May 19, 1989

Docket No. 50-341

Mr. B. Ralph Sylvia
Senior Vice President - Nuclear
Operations
Detroit Edison Company
6400 North Dixie Highway
Newport, Michigan 48166

Dear Mr. Sylvia:

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SUBJECT: AMENDMENT NO. 33 TO FACILITY OPERATING LICENSE NO. NPF-43: (TAC NO. 72742)

The Commission has issued the enclosed Amendment No. 33 to Facility Operating License No. NPF-43 for the Fermi-2 facility. This amendment consists of changes to the Plant Technical Specifications (TS) in response to your letter dated March 10, 1989.

The amendment revises TS Section 4.3.8.2.c to allow a one-time extension to the disassembly and inspection interval for the turbine overspeed protection system valves, specifically, the turbine control valves, high pressure turbine stop valves, low pressure turbine intercept valves, and low pressure turbine stop valves, until the first refueling outage, currently scheduled to begin in September 1989. These tests would have become overdue after May 20, 1989.

A copy of the Safety Evaluation supporting this amendment is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

Original Signed By

John F. Stang, Project Manager
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects

Enclosures:
1. Amendment No. 33 to NPF-43
2. Safety Evaluation

cc w/enclosures:
See next page

*SEE PREVIOUS CONCURRENCE

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*LA/PD31:DRSP	*PM/PD31:DRSP	*PM/PD31:DRSP	*(A)D/PD31:DRSP	*OGC
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Mr. B. Ralph Sylvia
Detroit Edison Company

Fermi-2 Facility

cc:

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

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

DOCKET NO. 50-341

FERMI-2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 33
License No. NPF-43

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

   A. The application for amendment by the Detroit Edison Company (DECo or the licensee) dated March 10, 1989, 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. 33, 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.

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3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Lawrence Yandell, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 19, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 33

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following page of the Appendix "A" Technical Specifications with the attached page. The revised page is identified by Amendment number and contains a vertical line indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

REMOVE	INSERT
3/4 3-85	3/4 3-85
3/4 3-86*	3/4 3-86*

*Overleaf page provided to maintain document completeness. No changes contained on this page.

INSTRUMENTATION

3/4.3.8 TURBINE OVERSPEED PROTECTION SYSTEM

LIMITING CONDITION FOR OPERATION

3.3.8 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION:

a. With one turbine control valve, or one turbine stop valve per high pressure turbine steam lead inoperable and/or with one turbine low pressure stop valve or intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours or close at least one valve in the affected steam lead(s) or isolate the turbine from the steam supply within the next 6 hours.

b. With the above required turbine overspeed protection system otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.8.1 The provisions of Specification 4.0.4 are not applicable.

4.3.8.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

a. At least once per 7 days by cycling each of the following valves through at least one complete cycle from the running position and observing valve closure:

   1. Four high pressure turbine stop valves,

   2. Six low pressure turbine low pressure stop valves,

   3. Four high pressure turbine control valves, and

   4. Six low pressure turbine intercept valves.

b. At least once per 18 months by performance of a CHANNEL CALIBRATION of the turbine overspeed protection instrumentation.

c. At least once per 40 months* by dismantling and inspecting at least one of each of the above valves and performing a visual and surface inspection of all valve seats, disks, and stems and verifying no unacceptable flaws or excessive corrosion. If unacceptable flaws or excessive corrosion are found, all other valves of that type shall be inspected.

*The initial surveillance test interval is extended on a one time basis to the first refueling outage.

3/4.3.9 FEEDWATER/MAIN TURBINE TRIP SYSTEM ACTUATION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.9 The feedwater/main turbine trip system actuation instrumentation channels shown in Table 3.3.9-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.9-2.

APPLICABILITY: As shown in Table 3.3.9-1.

ACTION:

a. With a feedwater/main turbine trip system actuation instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.9-2, declare the channel inoperable and either place the inoperable channel in the tripped condition until the channel is restored to OPERABLE status with its trip setpoint adjusted consistent with the Trip Setpoint value, or declare the associated system inoperable.

b. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement, restore the inoperable channel to OPERABLE status within 7 days or be in at least STARTUP within the next 6 hours.

c. With the number of OPERABLE channels two less than required by the Minimum OPERABLE Channels per Trip System requirement, restore at least two channels to OPERABLE status within 72 hours or be in at least STARTUP within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.3.9.1 Each feedwater/main turbine trip system actuation instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations for the OPERATIONAL CONDITIONS and at the frequencies shown in Table 4.3.9.1-1.

4.3.9.2 LOGIC SYSTEM FUNCTIONAL TESTS and simulated automatic operation of all channels shall be performed at least once per 18 months.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 33 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

FERMI-2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated March 10, 1988, the Detroit Edison Company (DECo or the licensee) requested amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-43 for Fermi-2. The proposed amendment would revise TS Section 4.3.8.2.c to allow a one-time extension to the disassembly and inspection interval for the turbine overspeed protection system valves. The valves involved include the turbine control valves, high pressure turbine stop valves, low pressure turbine intercept valves, and the low pressure turbine stop valves. These tests will become overdue after May 20, 1989, and the amendment would allow extension until the first refueling outage, scheduled to begin in September 1989.

