

Docket file



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 17, 1998

Mr. Douglas R. Gipson
Senior Vice President
Nuclear Generation
Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERM1 2 - ISSUANCE OF AMENDMENT RE: RELOCATION OF SELECTED
TECHNICAL SPECIFICATIONS REQUIREMENTS RELATED TO
INSTRUMENTATION (TAC NO. M99746)

Dear Mr. Gipson:

The Commission has issued the enclosed Amendment No. 115 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated September 29, 1997 (NRC-97-0089), as supplemented on March 10, 1998 (NRC-98-0036).

The amendment revises the TS and the associated bases by relocating the requirements for selected instrumentation to the updated final safety analysis report (UFSAR). The affected TS's are:

- TS 3/4.3.7.2, Seismic Monitoring Instrumentation
- TS 3/4.3.7.3, Meteorological Monitoring Instrumentation
- TS 3/4.3.7.7, Traversing In-Core Probe System
- TS 3/4.3.7.8, Chlorine Detection System
- TS 3/4.3.7.10, Loose-Part Detection System

These changes are being made in accordance with the guidance in Generic Letter 95-10, "Relocation of Selected Technical Specifications Requirements Related to Instrumentation," dated December 15, 1995.

In accordance with your commitment in the submittal dated September 29, 1997, these TS requirements will be relocated, with modifications, to the updated final safety analysis report (UFSAR). In approving the proposed action, the staff relied upon this commitment and it is incorporated into our Safety Evaluation, which is also enclosed. Information related to the commitment is also incorporated in the paragraphs of the amendment that describe the changes and the implementation of the amendment.

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D. Gipson

- 2 -

March 17, 1998

The notice of issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

ORIGINAL SIGNED BY

Andrew J. Kugler, Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures: 1. Amendment No. 115 to NPF-43
2. Safety Evaluation

cc w/encl: See next page

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Docket File (50-341)

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Mr. Douglas R. Gipson
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Fermi 2

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August 1997



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 115
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 29, 1997, as supplemented on March 10, 1998, 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.

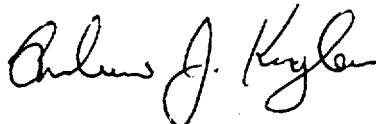
2. Accordingly, the license is amended to approve the relocation of the requirements of Technical Specifications 3/4.3.7.2, 3/4.3.7.3, 3/4.3.7.7, 3/4.3.7.8, and 3/4.3.7.10 to the updated final safety analysis report (UFSAR) with modifications as described in the licensee's application dated September 29, 1997, as supplemented on March 10, 1998, and evaluated in the staff's safety evaluation attached to this amendment. Implementation will be completed within 90 days of the issuance of this amendment. With respect to changes to the UFSAR, the action that must be completed within the implementation date is the licensee approval of the UFSAR change documentation. This license is also hereby 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. 115, 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 with full implementation within 90 days. Implementation of this amendment shall include the relocation of the requirements of Technical Specifications 3/4.3.7.2, 3/4.3.7.3, 3/4.3.7.7, 3/4.3.7.8, and 3/4.3.7.10 to the updated final safety analysis report (UFSAR) with modifications as described in the licensee's application dated September 29, 1997, as supplemented on March 10, 1998, and evaluated in the staff's safety evaluation attached to this amendment.

FOR THE NUCLEAR REGULATORY COMMISSION



Andrew J. Kugler, Project Manager
Project Directorate III-1
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: March 17, 1998

ATTACHMENT TO LICENSE AMENDMENT NO. 115

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 vertical lines indicating the area of change.

REMOVE

v
vi
xi
xii
xiii
xiv
xxiii
xxiv
3/4 3-51
3/4 3-52
3/4 3-53
3/4 3-54
3/4 3-55
3/4 3-56
3/4 3-65
3/4 3-66
3/4 3-69
3/4 3-70
B 3/4 3-3
B 3/4 3-4
B 3/4 3-5
B 3/4 3-6

INSERT

v
vi*
xi*
xii
xiii
xiv*
xxiii
xxiv*
3/4 3-51
3/4 3-52
3/4 3-53
3/4 3-54
3/4 3-55
3/4 3-56
3/4 3-65
3/4 3-66
3/4 3-69*
3/4 3-70
B 3/4 3-3*
B 3/4 3-4
B 3/4 3-5
B 3/4 3-6*

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

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.3 INSTRUMENTATION</u>	
3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION.....	3/4 3-1
3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION.....	3/4 3-9
3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION.....	3/4 3-23
3/4.3.4 ATWS RECIRCULATION PUMP TRIP SYSTEM ACTUATION INSTRUMENTATION.....	3/4 3-32
3/4.3.5 REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION.....	3/4 3-36
3/4.3.6 CONTROL ROD BLOCK INSTRUMENTATION.....	3/4 3-41
3/4.3.7 MONITORING INSTRUMENTATION Radiation Monitoring Instrumentation.....	3/4 3-47
Deleted.....	3/4 3-51
Deleted.....	3/4 3-54
Remote Shutdown System Instrumentation and Controls..	3/4 3-57
Accident Monitoring Instrumentation.....	3/4 3-60
Source Range Monitors.....	3/4 3-64
Deleted.....	3/4 3-65
Deleted.....	3/4 3-66
Deleted.....	3/4 3-67
Deleted.....	3/4 3-70
Explosive Gas Monitoring Instrumentation.....	3/4 3-76
3/4.3.9 FEEDWATER/MAIN TURBINE TRIP SYSTEM ACTUATION INSTRUMENTATION.....	3/4 3-86
3/4.3.10 RESERVED.....	
3/4.3.11 APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION.....	3/4 3-90

