November 28, 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:

DISTRIBUTION

Docket File	BGrimes
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DHagan	EJordan
JStang	

SUBJECT: AMENDMENT NO. 46 TO FACILITY OPERATING LICENSE NO. NPF-43: (TAC NO. 71229 AND 71230)

The Commission has issued the enclosed Amendment No. 46 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 November 15, 1988.

The amendment revises the TS to reflect the deletion of Special Test Exceptions-Oxygen Concentration 3/4.10.5 because the period for which the exception was valid has passed. The application also proposed changes to the TS dealing with accident monitoring instrumentation. These changes will be evaluated under a separate cover.

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,

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

Enclosures:
1. Amendment No. 46 to NPF-43
2. Safety Evaluation

cc w/enclosures:
See next page

FERMI AMEND 71229/30
*See previous concurrence

*LA/PD31:DRSP	*PM/PD31:DRSP	*(A)D/PD31:DRSP	*OGC
PShuttleworth	JStang:jw	JThoma	
10/16/89	10/17/89	10/17/89	10/19/89

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/s/ JStang

John F. Stang, Project Manager
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Division of Reactor Projects - III, IV, V & Special Projects
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FERMI AMEND 71229/30

LA/PD31:DRSP	PM/PD31:DRSP	(A)D/PD31:DRSP	OGC
PShuttleworth	JStang:jw	JThoma	BMB
10/16/89	10/17/89	10/17/89	10/19/89 with changes as marked

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

November 28, 1989

Docket No. 50-341

Mr. B. Ralph Sylvia
Senior Vice President - Nuclear
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Detroit Edison Company
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John F. Stang

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

Enclosures:
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2. Safety Evaluation

cc w/enclosures:
See next page

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. 46
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 November 15, 1988, 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. 46, 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.

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

FOR THE NUCLEAR REGULATORY COMMISSION

John O. Thoma

John O. Thoma, Acting Director
Project Directorate III-1
Division of Reactor Projects - III,
IV, V & Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 28, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 46

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

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

REMOVE	INSERT
ix*	ix*
x	x
xvi	xvi
3/4 3-61	3/4 3-61
3/4 3-62*	3/4 3-62*
3/4 6-57*	3/4 6-57*
3/4 6-58	3/4 6-58
3/4 10-5	3/4 10-5
3/4 10-6*	3/4 10-6*
B 3/4 10-1	B 3/4 10-1

*Overleaf page provided to maintain document completeness. No changes contained in these pages.

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

BASES

TABLE 3.3.7.5-1

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NUMBER OF CHANNELS	MINIMUM CHANNELS OPERABLE	APPLICABLE OPERATIONAL CONDITIONS	ACTION
1. Reactor Vessel Pressure	2	1	1, 2	80
2. Reactor Vessel Water Level, Fuel Zone	2	1	1, 2	80
3. Suppression Chamber Water Level	2	1	1, 2	80
4. Suppression Chamber Water Temperature	2	1	1, 2	80
5. Suppression Chamber Air Temperature	2	1	1, 2	80
6. Suppression Chamber Pressure	2	1	1, 2	80
7. Drywell Pressure, Wide Range	2	1	1, 2	80
8. Drywell Air Temperature	2	1	1, 2	80
9. Drywell Oxygen Concentration	2	1	1, 2	80
10. Drywell Hydrogen Concentration	2	1	1, 2	80
11. Safety/Relief Valve Position Indicators	1*/valve	1*/valve	1, 2	80
12. Containment High Range Radiation Monitor	2	2	1, 2, 3	81
13. Standby Gas Treatment System Radiation Monitors**	2	2	1, 2, 3	81
14. Neutron Flux	2	1	1, 2	80
15. Drywell Sump Level	2	1	1, 2	80
16. Primary Containment Isolation Valve Position	1/valve	1/valve	1, 2, 3	80

