December 7, 2000

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

SUBJECT: FERMI INSPECTION REPORT 50-341/00-13(DRP)

Dear Mr. Gipson:

On November 17, 2000, the NRC completed an inspection at your Fermi 2 reactor facility. The results were discussed with you 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).

Sincerely,

/RA/

Mark A. Ring, Chief
Reactor Projects Branch 1

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

Enclosure: Inspection Report 50-341/00-13(DRP)

See Attached Distribution

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cc w/encl: N. Peterson, Director, Nuclear Licensing
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	DPR-43
Report No:	50-341/00-13(DRP)
Licensee:	Detroit Edison Company
Facility:	Enrico Fermi, Unit 2
Location:	6400 N. Dixie Hwy. Newport, MI 48166
Date:	October 1 through November 17, 2000
Inspectors:	S. Campbell, Senior Resident Inspector J. Larizza, Resident Inspector
Approved by:	Mark 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 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 05000341-00-13, on 10/1 - 11/17/00; 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.

Report Details

Summary of Plant Status

During the inspection period, the plant was operated at or near 100 percent power. On November 2, 2000, at 11:35 a.m., the south reactor feedwater pump tripped causing a reactor recirculation system automatic runback in recirculation flow and subsequent decrease in reactor power to approximately 53 percent. Following the replacement of a failed solenoid in the reactor feedwater pump turbine stop valve control oil circuit and other maintenance activities, reactor power was returned to 100 percent on November 3, 2000, at 11:29 p.m., where it remained for the rest of the inspection period.

1. REACTOR SAFETY

1R04 Equipment Alignments

.1 Partial Walkdown of the Reactor Core Isolation Cooling System

b. Inspection Scope (71111-04)

On November 9 and 11, 2000, the inspectors used Drawing 6M721-5709 and Procedure 23.206, “Reactor Core Isolation Cooling System,” to conduct a partial walkdown of the reactor core isolation cooling system.

c. Issues and Findings

There were no findings identified.

1R05 Fire Protection

.1 Fire Protection Tour of Divisions 1 and 2 Switchgear and Battery Rooms

a. Inspection Scope (71111-5Q)

On October 12 and November 16, 2000, the inspectors toured Divisions 1 and 2 switchgear and battery rooms. The inspectors reviewed the areas for the presence of combustible material and fire extinguishers, and verified the carbon dioxide systems were energized.

b. Issues and Findings

There were no findings identified.

1R12 Maintenance Rule Implementation

.1 Maintenance Rule Implementation for the Residual Heat Removal System

a. Inspection Scope (71111-12Q)

The inspectors reviewed the following documents to determine whether the licensee appropriately implemented the maintenance rule for the residual heat removal system:

- Engineering System Health Report, “Residual Heat Removal,”
- Selected Condition Assessment Resolution Documents dated since January 1, 1999, and
- Control Room Logs.

b Issues and Findings

There were no findings identified.

.2 Maintenance Rule Implementation for the Fuel and Reloads System

a. Inspection Scope (71111-12Q)

The inspectors reviewed the following documents to determine whether the licensee appropriately implemented the maintenance rule for the fuel and reloads system:

- Engineering System Health Report, “Fuel and Reloads,”
- Selected Condition Assessment Resolution Documents dated since January 1, 1998, and
- Fermi 2 Fuel Management Updates.

b. Observations and Findings

There were no findings identified.

.3 Maintenance Rule Implementation for the Reactor Core Isolation Cooling System

a. Inspection Scope (71111-12Q)

The inspectors reviewed the following documents to determine whether the licensee appropriately implemented the maintenance rule for the reactor core isolation cooling system:

- Engineering System Health Report, “Reactor Core Isolation Cooling,”
- Control Room Logs since January 1, 1998,
- Selected open Condition Assessment Resolution Documents dated since January 1, 1990, and
- Licensee Event Report 50-341/87012, “Inoperable High Pressure Coolant Injection and Reactor Core Isolation Cooling Due to Blown Power Supply Fuse.”

b. Observations and Findings

There were no findings identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

.1 Emergency Diesel Generator 11, Generator Bearing High Temperature Alarm

a. Inspection Scope (71111-13)

The inspectors reviewed the following documents regarding the Emergency Diesel Generator 11 generator bearing high temperature alarm that occurred on November 4, 2000:

- Technical Specification 3.8.1, “Alternating Current Sources - Operating,”
- Condition Assessment Resolution Document 00-01714, “Potential Fault in Alarm Card,”
- Work Request 000Z003594, “Potential Fault in Alarm Card,” and
- Work Request 000Z992137, “Generic Work Request to Rework/Replace Emergency Diesel Generator 11 Annunciator Board.”

b. Issues and Findings

There were no findings identified.