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.4 REACTOR COOLANT SYSTEM</u>	
3/4.4.1 RECIRCULATION SYSTEM	
Recirculation Loops.....	3/4 4-1
Jet Pumps.....	3/4 4-4
Recirculation Pumps.....	3/4 4-5
Idle Recirculation Loop Startup.....	3/4 4-6
3/4.4.2 SAFETY/RELIEF VALVES	
Safety/Relief Valves.....	3/4 4-7
Safety/Relief Valves Low-Low Set Function.....	3/4 4-8
3/4 4.3 REACTOR COOLANT SYSTEM LEAKAGE	
Leakage Detection Systems.....	3/4 4-9
Operational Leakage.....	3/4 4-10
3/4.4.4 CHEMISTRY.....	3/4 4-13
3/4.4.5 SPECIFIC ACTIVITY.....	3/4 4-16
3/4.4.6 PRESSURE/TEMPERATURE LIMITS	
Reactor Coolant System.....	3/4 4-19
Reactor Steam Dome.....	3/4 4-23
3/4.4.7 MAIN STEAM LINE ISOLATION VALVES.....	3/4 4-24
3/4.4.8 STRUCTURAL INTEGRITY.....	3/4 4-25
3/4.4.9 RESIDUAL HEAT REMOVAL	
Hot Shutdown.....	3/4 4-26
Cold Shutdown.....	3/4 4-28
3/4.4.10 CORE THERMAL HYDRAULIC STABILITY.....	3/4 4-30
<u>3/4.5 EMERGENCY CORE COOLING SYSTEMS</u>	
3/4.5.1 ECCS - OPERATING.....	3/4 5-1
3/4.5.2 ECCS - SHUTDOWN.....	3/4 5-6
3/4.5.3 SUPPRESSION CHAMBER.....	3/4 5-8

INDEX

LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

SECTION

PAGE

3/4.11 RADIOACTIVE EFFLUENTS

3/4.11.1 LIQUID EFFLUENTS

Liquid Holdup Tanks..... 3/4 11-7

3/4.11.2 GASEOUS EFFLUENTS

Explosive Gas Mixture..... 3/4 11-16

Main Condenser..... 3/4 11-17

3/4.12 DELETED

BASES

<u>SECTION</u>	<u>PAGE</u>
<u>3/4.0 APPLICABILITY</u>	B 3/4 0-1
<u>3/4.1 REACTIVITY CONTROL SYSTEMS</u>	
3/4.1.1 SHUTDOWN MARGIN.....	B 3/4 1-1
3/4.1.2 REACTIVITY ANOMALIES.....	B 3/4 1-1
3/4.1.3 CONTROL RODS.....	B 3/4 1-2
3/4.1.4 CONTROL ROD PROGRAM CONTROLS.....	B 3/4 1-3
3/4.1.5 STANDBY LIQUID CONTROL SYSTEM.....	B 3/4 1-4
<u>3/4.2 POWER DISTRIBUTION LIMITS</u>	
3/4.2.1 AVERAGE PLANAR LINEAR HEAT GENERATION RATE.....	B 3/4 2-1
3/4.2.3 MINIMUM CRITICAL POWER RATIO.....	B 3/4 2-3
3/4.2.4 LINEAR HEAT GENERATION RATE.....	B 3/4 2-4
<u>3/4.3 INSTRUMENTATION</u>	
3/4.3.1 REACTOR PROTECTION SYSTEM INSTRUMENTATION.....	B 3/4 3-1
3/4.3.2 ISOLATION ACTUATION INSTRUMENTATION.....	B 3/4 3-2
3/4.3.3 EMERGENCY CORE COOLING SYSTEM ACTUATION INSTRUMENTATION.....	B 3/4 3-2
3/4.3.4 ATWS RECIRCULATION PUMP TRIP SYSTEM ACTUATION INSTRUMENTATION.....	B 3/4 3-3
3/4.3.5 REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION.....	B 3/4 3-3
3/4.3.6 CONTROL ROD BLOCK INSTRUMENTATION.....	B 3/4 3-3
3/4.3.7 MONITORING INSTRUMENTATION	
Radiation Monitoring Instrumentation.....	B 3/4 3-3
Deleted.....	B 3/4 3-4

BASES

SECTION

PAGE

INSTRUMENTATION (Continued)

MONITORING INSTRUMENTATION (Continued)

