September 8, 2000

Mr. William O'Connor, Jr.
Vice President
Nuclear Generation
Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI INSPECTION REPORT 50-341/2000008(DRP)

Dear Mr. O'Connor:

On August 17, 2000, the NRC completed an inspection at your Fermi 2 reactor facility. The results were discussed with Mr. Hlavaty and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, this inspection focused on resident inspection activities.

Based on the results of this inspection, the NRC did not identify any issues which were categorized as being risk significant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from* the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

/RA/

Mark A. Ring, Chief
Reactor Projects Branch 1

Docket No. 50-341
License No. NPF-43

Enclosure: Inspection Report 50-341/2000008(DRP)

See Attached Distribution

September 8, 2000

Mr. William O'Connor, Jr.
Vice President
Nuclear Generation
Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI INSPECTION REPORT 50-341/2000008(DRP)

Dear Mr. O'Connor:

On August 17, 2000, the NRC completed an inspection at your Fermi 2 reactor facility. The results were discussed with Mr. Hlavaty and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, this inspection focused on resident inspection activities.

Based on the results of this inspection, the NRC did not identify any issues which were categorized as being risk significant.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available **electronically** for public inspection in the NRC Public Document Room **or** from the *Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from* the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

We will gladly discuss any questions you have concerning this inspection.

Sincerely,

/RA/

Mark A. Ring, Chief
Reactor Projects Branch 1

Docket No. 50-341
License No. NPF-43

Enclosure: Inspection Report 50-341/2000008(DRP)

See Attached Distribution

DOCUMENT NAME: G:\FERM\fer2000008.wpd

To receive a copy of this document, indicate in the box:"C" = Copy without enclosure "**E**"= Copy with enclosure"**N**"= No copy

OFFICE	RIII	N	RIII	E	RIII			
NAME	RLerch:		MRing		JCreed			
DATE	09/07/00		09/08/00		09/07/00			

OFFICIAL RECORD COPY

cc w/encl: N. Peterson, Director, Nuclear Licensing
P. Marquardt, Corporate Legal Department
Compliance Supervisor
R. Whale, Michigan Public Service Commission
Michigan Department of Environmental Quality
Monroe County, Emergency Management Division
Emergency Management Division
MI Department of State Police

ADAMS Distribution:
CAC
DFT
AJK1 (Project Mgr.)
J. Caldwell, RIII
B. Clayton, RIII
SRI Fermi
DRP
DRSIII
RIII_IRTS
JRK1
BAH3

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	DPR-43
Report No:	50-341/2000008(DRP)
Licensee:	Detroit Edison Company
Facility:	Enrico Fermi, Unit 2
Location:	6400 N. Dixie Highway Newport, MI 48166
Dates:	July 7 through August 17, 2000
Inspectors:	S. Campbell, Senior Resident Inspector J. Larizza, Resident Inspector J. Belanger, Security Inspector
Approved by:	Mark A. Ring, Chief Reactor Projects Branch 1 Division of Reactor Projects

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 . years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

IR 05000341-00-08, on 7/7 - 8/17/00; Detroit Edison; Fermi 2; Resident Operations Report.

The inspection was conducted by the resident inspectors. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process. Based on the results of this inspection, there were no findings identified.

Report Details

Summary of Plant Status

The plant operated at or near 100 percent power until August 11, 2000, when reactor power was decreased to 65 percent to conduct pre-planned maintenance and testing activities, including main turbine valves testing and control rod pattern adjustments. The plant was returned to full power on August 13, where it remained for the duration of the inspection period.

1. REACTOR SAFETY

1R04 Equipment Alignments

.1 Equipment Alignment of the Standby Feedwater (SBFW) System

a. Inspection Scope (71111-04)

The inspectors walked down the Division 1 and Division 2 standby feedwater systems using the following documents as a guide:

- Procedure 24.107.03, "SBFW Pump and Valve Operability and Lineup Verification,"
- Procedure 23.107.01, SBFW System,"
- Drawing M-5713-3, "SBFW Functional Operating Sketch," and
- Drawing M-5715-4, "SBFW Lube Oil System Turbine Building (TB) Functional Operating Sketch."

b. Issues and Findings

There were no findings identified.

.2 Equipment Alignment of the Diesel Generator Service Water (SW) System

a. Inspection Scope (71111-04)

On July 13, 2000, the inspectors verified valve alignment by walking down Division 1 and Division 2 diesel generator service water systems using Procedures 24.307.05, "Diesel Generator SW Valve Lineup," and 24.205.08, "Residual Heat Removal (RHR) Reservoir Return Valves Lineup."

b. Issues and Findings

There were no findings identified.