.2 Feedwater Distributed Control System Trouble Alarm

a. Inspection Scope (71111-13)

The inspectors reviewed the following documents regarding the feedwater distributed control system trouble alarm for the narrow range “C” channel reactor water level due to a difference between the “C” reactor water level and the other channels:

- Condition Assessment Resolution Document 00-17454, “3D164 Feedwater Distributed Control System Trouble Alarm Received,”
- Condition Assessment Resolution Document 00-20624, “Feedwater Distributed Control System Trouble Alarm,”
- Work Request 000Z003866, “Change Setpoint on Feedwater Control System per Technical Service Request 31252," and
- Control Room Logs.

b. Issues and Findings

There were no findings identified.

.3 Reactor Recirculation System Distributed Control System "A" and "B" Backup Multifunction Processor

a. Inspection Scope (71111-13)

The inspectors reviewed the following documents regarding the reactor recirculation distributed control system "A" and "B" backup multifunction processor.

- Condition Assessment Resolution Document 20621, "Backup Multifunction Processor,"
- Work Request 000Z003590, "Backup Multifunction Processor Problem,"
- Work Request 000Z003922, "Control Room Received Recirculation System "A" and "B" Distributed Control System Trouble Alarms," and
- Control Room Logs.

b. Issues and Findings

There were no findings identified.

1R14 Nonroutine Events

.1 Greater than 20 Percent Power Reduction Due to Loss of South Reactor Feedwater Pump

a. Inspection Scope (71111-14)

On November 2, 2000, the inspectors responded to the control room when the south reactor feedwater pump tripped followed by a reactor runback to 53 percent power.

The licensee's Independent Safety Engineering Group examined the circumstances surrounding the event and determined the adequacy of personnel and equipment response. The inspectors interviewed the Independent Safety Engineering Group personnel and reviewed the following documents:

- Operating Personnel Written Statements,
- Sequence of Events Printout,
- General Electric Transient Analysis Report Traces,
- Critical Parameter Strip Charts and Recorders, and
- Condition Assessment Resolution Document 00- 20951, "South Reactor Feed Pump Trip."

b. Observations and Findings

There were no findings identified.

1R15 Operability Evaluations

.1 10 CFR Part 21 Notification Concerning Unqualified Epoxy Used in Fabrication of ITT Conoflow I/P Transducers.

a. Inspection Scope (71111-15)

On November 16, 2000, the licensee was notified by ITT Industries that transducers installed in an EQ Harsh (harsh environment), Seismic Class I application may not be able to perform their intended function during and after a design basis accident. The inspectors reviewed the following documents that established the operability of the transducers:

- Condition Assessment Resolution Document 00-13701 "10 CFR Part 21 Notification Concerning Unqualified Epoxy Used in Fabrication of ITT Conoflow I/P Transducers,"
- Procedure MES 27, "Engineering Functional Analysis,"
- Engineering Functional Analysis for Condition Assessment Resolution Document 00-13701,
- USNRC Event Report No. 37427, dated October 13, 2000, "Part 21 Involving Possible ITT Industries Transducer Failures,"
- ITT Facsimile Cover Sheet from ITT Conoflow to Licensee dated October 17, 2000, titled, "ITT GT25 I/P Transducer Potential Failure Mode Clarification," and
- Limiting Condition for Operation 0-0390, "MES 27 Evaluation Requested for Unqualified Transducers Used in Standby Gas Treatment System Flow and Emergency Equipment Cooling Water Temperature Control Applications."

b. Issues and Findings

There were no findings identified.

1R16 Operator Work Arounds

.1 Review of Operator Work Arounds

a. Inspection Scope (71111-16)

The inspectors reviewed the following documents :

- Operator Work Around 00-015, "Reactor Building Condensate Return Pumps Do Not Operate Correctly in Auto,"
- Operator Work Around 00-016, "Two Minutes Delay Pipe Collector Tank Will Not Drain Due to Broken Switch,"
- Operator Work Around 00-017, "Control Center Heating, Ventilation and Air Conditioning Chiller Trips on Low Oil Pressure,"
- Aggregate Assessment of Operator Work Arounds, October 5, 2000,
- Risk Assessment of Revised Operator Work Arounds, October 2000, and

- Condition Assessment Resolution Document 00-20900, “Operator Work Arounds (Operations Department Instruction 002) Compensatory Actions.”

b. Issues and Findings

There were no findings identified.

1R19 Post Maintenance Testing

.1 Post Maintenance Testing of Emergency Diesel Generator 11

a. Inspection Scope (71111-19)

The inspectors reviewed Post Maintenance Testing Surveillance 24.307.014, “Emergency Diesel Generator 11 - Start and Load Test,” following completion of the 9-month inspection and preventive maintenance mid-cycle outage work activities. The initial post maintenance surveillance was not entirely successful because of a local indication that the diesel engine appeared to have started on cylinders 7 through 12. Cylinders 1 through 6 “air start” solenoid did not appear to be functioning. Condition Assessment Resolution Document 00-20719, “Loose Fuse Clip for FU3 on Emergency Diesel Generator 11,” was initiated. The electric power fuse for the “air start” solenoid did not appear to be making good contact with the fuse clip. Following inspection and adjustments of the clip, a second Post Maintenance Testing Surveillance 24.307.014, was performed successfully.

b. Issues and Findings

There were no findings identified.