	Deleted.....	B 3/4 3-4	
	Remote Shutdown System Instrumentation and Controls.....	B 3/4 3-4	
	Accident Monitoring Instrumentation.....	B 3/4 3-4	
	Source Range Monitors... ..	B 3/4 3-4	
	Deleted.....	B 3/4 3-4	
	Deleted....	B 3/4 3-5	
	Deleted.....	B 3/4 3-5	
	Deleted.....	B 3/4 3-5	
	Explosive Gas Monitoring Instrumentation.....	B 3/4 3-6	
3/4.3.9	FEEDWATER/MAIN TURBINE TRIP SYSTEMS ACTUATION INSTRUMENTATION.....	B 3/4 3-6	
3/4.3.10	RESERVED		
3/4 3.11	APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION.....	B 3/4 3-6	

3/4.4 REACTOR COOLANT SYSTEM

3/4.4.1	RECIRCULATION SYSTEM.....	B 3/4 4-1
3/4.4.2	SAFETY/RELIEF VALVES.....	B 3/4 4-1a
3/4.4.3	REACTOR COOLANT SYSTEM LEAKAGE	
	Leakage Detection Systems.....	B 3/4 4-2
	Operational Leakage.....	B 3/4 4-2
3/4.4.4	CHEMISTRY.....	B 3/4 4-2
3/4.4.5	SPECIFIC ACTIVITY.....	B 3/4 4-3
3/4.4.6	PRESSURE/TEMPERATURE LIMITS.....	B 3/4 4-4
3/4.4.7	MAIN STEAM LINE ISOLATION VALVES.....	B 3/4 4-5
3/4.4.8	STRUCTURAL INTEGRITY.....	B 3/4 4-5
3/4.4.9	RESIDUAL HEAT REMOVAL.....	B 3/4 4-5

3/4.4 REACTOR COOLANT SYSTEM (Continued)

3/4.4.10 CORE THERMAL HYDRAULIC STABILITY..... B 3/4 4-8

3/4.5 EMERGENCY CORE COOLING SYSTEMS

3/4.5.1/2 ECCS - OPERATING and SHUTDOWN..... B 3/4 5-1

3/4.5.3 SUPPRESSION CHAMBER..... B 3/4 5-2

3/4.6 CONTAINMENT SYSTEMS

3/4.6.1 PRIMARY CONTAINMENT

Primary Containment Integrity..... B 3/4 6-1

Primary Containment Leakage..... B 3/4 6-1

Primary Containment Air Locks..... B 3/4 6-1a

MSIV Leakage Control System..... B 3/4 6-2

Primary Containment Structural Integrity..... B 3/4 6-2

Drywell and Suppression Chamber Internal
Pressure..... B 3/4 6-2

Drywell Average Air Temperature..... B 3/4 6-2a

Drywell and Suppression Chamber Purge System.... B 3/4 6-2a

3/4.6.2 DEPRESSURIZATION SYSTEMS..... B 3/4 6-3

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES..... B 3/4 6-6

3/4.6.4 VACUUM RELIEF..... B 3/4 6-6

3/4.6.5 SECONDARY CONTAINMENT..... B 3/4 6-6a

3/4.6.6 PRIMARY CONTAINMENT ATMOSPHERE CONTROL..... B 3/4 6-7

INDEX

LIST OF TABLES (Continued)

<u>TABLE</u>	<u>PAGE</u>
4.3.4-1 ATWS RECIRCULATION PUMP TRIP ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-35
3.3.5-1 REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION	3/4 3-37
3.3.5-2 REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION SETPOINTS	3/4 3-39
4.3.5.1-1 REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-40
3.3.6-1 CONTROL ROD BLOCK INSTRUMENTATION	3/4 3-42
3.3.6-2 CONTROL ROD BLOCK INSTRUMENTATION SETPOINTS	3/4 3-44
4.3.6-1 CONTROL ROD BLOCK INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-45
3.3.7.1-1 RADIATION MONITORING INSTRUMENTATION	3/4 3-48
4.3.7.1-1 RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-50
3.3.7.2-1 DELETED	3/4 3-52
4.3.7.2-1 DELETED	3/4 3-53
3.3.7.3-1 DELETED	3/4 3-55
4.3.7.3-1 DELETED	3/4 3-56
3.3.7.4-1 REMOTE SHUTDOWN SYSTEM INSTRUMENTATION	3/4 3-58
4.3.7.4-1 REMOTE SHUTDOWN MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-59
3.3.7.5-1 ACCIDENT MONITORING INSTRUMENTATION	3/4 3-61
4.3.7.5-1 ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS	3/4 3-63

LIST OF TABLES (Continued)

