

August 30, 1989

Docket No. 50-341

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

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Dear Mr. Sylvia:

SUBJECT: AMENDMENT NO. 35 TO FACILITY OPERATING LICENSE NO. NPF-43:
(TAC NO. 72982)

The Commission has issued the enclosed Amendment No. 35 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 April 3, 1989.

The amendment revises the TS to reflect the modifications made to the Automatic Depressurization System (ADS). The ADS will be modified to bring the system in accordance with TMI Action Plan II.K.3.18 of NUREG-0737.

A copy of the related Safety Evaluation and Notice of Issuance are enclosed.

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.35 to NPF-43
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:
See next page

FERMI2 AMEND. TAC 72982

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08/12/89

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JStang
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BC/SRXB
WHodges
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JOT
(A)D/PD31:DRSP
Randall J. Thomas
08/29/89

OC
Notice of Issuance
Cochmann
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555
August 30, 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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(TAC NO. 72982)

The Commission has issued the enclosed Amendment No. 35 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 April 3, 1989.

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A copy of the related Safety Evaluation and Notice of Issuance are enclosed.

Sincerely,

A handwritten signature in cursive script, appearing to read "John F. Stand".

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

Enclosures:

1. Amendment No. 35 to NPF-43
2. Safety Evaluation
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cc w/enclosures:
See next page

Mr. B. Ralph Sylvia
Detroit Edison Company

Fermi-2 Facility

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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. 35
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 April 3, 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. 35, 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 its date of its issuance with full implementation within 90 days from the date of 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: August 30, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 35

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

3/4 3-25
3/4 3-26
3/4 3-28
3/4 3-29
3/4 3-31

INSERT

3/4 3-25
3/4 3-26
3/4 3-28
3/4 3-29
3/4 3-31

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

<u>TRIP FUNCTION</u>		<u>MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM(a)</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>	
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM#</u>					
a. Reactor Vessel Low Water Level - Level 1		2	1, 2, 3	30	
b. Drywell Pressure - High		2	1, 2, 3	30	
c. ADS Timer		1	1, 2, 3	31	
d. Core Spray Pump Discharge Pressure - High (Permissive)		1/pump	1, 2, 3	31	
e. RHR LPCI Mode Pump Discharge Pressure High (Permissive)		1/pump	1, 2, 3	31	
f. Reactor Vessel Low Water Level - Level 3 (Permissive)		1	1, 2, 3	31	
g. Manual Initiation		1/valve	1, 2, 3	33	
h. Drywell Pressure - High Bypass Timer		2	1, 2, 3	31	
i. Manual Inhibit		1	1, 2, 3	33	
	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE OPERATIONAL CONDITIONS</u>	<u>ACTION</u>
5. <u>LOSS OF POWER</u>					
1. 4.16 kV Emergency Bus Under-voltage (Loss of Voltage)	2/bus	1/bus	1/bus	1, 2, 3, 4**, 5**	35
2. 4.16 kV Emergency Bus Under-voltage (Degraded Voltage)	2/bus	1/bus	1/bus	1, 2, 3, 4**, 5**	35

(a) A channel may be placed in an inoperable status for up to 2 hours for required surveillance without placing the trip system in the tripped condition provided at least one OPERABLE channel in the same trip system is monitoring that parameter.

(b) Also actuates the associated emergency diesel generators.

(c) One trip system. Provides signals to HPCI and RCIC suction valves.

(d) One trip system. Provides signal to HPCI pump suction valves only.

(e) On 2 out of 2 logic, provides a signal to trip the HPCI turbine.

* When the system is required to be OPERABLE per Specification 3.5.2.

** Required when ESF equipment is required to be OPERABLE.

Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 150 psig.

Individual component controls.