*Pressure switch

**High (accident) range noble gas monitors (One channel per flow path)

TABLE 3.3.7.5-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

ACTION STATEMENTS

ACTION 80 -

a. With the number of OPERABLE accident monitoring instrumentation channels less than the Required Number of Channels shown in Table 3.3.7.5-1, restore the inoperable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.

b. With the number of OPERABLE accident monitoring instrumentation channels less than the Minimum Channels OPERABLE requirements of Table 3.3.7.5-1, restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

ACTION 81 - With the number of OPERABLE channels less than required by the minimum channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours, and:

1) either restore the inoperable channel(s) to OPERABLE status within 7 days of the event, or

2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL

DRYWELL AND SUPPRESSION CHAMBER HYDROGEN RECOMBINER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent drywell and suppression chamber hydrogen recombiner systems shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1 and 2.

ACTION: With one drywell and/or suppression chamber hydrogen recombiner system inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each drywell and suppression chamber hydrogen recombiner system shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying during a recombiner system functional test that the heater outlet gas temperature increases to greater than or equal to 1150°F within 75 minutes and is maintained for at least 1 hour.

b. At least once per 18 months by:

   1. Performing a CHANNEL CALIBRATION of all recombiner operating instrumentation and control circuits.

   2. Verifying the integrity of all heater electrical circuits by performing a resistance to ground test within 60 minutes following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.

   3. Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiner enclosure; i.e, loose wiring or structural connections, deposits of foreign materials, etc.

c. By measuring the system leakage rate as a part of the overall integrated leakage rate test required by Specification 3.6.1.2.

CONTAINMENT SYSTEMS

DRYWELL AND SUPPRESSION CHAMBER OXYGEN CONCENTRATION

LIMITING CONDITION FOR OPERATION

3.6.6.2 The drywell and suppression chamber atmosphere oxygen concentration shall be less than 4% by volume.

APPLICABILITY: OPERATIONAL CONDITION 1, during the time period:

a. Within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER, following startup, to

b. Within 24 hours prior to reducing THERMAL POWER to less than 15% of RATED THERMAL POWER, preliminary to a reactor shutdown.

ACTION:

With the drywell and/or suppression chamber oxygen concentration exceeding the limit, restore the oxygen concentration to within the limit within 24 hours or be in at least STARTUP within the next 8 hours.

SURVEILLANCE REQUIREMENTS

4.6.6.2 The drywell and suppression chamber oxygen concentration shall be verified to be within the limit within 24 hours after THERMAL POWER is greater than 15% of RATED THERMAL POWER and at least once per 7 days thereafter.

THIS PAGE INTENTIONALLY DELETED.

SPECIAL TEST EXCEPTIONS

3/4.10.6 TRAINING STARTUPS

LIMITING CONDITION FOR OPERATION

3.10.6 The provisions of Specification 3.5.1 may be suspended to permit one RHR subsystem to be aligned in the shutdown cooling mode during training startups provided that the reactor vessel is not pressurized, THERMAL POWER is less than or equal to 1% of RATED THERMAL POWER and reactor coolant temperature is less than 200°F.

APPLICABILITY: OPERATIONAL CONDITION 2, during training startups.

ACTION:

With the requirements of the above specification not satisfied, immediately place the reactor mode switch in the Shutdown position.

SURVEILLANCE REQUIREMENTS

4.10.6 The reactor vessel shall be verified to be unpressurized and the THERMAL POWER and reactor coolant temperature shall be verified to be within the limits at least once per hour during training startups.

3/4.10 SPECIAL TEST EXCEPTIONS

BASES

3/4.10.1 PRIMARY CONTAINMENT INTEGRITY

The requirement for PRIMARY CONTAINMENT INTEGRITY is not applicable during the period when open vessel tests are being performed during the low power PHYSICS TESTS.

3/4.10.2 ROD SEQUENCE CONTROL SYSTEM

In order to perform the tests required in the technical specifications it is necessary to bypass the sequence restraints on control rod movement. The additional surveillance requirements ensure that the specifications on heat generation rates and shutdown margin requirements are not exceeded during the period when these tests are being performed and that individual rod worths do not exceed the values assumed in the safety analysis.