<u>TABLE</u>	<u>PAGE</u>
3.3.7.9-1 DELETED.....	3/4 3-68
3.3.7.12-1 EXPLOSIVE GAS MONITORING INSTRUMENTATION.....	3/4 3-77
4.3.7.12-1 EXPLOSIVE GAS MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-81
3.3.9-1 FEEDWATER/MAIN TURBINE TRIP SYSTEM ACTUATION INSTRUMENTATION.....	3/4 3-87
3.3.9-2 FEEDWATER/MAIN TURBINE TRIP SYSTEM ACTUATION INSTRUMENTATION SETPOINTS.....	3/4 3-88
4.3.9.1-1 FEEDWATER/MAIN TURBINE TRIP SYSTEM ACTUATION INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-89
3.3.11-1 APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION..	3/4 3-91
4.3.11.1-1 APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION SURVEILLANCE REQUIREMENTS.....	3/4 3-92
3.4.3.2-1 REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES.....	3/4 4-12
3.4.3.2-2 REACTOR COOLANT SYSTEM INTERFACE VALVES LEAKAGE PRESSURE MONITORS.....	3/4 4-12
3.4.4-1 REACTOR COOLANT SYSTEM CHEMISTRY LIMITS.....	3/4 4-15
4.4.5-1 PRIMARY COOLANT SPECIFIC ACTIVITY SAMPLE AND ANALYSIS PROGRAM.....	3/4 4-18
4.4.6.1.3-1 REACTOR VESSEL MATERIAL SURVEILLANCE PROGRAM-- WITHDRAWAL SCHEDULE.....	3/4 4-22
4.6.1.1-1 PRIMARY CONTAINMENT ISOLATION VALVES/FLANGES LOCATED IN LOCKED HIGH RADIATION AREAS.....	3/4 6-1b
3.6.3-1 DELETED.....	3/4 6-22
3.6.5.2-1 SECONDARY CONTAINMENT VENTILATION SYSTEM AUTOMATIC ISOLATION DAMPERS.....	3/4 6-53
4.7.2.1-1 CONTROL ROOM EMERGENCY FILTRATION SYSTEM DUCT LEAK TESTING SURVEILLANCE REQUIREMENTS.....	3/4 7-10b
3.7.3-1 SURVEY POINTS FOR SHORE BARRIER.....	3/4 7-12
4.7.5-1 SNUBBER VISUAL INSPECTION INTERVAL.....	3/4 7-20a
3.7.7.5-1 DELETED.....	3/4 7-32
3.7.7.6-1 DELETED.....	3/4 7-37
4.8.1.1.2-1 DELETED.....	3/4 8-8

INSTRUMENTATION

3/4.3.7.2 DELETED

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TABLE 3.3.7.2-1

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INSTRUMENTATION

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TABLE 3.3.7.3-1

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TABLE 4.3.7.3-1

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INSTRUMENTATION

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INSTRUMENTATION

BASES

3/4.3.4 ATWS RECIRCULATION PUMP TRIP SYSTEM ACTUATION INSTRUMENTATION

The anticipated transient without scram (ATWS) recirculation pump trip system provides a means of limiting the consequences of the unlikely occurrence of a failure to scram during an anticipated transient. The response of the plant to this postulated event falls within the envelope of study events in General Electric Company Topical Report NEDO-10349, dated March 1971, NEDO-24222, dated December 1979, and Appendix 15B.8 of the FSAR.

Operation with a trip set less conservative than its Trip Setpoint but within its specified Allowable Value is acceptable on the basis that the difference between each Trip Setpoint and the Allowable Value is equal to or less than the drift allowance assumed for each trip in the safety analyses.

3/4.3.5 REACTOR CORE ISOLATION COOLING SYSTEM ACTUATION INSTRUMENTATION

The reactor core isolation cooling system actuation instrumentation is provided to initiate actions to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without providing actuation of any of the emergency core cooling equipment.

Operation with a trip set less conservative than its Trip Setpoint but within its specified Allowable Value is acceptable on the basis that the difference between each Trip Setpoint and the Allowable Value is equal to or less than the drift allowance assumed for each trip in the safety analyses.

3/4.3.6 CONTROL ROD BLOCK INSTRUMENTATION

The control rod block functions are provided consistent with the requirements of the specifications in Section 3/4.1.4, Control Rod Program Controls and Section 3/4.2 Power Distribution Limits. The trip logic is arranged so that a trip in any one of the inputs will result in a control rod block.

Operation with a trip set less conservative than its Trip Setpoint but within its specified Allowable Value is acceptable on the basis that the difference between each Trip Setpoint and the Allowable Value is equal to or less than the drift allowance assumed for each trip in the safety analyses.

3/4.3.7 MONITORING INSTRUMENTATION

3/4.3.7.1 RADIATION MONITORING INSTRUMENTATION

The OPERABILITY of the radiation monitoring instrumentation ensures that; (1) the radiation levels are continually measured in the areas served by the individual channels; (2) the alarm or automatic action is initiated when the radiation level trip setpoint is exceeded; and (3) sufficient information is available on selected plant parameters to monitor and assess these variables following an accident. This capability is consistent with 10 CFR Part 50, Appendix A, General Design Criteria 19, 41, 60, 61, 63, 64.

INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION (Continued)

3.4.3.7.2 DELETED

3/4.3.7.3 DELETED

3/4.3.7.4 REMOTE SHUTDOWN SYSTEM INSTRUMENTATION AND CONTROLS

The OPERABILITY of the remote shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the unit from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criterion 19 of 10 CFR Part 50.

3/4.3.7.5 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0737, "Clarification of TMI Action Plan Requirements," November 1980.

The multiple noble gas monitors installed on each division of the Standby Gas Treatment System provide the necessary monitoring capabilities to assure that the normal and extended monitoring ranges required by NUREG-0737 and Regulatory Guide 1.97 are met.