.3 Equipment Alignment of the Reactor Core Isolation Cooling (RCIC) System

a. Inspection Scope (71111-04)

On August 6, 2000, the inspectors verified that the valve lineup was correct following post-maintenance testing at the completion of the planned RCIC maintenance outage. The inspectors used Procedure 24.206.01, "RCIC System Pump and Valve Operability Test," Section 6, "Independent Lineup Verification."

b. Issues and Findings

There were no findings identified.

1R05 Fire Protection Tour of the Division 1 Residual Heat Removal (RHR) Complex

a. Inspection Scope (71111-05)

On July 25, 2000, the inspectors toured the Division 1 RHR complex to verify the adequacy of the fire protection equipment in the building. To conduct the tour, the inspectors used the following documents:

- Procedure 28.505.05, "Fire Detection Zone 50 Operability Test, RHR Complex, Division 1 (South) Pump Room,"
- Procedure 23.501.02, "CO_2 Fire Suppression System,"
- Procedure 28.508.02, "Fire Extinguisher Yearly Maintenance Inspection,"
- Drawing M-5733-3, "CO_2 Halon Fire Detection System," and
- As-Built Notice 12808-1, Revision 0, "Increase in the Ambient Temperature in the Diesel Oil and the CO_2 Storage Rooms."

b. Issues and Findings

There were no findings identified.

1R12 Maintenance Rule Implementation

.1 Maintenance Rule Implementation of the Standby Feedwater System

a. Inspection Scope (71111-12)

The inspectors reviewed several condition assessment resolution documents (CARDs) associated with the standby feedwater system and the licensee's maintenance rule program.

b. Issues and Findings

There were no findings identified.

.2 Maintenance Rule Implementation for Risk-Significant Systems

a. Inspection Scope (71111-12)

The inspectors reviewed the licensee's implementation of the maintenance rule requirements for the core spray and reactor recirculation systems.

These systems were selected based on their being designated as risk-significant under the maintenance rule, or their being placed in the increased monitoring Maintenance Rule Category (1) group as in the case of the reactor recirculation system. The inspectors reviewed the first, the second and the third quarter 1999 performance reports, as well as applicable work requests (WRs) and CARDs associated with the systems.

b. Issues and Findings

There were no findings identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation on Several Systems

a. Inspection Scope (71111-13)

The inspectors reviewed the risk profile and work schedule for the week of August 6, 2000. The work activities included maintenance on the hydrogen recombiner and on the turbine building (TB) heating and ventilation system. The out-of-service TB heating and ventilation system was considered risk-significant because TB steam tunnel temperatures could increase to a high area temperature limit where a Group 1 isolation of the main steam isolation valves could occur. The inspectors reviewed the following documents:

- WR U901000100, "Rebuild and Recalibrate Center TB Exhaust Fan Pitch Positioner and Actuator,"
- WR 000Z984589, "Valve T4804F001A Leaks Past its Seat. Disassemble and Rework Valve as Required," and
- Risk Assessment for Week of August 6, 2000.

b. Issues and Findings

There were no findings identified.

1R14 Personnel Performance During Nonroutine Plant Evolutions and Events

a. Inspection Scope (71111-14)

On July 29, 2000, the north turbine building heating, ventilation, and air-conditioning (TBHVAC) fans tripped when the fan blades failed on the north exhaust fan. Condition Assessment Resolution Document 00-18926 was initiated to document the condition. Consequently, only one set of fans operated to maintain steam tunnel temperatures below a 190°F limit, specified in Procedure 23.412, "TBHVAC System." Meeting or exceeding the limit required immediate actions to restore TBHVAC or reduce reactor

power and shutdown the plant. Further, temperatures that exceed 200°F could cause a Group 1 main steam isolation valve isolation and reactor scram.

An investigation continues to determine the blade failure mechanism.

The inspectors discussed this condition with the licensee and reviewed the following procedures and documents:

- Control Room Logs,
- CARD 00-18926, "North TBHVAC Exhaust Tripped,"
- CARD 00-14755, Elevated TB Temperature, Contingency Action Recommendation,"
- CARD 00-17713, "Remove Steam Tunnel Plugs to Support TBHVAC Fan Maintenance,"
- Procedure 23.412, "TBHVAC System," and its Attachment A, "TB Area Temperature,"
- Procedure 24.000.02, "Shiftly, Daily and Weekly Surveillance," and its Attachment 3, Page 24 of 33, "Shiftly/Daily -- Mode 1, 2, 3 -- Plant" and
- Plant Support Engineering Impact Review, "Removal of TB Third Floor Steam Tunnel Plugs During Power Operation."

b. Issues and Findings

There were no findings identified.