TABLE 3.3.3-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION

ACTION STATEMENTS

- ACTION 30 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement:
- a. For one trip system, place that trip system in the tripped condition within 1 hour* or declare the associated ECCS inoperable.
 - b. For both trip systems, declare the associated ECCS inoperable.
- ACTION 31 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, declare the associated ADS Trip System inoperable.
- ACTION 32 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place the inoperable channel in the tripped condition within 1 hour.
- ACTION 33 - Restore the manual initiation and/or manual inhibit function to OPERABLE status within 8 hours or declare the associated ECCS or ADS Trip System inoperable.
- ACTION 34 - With the number of OPERABLE channels less than required by the Minimum OPERABLE Channels per Trip System requirement, place at least one inoperable channel in the tripped condition within 1 hour*, align the HPCI system to take suction from the suppression pool, or declare the HPCI system inoperable.
- ACTION 35 - With the number of OPERABLE channels:
- a. One less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 72 hours or declare the associated emergency diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.
 - b. Less than the Minimum Channels OPERABLE requirement, declare the associated diesel generator inoperable and take the ACTION required by Specification 3.8.1.1 or 3.8.1.2, as appropriate.

*The provisions of Specification 3.0.4 are not applicable.

TABLE 3.3.3-2

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
1. <u>CORE SPRAY SYSTEM</u>		
a. Reactor Vessel Low Water Level - Level 1	> 31.8 inches*	> 24.8 inches
b. Drywell Pressure - High	< 1.68 psig	< 1.88 psig
c. Reactor Steam Dome Pressure - Low	> 461 psig, - decreasing	> 441 psig, - decreasing
d. Manual Initiation	NA	NA
2. <u>LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>		
a. Reactor Vessel Low Water Level - Level 1	> 31.8 inches*	> 24.8 inches
b. Drywell Pressure - High	< 1.68 psig	< 1.88 psig
c. Reactor Steam Dome Pressure - Low	> 461 psig, - decreasing	> 441 psig, - decreasing
d. Reactor Vessel Low Water Level - Level 2	> 110.8 inches*	> 103.8 inches
e. Reactor Steam Dome Pressure - Low	> 906 psig, decreasing	> 886 psig, decreasing
f. Riser Differential Pressure - High	< 0.627 psid	< 0.927 psid
g. Recirculation Pump Differential Pressure - High	< 1.627 psid	< 1.927 psid
h. Manual Initiation	NA	NA
3. <u>HIGH PRESSURE COOLANT INJECTION SYSTEM</u>		
a. Reactor Vessel Low Water Level - Level 2	> 110.8 inches*	> 103.8 inches
b. Drywell Pressure - High	< 1.68 psig	< 1.88 psig
c. Condensate Storage Tank Level - Low	> 3 inches (27 inches above tank bottom)	> 0 inches (24 inches above tank bottom)
d. Suppression Pool Water Level - High	< 2.0 inches**	< 5.0 inches**
e. Reactor Vessel High Water Level - Level 8	< 214 inches*	< 219 inches
f. Manual Initiation	NA	NA