3/4.3.7.6 SOURCE RANGE MONITORS

The source range monitors provide the operator with information of the status of the neutron level in the core at very low power levels during startup and shutdown. At these power levels, reactivity additions shall not be made without this flux level information available to the operator. When the intermediate range monitors are on scale, adequate information is available without the SRMs and they can be retracted.

3/4.3.7.7 DELETED

INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION (Continued)

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3/4.3.7.10 DELETED |

INSTRUMENTATION

BASES

MONITORING INSTRUMENTATION (Continued)

3/4.3.7.12 EXPLOSIVE GAS MONITORING INSTRUMENTATION

The explosive gas monitoring instrumentation is provided to monitor the concentrations of potentially explosive gas mixtures in the main condenser offgas treatment system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

3/4.3.9 FEEDWATER/MAIN TURBINE TRIP SYSTEM ACTUATION INSTRUMENTATION

The feedwater/main turbine trip system actuation instrumentation is provided to initiate action of the feedwater system/main turbine trip system in the event of a high reactor vessel water level due to failure of the feedwater controller under maximum demand.

3/4.3.11 APPENDIX R ALTERNATIVE SHUTDOWN INSTRUMENTATION

The OPERABILITY of the alternative shutdown system ensures that a fire will not preclude achieving safe shutdown. The alternative shutdown system instrumentation is independent of areas where a fire could damage systems normally used to shutdown the reactor. Thus, the system capability is consistent with General Design Criterion 3 and Appendix R to 10 CFR 50.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 115 TO FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter dated September 29, 1997, as supplemented on March 10, 1998, the Detroit Edison Company (DECo or the licensee) requested an amendment to the Technical Specifications (TSs) appended to Facility Operating License No. NPF-43 for Fermi 2. The March 10, 1998, supplement requested a change in the implementation period and was not outside the scope of the initial proposed no significant hazards consideration determination.

The proposed amendment would revise the TS and the associated bases by relocating the requirements for selected instrumentation to the updated final safety analysis report (UFSAR). The affected TSs are:

- TS 3/4.3.7.2, Seismic Monitoring Instrumentation
- TS 3/4.3.7.3, Meteorological Monitoring Instrumentation
- TS 3/4.3.7.7, Traversing In-Core Probe System
- TS 3/4.3.7.8, Chlorine Detection System
- TS 3/4.3.7.10, Loose-Part Detection System

These changes would be made in accordance with the guidance in Generic Letter (GL) 95-10, "Relocation of Selected Technical Specifications Requirements Related to Instrumentation," dated December 15, 1995.

2.0 BACKGROUND

Section 182a of the Atomic Energy Act (the Act) requires applicants for nuclear power plant operating licenses to include TSs as part of the license. In Section 50.36 of Title 10 of the Code of Federal Regulations (10 CFR 50.36), the Commission established the regulatory requirements related to the content of TSs. That regulation requires that the TSs include items in five specific categories, including (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. However, the regulation does not specify the particular requirements to be included in TSs.

The NRC developed criteria, as described in the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors" (58 FR 39132), to determine which of the design conditions and associated surveillances should be located in the TSs as limiting conditions for operation. Four criteria were subsequently incorporated into the regulations by an amendment to 10 CFR 50.36 (60 FR 36953):

1. installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
2. a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
3. a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier;
4. a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety.

The Commission's Final Policy Statement and documentation related to the revision of 10 CFR 50.36 acknowledged that implementation of these criteria may cause some requirements presently in TSs to be moved out of existing TSs to documents and programs controlled by licensees.

GL 95-10 addresses the relocation of selected TS requirements related to instrumentation as a result of applying the 10 CFR 50.36 criteria. On reviewing typical TSs for nuclear power reactors, the staff determined that, in accordance with the 10 CFR 50.36 criteria, several specifications did not warrant inclusion in TSs. The staff also concluded that the instrumentation addressed by these specifications are not related to dominant contributors to plant risk. The following typical TSs are among the candidates for relocation to licensee-controlled documents:

- Incore Detectors (Movable Incore Detectors, Traversing Incore Probe)
- Seismic Monitoring Instrumentation
- Meteorological Monitoring Instrumentation
- Chlorine Detection System
- Loose-Part Detection System
- Explosive Gas Monitoring Instrumentation
- Turbine Overspeed Protection

The generic letter indicated that licensees could request a license amendment to relocate selected instrumentation requirements of this type from the TSs to licensee-controlled documents or programs.

3.0 EVALUATION

In GL 95-10, NRC requested licensees that request an amendment to relocate instrumentation requirements to include a commitment to relocate each selected requirement to a particular licensee-controlled document or program, (e.g., the UFSAR or the emergency plan) and to address the submittal of the revised documents to the NRC in accordance with the applicable regulation (e.g., 10 CFR 50.71(e)). In addition, the licensee should clearly describe the program it will use to control changes to relocated provisions (e.g., 10 CFR 50.59 or 50.54(q)).