1R15 Operability Evaluations

a. Inspection Scope (71111-15)

The inspectors reviewed a sampling of operability evaluations for risk-significant systems to assure availability and that no unrecognized increase in risk had occurred. The inspectors reviewed the following and discussed several of the conditions with the licensee to determine justification of operability:

- CARD 00-18253, "RHR Switchgear Room - 4160 Volt-Alternating Current Breaker Failed Trip Coil Acceptance Criteria Pickup Voltage,"
- CARD 00-18947, "Relay Room - Source Range Monitor 'A' Unsatisfactory Pre-Regulator Voltage (VR 27),"
- CARD 00-10989, "RHR Division 1 Pump Discharge Miniflow Line Valve (F007A) Flow Switch (E11N021A) Reset Data for the High Set Point Left out of Tolerance,"
- CARD 00-18759, "Relay Room - Bypass Local Power Range Monitor 32.57C,"
- CARD 00-10976, "Relay Room - Out of Spec Ripple Voltage for the Power Supply to Division 1 Containment Area High Range Radiation Monitoring System,"

- CARD 00-16979, “Top of Torus - Anomaly in Stroke Trace for Valve E1150F028B, ‘Division 2 RHR Torus Isolation Valve,’”
- CARD 00-18758, “EDG Fuel Oil Storage Room Ventilation - Preventive Maintenance Event Operability Impact,”
- CARD 00-17485, “Division 2 Control Center Heating Ventilation Air Conditioning Chiller Tripped When Auto Loaded on Low Oil Pressure,” and
- CARD 00-10973, Relay Room - Out of Spec Readings, Reactor Building Ventilation Exhaust Rad Monitor/Normal Control Center Heating Ventilation Air Conditioning Makeup Radiation Monitoring Division 2.”

b. Issues and Findings

There were no findings identified.

1R16 Operator Work Around

a. Inspection Scope (71111-16)

The inspectors reviewed Operations Department Instruction 002, “Operator Work Arounds (OWAs)” and evaluated the following OWAs to determine if the applicable system function was impacted or if the OWA affected the operator’s ability to execute abnormal or emergency operating procedures.

- Operator Work Around 00-011, “Recirculation Motor Generator ‘B’ Scoop Tube Locked Requiring Local Manual for Power Increase/Power Adjustments,”
- “Aggregate Assessment of OWAs” of all the OWAs when a new OWA is approved for use, and
- “Risk Assessment of Revised OWAs - July 2000.”

b. Issues and Findings

There were no findings identified.

1R19 Post Maintenance Testing

a. Inspection Scope (71111-19)

The inspectors witnessed the testing and/or reviewed the test data for the components and systems listed below to ensure compliance with design and licensing bases and to assure that the testing demonstrated that the equipment and system was capable of performing its intended function.

- Performance of Surveillance Procedure 24.206.001, “RCIC System Pump and Valve Operability Test,”
- Performance of Surveillance Procedure 24.409.02, “Division 1 Post Loss of Coolant Accident Thermal Recombiner System Valve Operability Test,” and

- Performance of Surveillance Procedure 24.205.05, " Division 1 RHR SW Pump and Valve Operability Test" following the Division 1 RHR/RHR SW Safety System Outage.

b. Issues and Findings

There were no findings identified.

1R22 Surveillance Testing

a. Inspection Scope (71111-22)

The inspectors witnessed surveillance tests and/or reviewed the test data for risk-significant structures, systems and components. The inspection included reviews of applicable Technical Specifications, the Updated Final Safety Analysis Report, the risk assessment associated with the surveillance testing and, where appropriate, the design basis documents and vendor manuals.

The following surveillance test procedures and plant documents were reviewed:

- Failed Surveillance 27.138, "Reactor Recirculation Jet Pump Riser Integrity Test," for Reactor Recirculation "B" Loop,
- Review of completed Surveillance 24.307.35, "Diesel Generator SW and Diesel Fuel Oil Tank Pump and Valve Operability Test - Emergency Diesel Generator (EDG) 12," and
- Review of completed Surveillance 24.409.01, "Post Loss of Coolant Accident Thermal Recombiner Functional Test," completed August 2 and August 4, 2000.

In addition, the inspectors reviewed and discussed with the licensee the following documents associated with the above tests:

- CARD 00-19062, "EDG 12 Fuel Oil Room - Discharge Check Valve Did Not Meet Acceptance Criteria,"
- Limiting Condition for Operation 00-0317, "EDG 12 Fuel Oil Transfer Pump 'A' Discharge Check Valve R3000F083C Failed Surveillance,"
- CARD 00-18919, "Relay Room Panel H11-P886 - Temperature Limit Not Reached in Required Time,"
- CARD 00-18510, "Failed Surveillance 27.138 for Reactor Recirculation System 'B' Pump,"
- CARD 98-15784, "Failure of Performance Evaluation 27.138," and
- Procedure 27.138, "Reactor Recirculation Jet Pump Riser Integrity Test."

b. Issues and Findings

There were no findings identified.