3/4.10.3 SHUTDOWN MARGIN DEMONSTRATIONS

Performance of shutdown margin demonstrations with the vessel head removed requires additional restrictions in order to ensure that criticality is properly monitored and controlled. These additional restrictions are specified in this LCO.

3/4.10.4 RECIRCULATION LOOPS

This special test exception permits reactor criticality under no flow conditions and is required to perform certain startup and PHYSICS TESTS while at low THERMAL POWER levels.

3/4.10.6 TRAINING STARTUPS

This special test exception permits training startups to be performed with the reactor vessel depressurized at low THERMAL POWER and temperature while controlling RCS temperature with one RHR subsystem aligned in the shutdown cooling mode in order to minimize contaminated water discharge to the radioactive waste disposal system.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 46 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 November 15, 1988, the Detroit Edison Company (DECo or the licensee) requested amendment to the Technical Specifications (TS) appended to Facility Operating License No. NPF-43 for Fermi-2. The proposed amendment would delete references in the TS to Special Test Exception-Oxygen Concentration 3/4.10.5, because the period for which this exception was valid has passed. The exception expired on May 23, 1988, after 120 Effective Full Power Days of Operation.

2.0 EVALUATION

Special Test Exception-Oxygen Concentration TS 3.10.5 has been a part of the Fermi-2 TS since original licensing to allow relief from the oxygen concentration specifications in order to provide access to the primary containment during the initial startup and testing phase of operation. Since the period for which this exception was valid has passed, the licensee has proposed a change to the TS to remove all reference to the exception. Specifically, the proposed revision would delete a footnote to the requirement for Drywell Oxygen Concentration in Table 3.3.7.5-1, Accident Monitoring Instrumentation, which references Specification 3.10.5, Special Test Exceptions-Oxygen Concentration. This test exception was applicable with reactor operational exposure up to 120 Effective Full Power Days (EFPD). Fermi-2 has operated greater than this limit, and thus the exception is no longer valid. The special test exception is also footnoted in Specification 3.4.6.6.2, Drywell and Suppression Chamber Oxygen Concentration. Deletion of Specification 3.10.5 and corresponding references to 3.10.5 are included in this proposed change. Deletion of the corresponding Bases for the Special Test Exception is also proposed.

2.1 3/4.3.7.5, Table 3.3.7.5-1, item 9

Current: 9. Drywell Oxygen Concentration***
*** See Special Test Exception 3.10.5

Proposed: 9. Drywell Oxygen Concentration

The special test exception is no longer applicable since 120 EFPD has been exceeded.

2.2 3/4.10.5, Oxygen Concentration

Current: The provisions of Specification 3.6.6.2 and the OPERABILITY requirements of the Drywell Oxygen Concentration instrument of Specification 3.3.7.5 may be suspended during the performance of the Startup Test Program until either the required 100% of RATED THERMAL POWER trip tests have been completed or the reactor has operated for 120 Effective Full Power Days.

Proposed: The exception is no longer valid due to the plant exceeding 120 EFPD, this entire specification is proposed to be deleted.

2.3 3.6.6.2, APPLICABILITY

Current: OPERATIONAL CONDITION 1*, during....
*See Special Test Exception 3.10.5

Proposed: OPERATIONAL CONDITION 1, during....

The footnote, *, in the proposed amendment is being deleted since the APPLICABILITY requirements to apply the exception (less than 120 EFPD) has been exceeded.

2.4 Conclusion

Since, the special test exception for oxygen concentration expired after 120 EFPD, on May 23, 1988, the TS require a change to reflect the expiration of the exception. The proposed amendment removes all references to the exception for oxygen concentration. The staff has reviewed the proposed amendment and finds the elimination of the sections in the TS, including the Bases, which are referenced to the special exception to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves change in 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 to the surveillance requirements. The staff has 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: John Stang

Date: November 28, 1989