In its submittal, Detroit Edison stated that, contingent upon NRC approval, it committed to relocate the five subject TSs to the UFSAR (except for Special Report requirements) and control their future changes pursuant to the requirements of 10 CFR 50.59. The licensee stated that NRC reporting criteria of 10 CFR 50.72, "Immediate Notification Requirements for Operating Nuclear Reactors," and 10 CFR 50.73, "Licensee Event Report Systems" provide appropriate requirements for reporting degraded and nonconforming conditions to the NRC and that the elimination of such Special Reports is an administrative change and consistent with NUREG-1433, "Standard Technical Specifications - General Electric Plants, BWR/4," April 1995. In addition, the licensee stated that the NRC will receive, in accordance with 10 CFR 50.71(e), future changes to these relocated TSs in the form of UFSAR revisions.

The information supplied by the licensee satisfies the request in GL 95-10. In addition, the staff has concluded that eliminating the special reporting requirements is an administrative change that will be replaced by the reporting requirements of 10 CFR 50.72 and 10 CFR 50.73. This administrative change will have no effect on the health and safety of the public. Therefore, the staff finds this change acceptable. The following sections provide the staff's evaluation of the relocation for each of the affected instruments.

3.1 Seismic Instrumentation

In its submittal the licensee stated:

The Seismic Monitoring Instrumentation is described in Fermi 2 UFSAR Section 3.7.4, "Seismic Instrumentation Program." This instrumentation is provided in accordance with 10 CFR 100, "Reactor Site Criteria," Appendix A, Section VI(a)(3), "Required Seismic Instrumentation," to promptly determine the magnitude of a seismic event so the effect on those plant features important to safety may be evaluated. This capability is provided to permit comparison of the measured response to that used in the design basis for the plant. Comparison of such data is used to determine whether the plant can operate safely, and permit timely action as may be appropriate. The Seismic Monitoring Instrumentation has no nuclear safety related function and does not automatically shut down the plant when an earthquake occurs which exceeds a predetermined intensity.

An evaluation of the Seismic Monitoring Instrumentation with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: Seismic Monitoring Instrumentation is not installed instrumentation that is used to detect degradation of the reactor coolant pressure boundary. The instrumentation is not installed for, or capable of, detecting reactor coolant leakage. The NRC's Final Policy Statement and GL 95-10 explicitly identify the Seismic Monitoring Instrumentation as an example of controls that are not required to be retained in the TS. This instrumentation does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 2: Seismic Monitoring Instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. It is provided to promptly detect and determine the magnitude of a seismic event so that the effect on those plant features, important to safety, may be evaluated. This instrumentation does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 3: The Seismic Monitoring Instrumentation is not a component that is part of the primary success path and it does not provide a function or actuation in order to mitigate the consequences of a Design Basis Accident or Transient. This instrumentation does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 4: The Seismic Monitoring Instrumentation has not been shown to be significant to public health and safety by either operational experience or probabilistic risk assessment. Seismic Monitoring Instrumentation was not included in the scope of the Fermi 2 Individual Plant Examination or the Individual Plant Examination for External Events, nor is it "risk significant" under the Fermi 2 Maintenance Rule Program. This instrumentation does not meet Criterion 4 of 10 CFR 50.36 (c)(2)(ii) for inclusion in TS.

In GL 95-10, the NRC staff also evaluated the seismic monitoring instrumentation with respect to the 10 CFR 50.36 criteria. The staff concluded that the seismic instrumentation does not serve as a protective design feature or part of a primary success path for events that challenge fission product barriers and that the seismic monitoring instrumentation does not satisfy the 10 CFR 50.36 criteria and need not be included in the TSs. Based on the generic staff review and the licensee's submittal, the staff concludes that relocating the seismic instrumentation requirements from the TSs to the UFSAR is acceptable.

3.2 Meteorological Monitoring Instrumentation

In its submittal the licensee stated:

The Meteorological Monitoring Instrumentation is described in Fermi 2 UFSAR Section 2.3.3.2, "Operational Meteorological Monitoring System."

The Meteorological Monitoring Instrumentation is used to measure environmental parameters (wind speed, wind direction and air temperature differences) which may affect the distribution of radioactive effluents following a release of radioactive material. In 10 CFR 50.47, "Emergency Plans," and 10 CFR 50, Appendix E, "Emergency Planning and

Preparedness for Production and Utilization Facilities," the NRC requires that licensees provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. Timely access to accurate local meteorological data is important for estimating potential radiation doses to the public and for determining appropriate protective measures.

In 10 CFR 50.36a(a)(2), "Technical Specifications on Effluents from Nuclear Power Reactors," the NRC requires licensees to submit annual reports specifying the quantity of each of the [principal] radionuclides released to unrestricted areas in liquid and airborne effluents, and such other information as may be required by the NRC to estimate maximum potential annual doses to the public. A knowledge of meteorological conditions in the vicinity of the plant is important in providing a basis for estimating annual radiation doses to the public from either routine or accidental releases of radioactive materials to the atmosphere.

