

August 30, 1990

Docket No. 50-341

Mr. William S. Orser
Senior Vice President - Nuclear
Operations
Detroit Edison Company
6400 North Dixie Highway
Newport, Michigan 48166

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Dear Mr. Orser:

SUBJECT: AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NO. NPF-43:
(TAC NO. 69836)

The Commission has issued the enclosed Amendment No. 55 to Facility Operating License No. NPF-43 for the Fermi-2 facility. This amendment consists of changes to the Plant Technical Specifications in response to your letter dated September 21, 1988.

The amendment revises Technical Specification (TS) 3/4.3.4, Anticipated Transient Without Scram Recirculation Pump Trip System Instrumentation. The proposed TS changes provide appropriate provisions for the two-out-of-two-trip logic and will allow Fermi-2 TS to better reflect the as-built plant design.

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
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 55 to NPF-43
2. Safety Evaluation

cc w/enclosures:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555
August 30, 1990

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Senior Vice President - Nuclear
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Detroit Edison Company
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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,

A handwritten signature in black ink, appearing to read "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:

1. Amendment No. 55 to NPF-43
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. William Orser
Detroit Edison Company

Fermi-2 Facility

cc:

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

DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI-2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 55
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 September 21, 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:

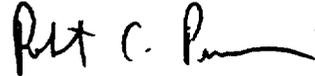
Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 55, 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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PDC

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

FOR THE NUCLEAR REGULATORY COMMISSION



Robert C. Pierson, 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: August 30, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 30

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.

<u>REMOVE</u>	<u>INSERT</u>
3/4 3-32	3/4 3-32
3/4 3-33	3/4 3-33
*3/4 3-34	*3/4 3-34

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

INSTRUMENTATION

3/4.3.4 ATWS RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.4 The anticipated transient without scram recirculation pump trip (ATWS-RPT) system instrumentation channels shown in Table 3.3.4-1 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3.4-2.

APPLICABILITY: OPERATIONAL CONDITION 1.

ACTION:

- a. With an ATWS-RPT system instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3.4-2, declare the channel inoperable until the channel is restored to OPERABLE status with the channel trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With the number of OPERABLE channels one less than required by the Minimum OPERABLE Channels per Trip System requirement for one or both trip systems, place the inoperable channel(s) in the tripped condition within 1 hour.
- c. With the number of OPERABLE channels two or more less than required by the Minimum OPERABLE Channels per Trip System requirement for one trip system and:
 1. If the inoperable channels consist of one reactor vessel water level channel and one reactor vessel pressure channel, place both inoperable channels in the tripped condition within 1 hour, or, if this action will initiate a pump trip, declare the trip system inoperable.
 2. If the inoperable channels include two reactor vessel water level channels or two reactor vessel pressure channels, declare the trip system inoperable.
- d. With one trip system inoperable, restore the inoperable trip system to OPERABLE status within 72 hours or be in at least STARTUP within the next 6 hours.
- e. With both trip systems inoperable, restore at least one trip system to OPERABLE status within 1 hour or be in at least STARTUP within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.3.4.1 Each ATWS-RPT system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL FUNCTIONAL TEST and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.4-1.

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

TABLE 3.3.4-1

ATWS RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION

<u>TRIP FUNCTION</u>	<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM*</u>
1. Reactor Vessel Low Water Level - Level 2	2
2. Reactor Vessel Pressure-High	2

*One channel may be placed in an inoperable status for up to 2 hours for required surveillance provided the other channel of the same trip function is OPERABLE

TABLE 3.3.4-2ATWS RECIRCULATION PUMP TRIP SYSTEM INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. Reactor Vessel Low Water Level - Level 2	≥ 110.8 inches*	≥ 103.8 inches
2. Reactor Vessel Pressure-High	≤ 1133 psig	≤ 1153 psig

*See Bases Figure B3/4 3-1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 55 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI-2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated September 21, 1988, the Detroit Edison Company (DECo or the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. NPF-43 for Fermi-2. The proposed amendment would revise TS Section 3/4.3.4, Anticipated Transient Without Scram (ATWS) Recirculation Pump Trip System Instrumentation. The proposed TS changes provide appropriate provisions for the two-out-of-two trip logic and will allow the Fermi-2 TS to better reflect the as-built plant design.

2.0 EVALUATION

TS Section 3/4.3.4 specifies instrumentation and surveillance requirements for the anticipated transient without scram recirculation pump trip (ATWS-RPT) system. The ATWS-RPT system consists of two separate and redundant trip systems. Each trip system consists of four channels; each channel contains one instrument. Two channels monitor Reactor Water Level and two channels monitor Reactor Pressure. The ATWS-RPT is activated with two-out-of-two being satisfied on either Reactor Vessel Pressure - High or Reactor Water Level Low - Level 2, causing the Motor Generator (MG) set field breakers to open resulting in the Recirculation Pumps tripping.

With one channel in a trip system inoperable the current TS do not require the inoperable channel to be placed in the trip position, and do not require any action to be taken for up to 14 days, at which time the TS require the reactor to be shut down. Most safety related instrumentation systems in the TS (i.e. Reactor Protection System, Emergency Core Cooling System Instrumentation) require inoperable channels to be placed in the trip position in a short period of time following discovery as long as the action will not cause a reactor trip.

The current TS covering the ATWS-RPT also does not contain any provisions for more than one channel per trip system to be inoperable. If one channel becomes inoperable the TS allow 14 days to repair the inoperable channel; however, if another channel in the same trip system becomes inoperable the current TS do not allow for this provision and would require entry into Section 3.0.3 of the TS, even though the redundant trip system may be fully operable. Entry into Section

3.0.3 of the TS requires prompt action to shut down the reactor, since it is presumed that an essential safety function is lost. Such action will result in challenges to plant safety systems. The current TS require such action be taken even though the redundant trip system may be fully operable.

The proposed changes to the TS bring the Fermi-2 TS more in line with the Boiling Water Reactor (BWR) Standard Technical Specification concerning ATWS-RPT. The proposed change will replace the existing two action statements with four action statements. The proposed change requires that if the number of operable channels is one less than the number required by the minimum operable channels per trip system, the inoperable channels or channels shall be placed in the tripped condition within 1 hour. This action is more conservative than required by the current TS. The existing TS allow 14 days prior to any action being taken. The proposed change also addresses the condition where two inoperable channels exist in the same trip system. The proposed change either requires the inoperable channels be placed in the trip condition or the trip system be declared inoperable, and allows 72-hours to repair the trip system prior to commencing with a reactor shut down, as long as the redundant trip system is operable. The proposed change precludes the situation where two inoperable channels exist in the same trip system and Section 3.0.3 of the TS has to be entered. The proposed change also makes provisions for the inoperability of two trip systems simultaneously. If two trip systems are inoperable the proposed TS allows only 1 hour to restore one trip system to operable prior to requiring the reactor to start shutting down and be in STARTUP within the next 6-hours. This is similar to the requirements of Section 3.0.3 of the TS.

The proposed TS better reflect the ATWS-RPT plant design and the BWR Standard TS requirements for the ATWS-RPT system. In addition, the proposed change requires that the plant be placed in a safer condition upon the discovery of inoperable instrumentation channels of trip systems.

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

3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the requirements 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 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) 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: August 30, 1990

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