2.0 EVALUATION

Technical Specification 4.3.8.2.c requires that every 40 months at least one turbine control valve, high pressure turbine stop valve, low pressure turbine intercept valve, and low pressure turbine stop valve be disassembled, and a visual and surface inspection performed of the valve seats, disks, and stems to verify no unacceptable flaws or excessive corrosion are present. An additional 25 percent may be added to the 40 month interval per Technical Specification 4.0.2.a, resulting in a latest due date on this surveillance of May 20, 1989.

Performance of the surveillance requires the plant to be shut down. DECo estimated that the dismantling and inspection of one turbine control valve, one high pressure stop valve, and one low pressure turbine intercept valve will take 1340 man hours each and one low pressure turbine stop valve 485 man hours. There are no outages planned between now and the first refueling outage.

A low power license was issued for Fermi-2 on March 20, 1985. Use of this date for the commencement of the surveillance interval results in the May 20, 1989 maximum due date. Initial criticality was achieved on June 21, 1985. Upon entry into Operation Condition 2, Specification 4.3.8.2.c first became applicable. The first turbine roll was performed on September 26, 1985. By the commencement of the first refueling outage, the valves will have experienced operating conditions for approximately 24 months. Normally, 2 full operating cycles of

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wear are experienced before this surveillance is due to be performed. Due to Fermi's extended startup test program, the surveillance becomes due before completion of even this first operating cycle. Therefore, this one-time extension is needed.

The purpose of the surveillance is to assess the condition of the valves to verify that no unacceptable flaws or excessive corrosion will prevent them from closing when needed to prevent an overspeed condition. Valve mechanical behavior during routine operation has been good. There is no indication that the valve seats have corroded which could be evidenced by problems in keeping the unit on the turning gear during startup preparations. The valves closed properly during the trip experienced February 26, 1989. Weekly, each of the valves is fully cycled. This test is unaffected by this proposed one-time extension of the dismantling surveillance. There have been no situations detected where the valves would not fully close that could be attributed to actual valve problems. The current and past problems that have been experienced with turbine valves have been due to actuator, circuitry, or test problems, not valve degradation. The required dismantling and inspection of the valves is to find problems with the valves themselves.

A mechanical and the electrical overspeed trip system were last successfully tested on August 7, 1988. This testing confirmed that the turbine is protected from an overspeed condition, as required by Technical Specifications. The manufacturer of the turbine, English Electric, was contacted on this matter by DECo. Their representative stated that they concur with the postponement of the inspection to the first refueling outage.

The basis of the Standard Technical Specification involves maintaining turbine overspeed protection to reduce the hazard of turbine missiles. This function is also discussed in the Standard Review Plan Sections 3.5.1.3 and 10.2. The bases for the Fermi-2 Turbine Overspeed Protection System specifications states, in part, "Protection from turbine excessive overspeed is not required to protect safety-related components, equipment or structures. However it is included in order to improve overall plant reliability." Since the overspeed protection system is not needed to protect safety-related equipment or to safely shutdown in the event of a turbine overspeed condition, extension of the surveillance interval cannot adversely affect safety-related equipment. A discussion of the turbine missile evaluation is contained in the Updated Final Safety Analysis Report, Section 10.2.3.

The Standard Review Plan, Section 10.2 states that at approximately 3½ year intervals, during refueling or maintenance shutdowns coinciding with the inservice inspection schedule required by Section XI of the ASME Code for reactor components, as least one of each type of valve should be dismantled and examined. Fermi-2's Safety Evaluation Report states that this program is acceptable and will be included in the Fermi-2 Technical Specifications. Thus, the anticipated interval involved performance approximately every 3½ years during refueling outages or maintenance shutdowns coincident with the inservice inspection schedule. The inservice inspection schedule required by Section XI of the ASME Code initialized at commercial operation, thus 3½ years from this time would not be until the second refueling outage. The proposed one-time extension to the first refueling outage is within the program reviewed as acceptable.

To summarize, there is no safety issue involved in extending on a one-time basis the surveillance interval for the dismantling and inspection of turbine valves until the first refueling outage because:

- all tests performed to date have indicated no problems with the valves themselves,
- the total period of valve exposure to operating conditions is well within the expected number of months exposure anticipated for future surveillance intervals, given average availability,
- the vendor has indicated agreement with the extension, and
- protection from turbine excessive overspeed is not required to protect safety-related components, equipment or structures.

Based on the above evaluation, the staff finds the proposed changes acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. We have determined that this amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents which 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 this amendment.

4.0 CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Lynn Kelly

Date: May 19, 1989