An evaluation of the Meteorological Monitoring Instrumentation with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: The Meteorological Monitoring Instrumentation is not installed instrumentation that is used to detect degradation of the reactor coolant pressure boundary. This instrumentation is not installed for, or capable of, detecting reactor coolant leakage. It is used to assess the need for recommending protective measures following an accident. This instrumentation does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 2: The Meteorological Monitoring Instrumentation is not a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. This instrumentation does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 3: The Meteorological Monitoring Instrumentation is not a component that is part of the primary success path and it does not provide a function or actuation in order to mitigate the consequences of a Design Basis Accident or Transient. This instrumentation does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 4: Although important for use in estimating potential radiation doses to the public and for determining appropriate protective measures, the Meteorological Monitoring Instrumentation has not been shown to be significant to public health and safety by either operational experience or probabilistic safety assessment. This instrumentation cannot be used to predict, prevent, or directly mitigate the consequences of a Design Basis Accident. This instrumentation was not included in the scope of the Fermi 2 Individual Plant Examination or the Individual Plant Examination for External Events, nor is it "risk significant" under the Fermi 2 Maintenance Rule Program. This instrumentation does not meet Criterion 4 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

In GL 95-10, the NRC staff also evaluated the meteorological monitoring instrumentation with respect to the 10 CFR 50.36 criteria. The staff concluded that this instrumentation does not serve to ensure that the plant is operated within the bounds of initial conditions assumed in design-basis accident and transient analyses or that the plant will be operated to preclude transients or accidents. Likewise, the meteorological instrumentation does not serve as part of the primary success path of a safety sequence analysis used to demonstrate that the consequences of these events are within the appropriate acceptance criteria. Accordingly, the staff concluded that the meteorological instrumentation does not meet the 10 CFR 50.36 criteria and need not be included in TSs. Based on the generic staff review and the licensee's submittal, the staff concludes that relocating the meteorological monitoring instrumentation requirements from the TSs to the UFSAR is acceptable.

3.3 Traversing In-Core Probe System

In its submittal the licensee stated:

The Traversing In-Core Probe System is described in the Fermi 2 UFSAR, Sections 7.1.2.1.4.6, "Traversing In-Core Probe System," and 7.6.1.13.8, "Traversing In-Core Probe System."

The Traversing In-Core Probe System provides a signal proportional to the axial neutron flux distribution over the regions of the core where the Local Power Range Monitor System detection assemblies are located. This signal is of high precision to allow reliable calibration of the Local Power Range Monitor System. These signals do not provide direct input to the Reactor Protection System, the isolation actuation instrumentation, or the Emergency Core Cooling System actuation instrumentation.

An evaluation of the Traversing In-Core Probe System with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: The Traversing In-Core Probe System is not installed instrumentation that is used to detect degradation of the reactor coolant pressure boundary. It is used as a calibration and measurement tool. This system is not installed for, or capable of, detecting reactor coolant leakage. This system does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 2: This system is not a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Although the core power distributions (measured by the in-core probe) constitute an important initial condition to Design Basis Accidents and, therefore, will continue to be addressed by TS 3/4.2, "Power Distribution Limits," the probe itself is not an active design feature needed to preclude analyzed accidents or transients. The Local Power Range Monitor System itself will continue to be required to be operable per TS 3/4.3.1, "Reactor Protection System," and calibrated at least once per 1000 effective full power hours using the Traversing In-Core Probe System under TS Table 4.3.1.1-1, "Reactor Protection System Instrumentation Surveillance

Requirements." Therefore, this system does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 3: This system is not part of the primary success path and does not provide a function or actuation in order to mitigate the consequences of a Design Basis Accident or Transient. This system does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 4: This system has not been shown to be significant to public health and safety by either operational experience or probabilistic safety assessment. This system was not included in the scope of the Fermi 2 Individual Plant Examination or the Individual Plant Examination for External Events, nor is it "risk significant" under the Fermi 2 Maintenance Rule Program. This system does not meet Criterion 4 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

In GL 95-10, the NRC staff also evaluated the traversing in-core probe system with respect to the 10 CFR 50.36 criteria. The staff concluded that these instruments are neither used for, nor capable of, detecting a significant abnormal degradation of the reactor coolant pressure boundary before a design-basis accident, nor do they function as a primary success path to mitigate events that assume a failure of or a challenge to the integrity of fission product barriers. Although the core power distributions (measured by the incore detectors) constitute an important initial condition to design-basis accidents and therefore need to be addressed by TSs, the detectors themselves are not an active design feature needed to preclude analyzed accidents or transients. The staff determined, therefore, that the incore detector requirements do not meet the criteria of 10 CFR 50.36 for inclusion in TSs. Based on the generic staff review and the licensee's submittal, the staff concludes that relocating the traversing in-core probe system requirements from the TSs to the UFSAR is acceptable.

3.4 Chlorine Detection System

In its submittal the licensee stated:

The Chlorine Detection System is described in Fermi 2 UFSAR Sections 6.4.2.3, "Air Conditioning System," and 6.4.3.4, "Air Conditioning System - Control of Main Control Room Chemical Environment." The Chlorine Detector System is consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators against an Accidental Chlorine Release," Revision 1, January 1977. Quick-response chlorine detectors are located in the normal air intake to the Control Center Air Conditioning System (CCACS). On detection of chlorine concentrations greater than or equal to 5 ppm, the detectors automatically initiate complete isolation of the main control room. Therefore, the Chlorine Detection System ensures that an accidental chlorine release will be promptly detected and the protective actions will be automatically initiated to provide protection for control room personnel.

