion 19, "Control Room," provides requirements regarding the value for radiological dose to control room personnel to be used as a limiting value for design basis analyses.

NRC Generic Letter 91-18, "Information to Licensees Regarding NRC Inspection Manual Section on Resolution of Degraded and Nonconforming Conditions," provides the framework for licensees to make an operability determination and take corrective actions upon discovery of a nonconforming condition, such as when as-built equipment does not meet the design requirements specified in the Final Safety Analysis Report.

## 3.0 TECHNICAL EVALUATION

The licensee proposed revising TSs to delete SR 3.7.3.6 which requires that the license "Verify that unfiltered inleakage from [Control Room Emergency Filtration] CREF system duct work outside the Control Room envelope that is at negative pressure during accident conditions is within limits," at a frequency of every 36 months. In addition, the licensee proposed deleting footnote "#" that is associated with this 36-month frequency, as well as, deleting the reference "for performance of SR 3.7.3.6" from TS Limiting Condition for Operation (LCO) 3.7.3, Conditions D and F.

The NRC staff noted that a portion of the CREF duct work that is under negative pressure is located outside of the control room envelope. In addition, these sections of duct work use a brazed mechanical joint rather than a welded joint. The joints are sealed with a silicone sealant that can become hard and brittle and crack with age. Leakage through cracks in the sealant would enter the control room. This potential leakage would enter the control room which could increase the radiological dose received by control room personnel following a postulated accident.

SR 3.7.3.6 was implemented to provide assurance that the seals between the joints under negative pressure were intact. Although inspection and maintenance programs are performed to visually assess and repair the joint sealing, only direct testing can provide the integrity assurance. The deletion of SR 3.7.3.6 removes the requirement to directly test the integrity of these non-welded, silicone sealed, CREF duct work joints that are at negative pressure outside of the control room envelope.

To provide assurance of control room habitability integrity for unfiltered inleakage, the licensee proposed adding License Condition 2.C.(22) which states:

"DECo shall perform an integrated tracer gas test to measure Control Room inleakage using methods described in ASTM E741-00, "Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution." This test will be performed by March 31, 2005. Further periodic assessments and testing will be performed in accordance with the guidance provided in NRC Regulatory Guide 1.197, (May 2003) "Demonstrating Control Room Envelope Integrity at Nuclear Power Reactors," Section D, Implementation, using the six year cycle described. In accordance with the Regulatory Guide, a self assessment will be performed after three years and a periodic test after 6 years."

The license condition does not explicitly state the test acceptance criterion for control room inleakage. As such, the license condition also does not describe the actions that would be required if the test acceptance criterion were not met. The NRC staff has determined that the acceptance criterion for the test is the design basis value for control room inleakage used in the design-basis accident analysis, and that the test must be performed in the operating configuration(s) assumed in the design-basis accident analysis. The NRC Division of Licensing Project Management provided the following information to explain the regulatory flow path for the Fermi tracer gas testing license condition:

"The license condition will require the performance of the tracer gas test in accordance with the standard. The function of the tracer gas test is, in part, to determine the level of control room envelope in-leakage. The 10 CFR 50.2 design basis for control room envelope inleakage is established and documented in dose calculations. These values have been established in docketed correspondence.

If the tracer gas testing identifies inleakage greater than that assumed in the calculations, the CREF system may not be capable of performing its specified safety function in accordance with the Technical Specification definition of OPERABILITY. As discussed in NRC Generic Letter 91-18, licensees are obligated to thoroughly evaluate any information that potentially impacts the ability of a Technical Specification system to perform its specified safety function.

If the licensee believes that the system remains capable of performing its specified safety function (e.g., the deviation from assumed inleakage is very small and the licensee understands that the calculations contain conservatism), an operability determination can be completed in accordance with the guidance in NRC Generic Letter 91-18.

If this evaluation concludes that the system is capable of performing its specified safety function (i.e., it is OPERABLE but degraded/non-conforming), operation may continue and the degraded/non-conforming condition is resolved via the corrective action program.

If the OPERABILITY determination concludes that the CREF system is not OPERABLE or the licensee does not have an initial rationale for believing the CREF system is OPERABLE but degraded/non-conforming, then both trains of CREF would be declared in-OPERABLE and CONDITION 3.7.3.B would be entered. REQUIRED ACTION 3.7.3.B.1 would have to be completed within 24 hours. If this REQUIRED ACTION is not met REQUIRED ACTION 3.7.3.C is entered. Unless the condition can be corrected, 3.7.3.C would require that the plant be in MODE 3 in 12 hours and MODE 4 in 36 hours.”

It should be noted that CONDITION 3.7.3 B states, “Two CREF subsystems inoperable due to an inoperable control room boundary in MODE 1, 2, or 3.” Thus, an inoperable control room boundary based on tracer gas test results is a sufficient reason to declare the CREF system inoperable. The actions for an inoperable CREF system are sufficient to respond to a failure to achieve successful test results.

The NRC staff considers the tracer gas test specified in the proposed License Condition 2.C.(22) to be a better test than the existing SR 3.7.3.6 that is being deleted. The tracer gas test will address the entire boundary of the control room envelope and produce a more accurate assessment of unfiltered inleakage.

The NRC staff has also determined that the changes to TS LCO 3.7.3, Conditions D and F, as well as the deletion of the SR 3.7.3.6 footnote, are acceptable because these revisions involve the deletion of wording that relates to SR 3.7.3.6 which is being deleted. Therefore, this language would no longer be applicable.

The proposed changes to the above TSs require that the licensee revise the discussion in the associated TS Bases section. Although the licensee’s application included possible wording for the revised TS Bases, the licensee will formally address the change to the Bases in accordance with the Fermi 2 Bases Control Program. The TS Bases should be addressed separately from this amendment and should be included in a future update of the TS Bases in accordance with the Fermi 2 Bases Control Program.

Based on the above evaluation, the NRC staff finds that the proposed amendment is 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 or changes a surveillance requirement. 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 (69 FR 50217). 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) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: E. Forrest

Date: October 25, 2004