TABLE 3.3.3-2 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS

<u>TRIP FUNCTION</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUE</u>
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM</u>		
a. Reactor Vessel Low Water Level - Level 1	> 31.8 inches*	> 24.8 inches
b. Drywell Pressure - High	< 1.68 psig	< 1.88 psig
c. ADS Timer	< 105 seconds	< 117 seconds
d. Core Spray Pump Discharge Pressure - High	> 145 psig, increasing	> 125 psig, increasing
e. RHR LPCI Mode Pump Discharge Pressure-High	> 125 psig, increasing	> 115 psig, increasing
f. Reactor Vessel Low Water Level - Level 3	> 173.4 inches*	> 171.9 inches
g. Manual Initiation	NA	NA
h. Drywell Pressure - High Bypass Timer	< 420 seconds	< 450 seconds
i. Manual Inhibit	NA	NA
5. <u>LOSS OF POWER</u>		
<u>Division 1</u>		
a. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage) (Division 1 and Division 2)	a. 4.16 kV Basis - 3033 volts	3033 ± 60.7 volts
	b. 120 V Basis - 87.5 volts	87.5 ± 1.75 volts
	c. 2 sec time delay	2.0 ± 0.1 sec time delay
<u>Division 2</u>		
	a. 4.16 kV Basis - 3078 volts	3078 ± 61.6 volts
	b. 120 V Basis - 88.8 volts	88.8 ± 1.78 volts
	c. 2 sec time delay	2.0 ± 0.1 sec time delay
<u>Division 1</u>		
b. 4.16 kV Emergency Bus Undervoltage (Degraded Voltage) (Division 1 and Division 2)	a. 4.16 kV Basis - 3952 volts	3952 ± 79.0 volts
	b. 120 V Basis - 114.0 volts	114.0 ± 2.29 volts
	c. 44.0 sec time delay	44.0 ± 2.2 sec time delay
<u>Division 2</u>		
	a. 4.16 kV Basis - 3702 volts	3702 ± 74.0 volts
	b. 120 V Basis - 106.8 volts	106.8 ± 2.14 volts
	c. 21.4 sec time delay	21.4 ± 1.07 sec time delay

* See Bases Figure B 3/4 3-1.

** Suppression pool water level instrument zero is 14'6" above bottom of torus at elevation 557'0".

TABLE 3.3.3-3

EMERGENCY CORE COOLING SYSTEM RESPONSE TIMES

<u>TRIP FUNCTION</u>	<u>RESPONSE TIME (Seconds)</u>
1. <u>CORE SPRAY SYSTEM</u>	
a. Reactor Vessel Low Water Level - Level 1.	< 30
b. Drywell Pressure-High	< 30
c. Reactor Steam Dome Pressure-Low	NA*
d. Manual Initiation	NA
2. <u>LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>	
a. Reactor Vessel Low Water Level - Level 1	< 43
b. Drywell Pressure - High	< 43
c. Reactor Steam Dome Pressure - Low	NA*
d. Reactor Vessel Low Water Level - Level 2	NA
e. Reactor Steam Dome Pressure - Low	NA
f. Riser Differential Pressure - High	NA
g. Recirculation Pump Differential Pressure - High	NA
h. Manual Initiation	NA
3. <u>HIGH PRESSURE COOLANT INJECTION SYSTEM</u>	
a. Reactor Vessel Low Water Level - Level 2	< 30
b. Drywell Pressure - High	< 30
c. Condensate Storage Tank Level-Low	NA
d. Reactor Vessel Water Level-High, Level 8	NA
e. Suppression Pool Water Level-High	NA
f. Manual Initiation	NA
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM</u>	
a. Reactor Vessel Low Water Level - Level 1	NA
b. Drywell Pressure-High	NA
c. ADS Timer	NA
d. Core Spray Pump Discharge Pressure-High	NA
e. RHR LPCI Mode Pump Discharge Pressure-High	NA
f. Reactor Vessel Low Water Level - Level 3	NA
g. Manual Initiation	NA
h. Drywell Pressure - High Bypass Timer	NA
i. Manual Inhibit	NA
5. <u>LOSS OF POWER</u>	
a. 4.16 kV Emergency Bus Undervoltage (Loss of Voltage)	NA
b. 4.16 kV Emergency Bus Undervoltage (Degraded Voltage)	NA

*These are permissive signals only. They do not activate ECCS initiation.