1R23 Temporary Plant Modification

a. Inspection Scope (71111-23)

The inspectors reviewed Temporary Modification (TM) 98-0025, “Disconnect the ‘Normally Open Contact’ Wire at Main Turbine Low Pressure Exhaust Hood Temperature Protection Switch.” The inspectors reviewed the applicable portion of the Technical Specifications and the Updated Final Safety Analysis Report.

b. Issues and Findings

There were no findings identified.

Emergency Preparedness (EP)

1EP6 Drill, Exercise and Actual Events

a. Inspection Scope (71114-06)

On July 19, 2000, inspectors reviewed the drill, witnessed portions of the drill/exercise in the Fermi Simulator Control Room and the Emergency Offsite Facility, and evaluated the adequacy of conduct of drills and critiques of the performance of drills by the licensee.

b. Issues and Findings

There were no findings identified.

3. SAFEGUARDS (PP)

1PP4 Security Plan Changes

a. Inspection Scope (71130-04)

The inspectors conducted an in-office review of Revision 35 to the Fermi 2 Physical Security Plan . The revision was submitted under the provisions of 10 CFR 50.54(p)(2) by licensee letter dated June 2, 2000.

b. Issues and Findings

There were no findings identified.

1. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

.1 Unplanned Power Changes Per 7000 Critical Hours

a. Inspection Scope (71151)

The inspectors reviewed NRC inspection reports of Fermi, licensee operations logs, reports of monthly operating data and licensee event reports for the period of April 1, 1999, to June 30, 2000, to verify the performance indicator regarding unplanned power changes per 7000 critical hours.

b. Issues and Findings

There were no findings identified.

.2 Reactor Coolant System Activity

a. Inspection Scope (71151)

The inspectors reviewed Fermi Procedure 74.000.19, “Chemistry Routine Surveillances,” Attachment 7, “Reactor Coolant System Iodine Analysis Surveillance - Weekly Mode 1,” for the months of May and June 2000, to verify the performance indicator regarding the reactor coolant system activity.

b. Issues and Findings

There were no findings identified.

.3 Reactor Coolant System Leakage

a. Inspection Scope (71151)

The inspectors reviewed the licensee’s daily plant status and operations logs to verify the performance indicator regarding the reactor coolant system leakage.

b. Issues and Findings

There were no findings identified.

4OA6 Management Meeting

Exit Meeting Summary

The inspectors presented the inspection results to Mr. Hlavaty and other members of licensee management at the conclusion of the inspection on August 17, 2000. The licensee acknowledged the findings presented. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

W. O'Connor, Jr., Vice President, Nuclear Generation
P. Fessler, Assistant Vice President, Nuclear Operations
R. Libra, Manager, Technical
N. Peterson, Director, Nuclear Licensing
T. Dong, Acting Director, System Engineering
D. Williams, Assistant Manager, Radiation Protection
S. Booker, Superintendent, Work Control
J. Davis, Superintendent, Outage Management
K. Hlavaty, Superintendent, Operations
L. Chinavare, Supervisor, Fire Protection
R. Johnson, Supervisor, Nuclear Licensing
K. Morris, Supervisor, RERP
J. Hughes, Supervisor, Nuclear Quality Assurance
T. Stack, Supervisor, Nuclear Security
K. Sessions, General Supervisor, Maintenance
J. Davis, General Supervisor, Operations
K. Howard, Director, Plant Support Engineering
J. Pendergast, Principal Engineer, Licensing
K. Harsley, Engineer, Licensing
P. Kusumawati, Licensing

NRC

M. Ring, Chief, Reactor Projects Branch 1
S. Campbell, Senior Resident Inspector
J. Larizza, Resident Inspector

LIST OF BASELINE INSPECTIONS PERFORMED

The following inspectable-area procedures were used to perform inspections during the report period. Documented findings are contained in the body of the report.

Inspection Procedure		Report Section
Number	Title	
71111-04	Equipment Alignment	1R04
71111-05	Fire Protection	1R05
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Risk Assessment and Emergent Work Evaluation	1R13
71111-14	Personnel Performance During Nonroutine Plant Evolutions and Events	1R14
71111-15	Operability Evaluations	1R15
71111-16	Operator Workarounds	1R16
71111-19	Post Maintenance Testing	1R19
71111-22	Surveillance Testing	1R22
71111-23	Temporary Plant Modifications	1R23
71114-06	Drill, Exercise and Actual Events	1EP6
71130-04	Security Plan Changes	1PP4
71151	Performance Indicator Verification	4OA1

LIST OF ACRONYMS USED

CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
EDG	Emergency Diesel Generator
NRC	Nuclear Regulatory Commission
OWA	Operator Work Arounds
RCIC	Reactor Coolant Isolation System
RHR	Residual Heat Removal
SBFW	Standby Feedwater
SW	Service Water
TB	Turbine Building
TBHVAC	Turbine Building Heating Ventilation and Air Conditioning
TS	Technical Specification
WR	Work Request