An evaluation of the Chlorine Detection System with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: The Chlorine Detection System is not installed instrumentation that is used to detect degradation of the reactor coolant pressure boundary. This system is not installed for, or capable of, detecting reactor coolant leakage. It is used to automatically initiate isolation of the CCACS in the event of an accidental release offsite of chlorine. This system does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 2: The Chlorine Detection System is not a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. This system does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 3: The Chlorine Detection System is not a component that is part of the primary success path and it does not provide a function or actuation in order to mitigate the consequences of a Design Basis Accident or Transient. The Control Center Air Conditioning System will continue to be required by TS 3/4.7.2, "Control Room Emergency Filtration System," Surveillance Requirement 4.7.2.1.e.3 to automatically switch to the chlorine mode of operation upon a chlorine actuation signal. However, this system does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 4: The Chlorine Detection System has not been shown to be significant to the public health and safety by either operational experience or probabilistic safety assessment. This system was not included in the scope of the Fermi 2 Individual Plant Examination or the Individual Plant Examination for External Events, nor is it "risk significant" under the Fermi 2 Maintenance Rule Program. This system does not meet Criterion 4 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

In GL 95-10, the NRC staff also evaluated the chlorine detection system with respect to the 10 CFR 50.36 criteria. The staff concluded that the system may serve an important role in protecting control room personnel from internal or external hazards related to toxic gases. However, the release of chlorine or other hazardous chemicals is not part of an initial condition of a design-basis accident or transient analysis that assumes a failure of or presents a challenge to the integrity of a fission product barrier. Since the release of toxic gases is not assumed to initiate or occur simultaneously with design-basis accidents or transients involving challenges to fission product barriers, the chlorine detection system is not part of a success path for the mitigation of those accidents or transients. The staff concluded that requirements for this system do not meet the 10 CFR 50.36 criteria and need not be included in TSs. Based on the generic staff review and the licensee's submittal, the staff concludes that relocating the chlorine detection system requirements from the TSs to the UFSAR is acceptable.

3.5 Loose-Part Detection System

In its submittal the licensee stated:

The Loose-Part Detection System is described in UFSAR Section 4.4.6.2, "Loose-Part Monitoring System." This system is provided in response to the recommendations of

Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors", May 1981. The purpose of this system is to identify the existence of possible loose parts in the Reactor Coolant System. Early detection can provide operators time to take corrective actions and to avoid or mitigate damage to or malfunctions of primary system components.

An evaluation of the Loose-Parts Detection System with respect to the four criteria of 10 CFR 50.36(c)(2)(ii) follows:

Criterion 1: The Loose-Parts Detection System is not installed instrumentation that is used to detect a significant abnormal degradation of the reactor coolant pressure boundary. This system is not installed for, or capable of, detecting reactor coolant leakage. The NRC's Final Policy statement and GL 95-10 explicitly identify this system as an example of controls that are not required to be retained in the TS. This system does not meet Criterion 1 of 10 CFR 50.36(c)(2)(ii) for inclusion in the TS.

Criterion 2: This system is not a process variable, design feature, or operating restriction that is an initial condition of a Design Basis Accident or Transient Analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. This system does not meet Criterion 2 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 3: This system is not a component that is part of the primary success path and it does not provide a function or actuation in order to mitigate the consequences of a Design Basis Accident or Transient. This system does not meet Criterion 3 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

Criterion 4: This system has not been shown to be significant to public health and safety by either operational experience or probabilistic safety assessment. This system was not included in the scope of the Fermi 2 Individual Plant Examination or the Individual Plant Examination for External Events, nor is it "risk significant" under the Fermi 2 Maintenance Rule Program. This system does not meet Criterion 4 of 10 CFR 50.36(c)(2)(ii) for inclusion in TS.

In GL 95-10, the NRC staff also evaluated the loose-part detection system with respect to the 10 CFR 50.36 criteria. The staff concluded that the system does not function to detect significant abnormal degradation of the reactor coolant pressure boundary and that it does not serve as an active design feature for establishing initial conditions or mitigation of design basis accidents or transients. The staff concluded that requirements for this system do not satisfy the 10 CFR 50.36 criteria and need not be included in TSs. Based on the generic staff review and the licensee's submittal, the staff concludes that relocating the loose-part detection system requirements from the TS to the UFSAR is acceptable.

3.6 Overall Conclusion

The licensee has provided justification, consistent with GL 95-10, for the relocation of the subject instrumentation requirements from the TSs to the UFSAR. The staff has concluded that

the control of the relocated provisions in accordance with the applicable regulation ensures that NRC review and approval will be requested for changes exceeding the stated regulatory threshold (e.g., an unreviewed safety question). In addition, the staff has concluded that the elimination of the special reporting requirements is an administrative change that will be replaced by the reporting requirements of 10 CFR 50.72 and 10 CFR 50.73. Updating the TS Index and List of Tables is also an administrative change to reflect the relocation of the above TSs and their associated bases. Therefore, the staff concludes that the proposed changes are 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. The 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 (62 FR 54870). 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: Andrew J. Kugler

Date: March 17, 1998