TABLE 4.3.3.1-1

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>TRIP FUNCTION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
<u>1. CORE SPRAY SYSTEM</u>				
a. Reactor Vessel Low Water Level - Level 1	S	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	S	M	R	1, 2, 3
c. Reactor Steam Dome Pressure - Low	S	M	R	1, 2, 3, 4*, 5*
d. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
<u>2. LOW PRESSURE COOLANT INJECTION MODE OF RHR SYSTEM</u>				
a. Reactor Vessel Low Water Level - Level 1	S	M	R	1, 2, 3, 4*, 5*
b. Drywell Pressure - High	S	M	R	1, 2, 3
c. Reactor Steam Dome Pressure - Low	S	M	R	1, 2, 3, 4*, 5*
d. Reactor Vessel Low Water Level - Level 2	S	M	R	1, 2, 3, 4*, 5*
e. Reactor Steam Dome Pressure - Low	S	M	R	1, 2, 3, 4*, 5*
f. Riser Differential Pressure - High	S	M	R	1, 2, 3
g. Recirculation Pump Differential Pressure - High	S	M	R	1, 2, 3
h. Manual Initiation	NA	R	NA	1, 2, 3, 4*, 5*
<u>3. HIGH PRESSURE COOLANT INJECTION SYSTEM[#]</u>				
a. Reactor Vessel Low Water Level - Level 2	S	M	R	1, 2, 3
b. Drywell Pressure - High	S	M	R	1, 2, 3
c. Condensate Storage Tank Level - Low	S	M	R	1, 2, 3
d. Suppression Pool Water Level - High	S	M	R	1, 2, 3
e. Reactor Vessel High Water Level - Level 8	S	M	R	1, 2, 3
f. Manual Initiation	NA	R	NA	1, 2, 3

TABLE 4.3.3.1-1 (Continued)

EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>TRIP FUNCTION</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>CHANNEL CALIBRATION</u>	<u>OPERATIONAL CONDITIONS FOR WHICH SURVEILLANCE REQUIRED</u>
4. <u>AUTOMATIC DEPRESSURIZATION SYSTEM#</u>				
a. Reactor Vessel Low Water Level - Level 1	S	M	R	1, 2, 3
b. Drywell Pressure - High	S	M	R	1, 2, 3
c. ADS Timer	NA	M	R	1, 2, 3
d. Core Spray Pump Discharge Pressure - High	S	M	R	1, 2, 3
e. RHR LPCI Mode Pump Discharge Pressure - High	S	M	R	1, 2, 3
f. Reactor Vessel Low Water Level - Level 3	S	M	R	1, 2, 3
g. Manual Initiation	NA	R	NA	1, 2, 3
h. Drywell Pressure - High Bypass Timer	NA	M	R	1, 2, 3
i. Manual Inhibit	NA	R	NA	1, 2, 3
5. <u>LOSS OF POWER</u>				
a. 4.16 kV Emergency Bus Under-voltage (Loss of Voltage) (Division 1 and Division 2)	NA	M	R	1, 2, 3, 4**, 5**
b. 4.16 kV Emergency Bus Under-voltage (Degraded Voltage) (Division 1 and Division 2)	NA	M	R	1, 2, 3, 4**, 5**

* When the system is required to be OPERABLE per Specification 3.5.2.

** Required OPERABLE when ESF equipment is required to be OPERABLE.

Not required to be OPERABLE when reactor steam dome pressure is less than or equal to 150 psig.

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 trip function in one trip system, restore the inoperable channel to OPERABLE status within 14 days or be in at least STARTUP within the next 8 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.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 35 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 April 3, 1989, 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 the Technical Specifications (TS) to reflect modifications to the actuation logic for the Automatic Depressurization System (ADS). The ADS will be modified in accordance with TMI Action Plan II.K.3.18 of NUREG-0737, and as described in NUREG-0798, "Safety Evaluation Report Related to the Operation of Fermi-2," Supplement 5.

2.0 EVALUATION

The proposed modifications to the ADS are being implemented in order to bring Fermi-2 ADS into compliance with Item II.K.3.18, "Modification of ADS Logic" of NUREG-0737; the methods of achieving this compliance are in accordance with the "BWR Owners' Group Response to Item II.K.3.18 of NUREG-0737," Option 4. The NRC staff has reviewed and approved the proposed modification in NUREG-0798, Supplement 5.

Technical Specification 3/4.3.3, "Emergency Core Cooling System Actuation Instrumentation," Tables 3.3.3-1, -2 and -3, and Table 4.3.3-1 are revised to denote the addition of drywell pressure-high bypass timers and manual inhibit switches for the ADS. The bypass timers will provide automatic initiation of ADS for postulated events where reactor level remains low but drywell pressure does not increase; e.g., steam line break outside containment or stuck open relief valve. Presently, such events require manual initiation of ADS. The manual inhibit switches will allow a single operator action to inhibit ADS, thereby relieving the operator of having to successively reset the existing ADS timer.

The proposed changes to the TS are as follows:

- o Two new entries have been proposed to Table 3.3.3-1 "ECCS Actuation Instrumentation," one for the drywell pressure-high bypass timer (TRIP FUNCTION 4.h) and one for the manual inhibit (TRIP FUNCTION 4.i). The MINIMUM OPERABLE CHANNELS PER TRIP SYSTEM (MOCPTS) for the drywell

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pressure-high bypass timer is specified as two because the design incorporates two drywell pressure bypass timers per Trip System (one timer per channel). The MOCPTS for the manual inhibit switch is specified as one per Trip System because the modification will install a single switch that will inhibit a single ADS trip system. The APPLICABLE OPERATIONAL CONDITIONS for both entries are 1, 2 & 3 which is consistent with other ADS entries, the General Electric Standard Technical Specification and the design basis for the system. The applicable ACTIONS for both of the proposed entries are consistent with their associated existing ADS TRIP FUNCTIONS. The proposed drywell pressure-high bypass timer ACTION (TRIP FUNCTION 4.h) is the same as the existing ADS timer (TRIP FUNCTION 4.c). Likewise, the proposed manual inhibit switch ACTION (TRIP FUNCTION 4.i) is the same as the existing manual system initiation switch (TRIP FUNCTION 4.g). ACTION 33 has some editorial changes proposed to clarify that it is applicable to both the manual initiation TRIP FUNCTION entries (entries 1a, 2b, 3f, and 4g) of this Table and the proposed manual inhibit entry. The proposed change will provide a direct link between ACTION 31 of the Table and ACTION "c" of the LCO Section of this Technical Specification by using the same terminology. ACTION 31 is only applicable to ADS entries.

- o Two new entries have been proposed to Table 3.3.3-2 "ECCS ACTUATION INSTRUMENTATION SETPOINTS." A Fermi-2 unique analysis was performed by General Electric to determine the correct bypass timer TRIP SETPOINT and ALLOWABLE VALUE. The proposed drywell pressure-high Bypass Timer has a TRIP SETPOINT OF <420 seconds, (7 minutes) with an ALLOWABLE VALUE of <450 seconds (7 1/2 minutes). The proposed entry 4.i, manual inhibit, is added to this Table for the sake of providing consistency.
- o Two new entries have been proposed to Table 3.3.3-3 "ECCS RESPONSE TIMES" to provide consistency even though the entries for response time are "N/A", the same as for the other ADS entries. The response time of the bypass timer is inherent in the setpoint, and is governed by Tables 3.3.3-2 and 4.3.3.1-1.
- o Two new entries have been proposed to Table 4.3.3-1 "ECCS INSTRUMENTATION SURVEILLANCE REQUIREMENTS." The applicable surveillance requirements for both of the proposed entries are consistent with their associated existing ADS TRIP FUNCTIONS. The proposed surveillance requirements for the Drywell Pressure-High Bypass Timer are consistent with the ADS timer (entry 4.c). The proposed surveillance requirements for the manual inhibit switch are consistent with the manual system initiation (entry 4.g).

The proposed TS change will bring Fermi-2 ADS into compliance with item II.K.3.18 of NUREG-0737 "Modifications of ADS Logic." The modifications have been made in accordance with the licensee's commitments in NUREG-0798, Supplement 5 which had previously been reviewed and approved by the staff.

As required by NUREG-0798, Supplement 5, a plant-specific analysis was performed by General Electric to determine the optimum setpoint for the drywell pressure bypass timer. By letter dated August 28, 1989, the licensee committed to keep the analysis onsite for future NRC inspection. The analysis

determined that the limiting case was the postulated main steam line break outside containment assuming a D.C. power source failure. For this case the analysis found that, after the water level reached level 1, a maximum drywell pressure bypass timer setpoint of 8 minutes followed by the existing ADS timer setpoint of 2 minutes resulted in a Peak Cladding Temperature (PCT) of 1600°F. This temperature is below the 10 CFR 50.46 acceptance criteria. The 8 minute time delay, plus the additional 2 minutes from the existing ADS initiation delay, will combine to produce a total delay of 10 minutes to trip the ADS after RPV level 1 is reached. Using the 8 minutes as an Analytical Limit, General Electric chose the Trip Setpoint of 7 minutes and Allowable Value of 7.5 minutes using Setpoint Methodology which has been reviewed and accepted in NUREG-0738, Supplement 5. The time between the Setpoint and Allowable Value (0.5 minutes) is an adequate margin for instrument drift. The margin between the Allowable Value and Analytical Limit (0.5 minutes) accommodates uncertainties associated with the instrument accuracies and calibration effects, and is adequate to assure that the PCT will remain under 1600°F for the limiting event, should this event occur at a time when the setpoint has drifted to equal the Allowable Value. The new hardware being added has been procured and designed, and will be installed to meet the same criteria as the existing design.

The ADS modification reflected by the proposed Technical Specifications will eliminate the need for manual ADS actuation and still provide manual operator action as a backup. The specified drywell pressure bypass timer delay allows the operations staff time to control the system manually and still ensures automatic depressurization in time to prevent excessive fuel heatup. The manual inhibit switch will allow an operator to inhibit ADS operation without repeatedly pressing the reset pushbutton as currently required under the same conditions. This switch will free up the operation staff so that they can more effectively address the off-normal plant condition(s). Neither the over-pressure relief function, manual ADS nor individual SRV control will be affected by operation of the manual inhibit switch or the drywell pressure-high bypass timer.

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

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32 and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on August 28, 1989 (54 FR 35541). Accordingly, based upon the environmental assessment, we have determined that the issuance of this amendment will not have a significant effect on the quality of the human environment.

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: August 30, 1989

UNITED STATES NUCLEAR REGULATORY COMMISSIONDETROIT EDISON COMPANYDOCKET NO. 50-341NOTICE OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE

The U.S. Nuclear Regulatory Commission (Commission) has issued Amendment No. 35 to Facility Operating License No. NPF-43 issued to Detroit Edison Company (the licensee), which revised the Technical Specifications for operation of Fermi-2, located in Monroe County, Michigan.

The amendment is effective as of the date of issuance.

The amendment revises the TS to reflect the modifications made to the Automatic Depressurization System (ADS). The ADS will be modified in accordance with TMI Action Plan II.K.3.18 of NUREG-0737.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment.

Notice of Consideration of Issuance of Amendment and Opportunity for Hearing in connection with this action was published in the FEDERAL REGISTER on July 13, 1989 (54 FR 29622). No request for a hearing or petition for leave to intervene was filed following this notice.

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The Commission has prepared an Environmental Assessment related to the action and has determined not to prepare an environmental impact statement. Based upon the environmental assessment, the Commission has concluded that the issuance of this amendment will not have a significant effect on the quality of the human behavior environment.

For further details with respect to the action, see (1) the application for amendment dated April 3, 1989, (2) Amendment No. to License No. NPF-43, (3) the Commission's related Safety Evaluation, and (4) the Commission's Environmental Assessment. All of these items are available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., and at the Local Public Document Room. A copy of items (2), (3) and (4) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Reactor Projects - III, IV, V and Special Projects.

Dated at Rockville, Maryland, this 30th day of August.

FOR THE NUCLEAR REGULATORY COMMISSION



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