.2 Post Maintenance Testing of Emergency Diesel Generator 12

a. Inspection Scope (71111-19)

On November 8, 2000, the inspectors reviewed Post Maintenance Testing Surveillance 24.307.015, “Emergency Diesel Generator 12 - Start and Load Test - Slow Start,” following completion of the 9-month inspection and preventive maintenance mid-cycle outage work activities.

b. Issues and Findings

There were no findings identified.

1R22 Surveillance Testing

.1 Routine Review of Plant and Control Room Surveillance Records

a. Inspection Scope (71111-22)

Between October 1, and November 16, 2000, the inspectors reviewed records for Technical Specification required surveillance activities conducted in the control room and in the plant.

b. Issues and Findings

There were no findings identified.

.2 Emergency Diesel Generator 13 Surveillance Test

a. Inspection Scope (71111-22)

The inspectors reviewed the results of Emergency Diesel Generator 13 surveillance test conducted on November 15, 2000, per Procedure 24.307.16, "Emergency Diesel Generator 13 Start and Load Test."

b. Issues and Findings

There were no findings identified.

.3 Observance of Reactor Vessel Water Level Test

a. Inspection Scope (71111-22)

On October 3, 2000, the inspectors observed Instrumentation and Control personnel perform Procedure 44.030.263, "Emergency Core Cooling System - Reactor Water Level (Automatic Depressurization System Level 3 and Feedwater Main Turbine Level 8) Test."

b. Observations and Findings

There were no findings identified.

1R23 Temporary Plant Modifications

.1 Review of Temporary Modifications

a. Inspection Scope (71111-23)

The inspectors reviewed the following temporary modifications:

- Temporary Modification 00-0007, "Torque Thrust Testing not Being Performed During Refueling Outage 07," and

- Temporary Modification 00-0010, “Install Jumpers to Defeat Control Room Alarms 3D116,” “Reactor Recirculation System “A” Oil Mist Eliminator △P High,” and 3D140, ”Reactor Recirculation System “B” Oil Mist Eliminator △P High.”

b. Issues and Findings

There were no findings identified.

4. OTHER ACTIVITIES

4OA3 Event Follow-up

a. Inspection Scope (71153)

The inspectors reviewed licensee event reports and other items. The inspectors reviewed the root cause analysis and corrective actions taken by the licensee for these events.

b. Issues and Findings

(Closed) Licensee Event Report (50-341/96-003): “Emergency Core Cooling System Outage Design Basis During Emergency Safety Feature 64C Undervoltage Protection Functional Testing.” The licensee determined that the test configuration would have caused a loss of low pressure core injection and one division of core spray if a design basis loss of coolant accident concurrent with a loss of offsite power occurred. The licensee determined that this condition was outside the design basis of the plant. The inspectors verified that the corrective actions were implemented. The inspectors determined the risk significance of this issue to be very low (GREEN) from a mitigating system perspective. This licensee event report is closed.

(Closed) Licensee Event Report (50-341/98-001): “Automatic Reactor Scram due to Main Turbine Trip.” On February 1, 1998, a protective relay failed and caused a breaker in the 345kV ring bus to open. This caused a main turbine generator trip and turbine speed reached 124 percent, which was above the expected 110 percent speed. The higher than expected speed was attributed to an abnormally slow closure of the No. 2 low pressure stop and intercept valves. The inspectors reviewed the licensee’s corrective actions and found them acceptable. Risk significance of this issue was considered very low (GREEN) from an initiating event perspective. This licensee event report is closed.

(Closed) Licensee Event Report (50-341/98-004): “Manual Scram in Response to Reactor Power Fluctuations.” In preparation for rod pattern adjustments, reactor power had been reduced to 64 percent. While at this power level, the control room operator noted the power level oscillating between 50 and 75 percent due to unstable steam flow through the No. 4 high pressure turbine control valve. The operator immediately placed the mode switch to the “shutdown” position and scrammed the plant. After a unit restart, operators closed the valve and restricted the plant power level to 88 percent. The inspectors reviewed the licensee’s corrective actions and found them acceptable. The

inspectors considered the risk significance of this issue to be very low (GREEN) from an initiating event perspective. This licensee event report is closed.

4OA5 Other

Performance Indicator Data Collecting and Reporting Process Review (TI 2515/144) and Performance Indicator Verification

a. Inspection Scope

The inspectors reviewed the licensee's program for identifying, gathering, and submitting data for the reactor safety performance indicators, for calendar year 1999 and the second quarter of 2000 pertaining to:

- Unplanned Scrams per 7000 Critical Hours,
- Scrams with Loss of Normal Heat Removal,
- Unplanned Power Changes per 7000 Critical Hours,
- Safety System Unavailability, Emergency Alternating Current Power,
- Safety System Unavailability, High Pressure Injection Coolant System,
- Safety System Unavailability, Heat Removal System,
- Safety System Unavailability, Residual Heat Removal System, and
- Safety System Functional Failures.

A sample of historical records and data for each performance indicator were reviewed to validate the accuracy of the data. The licensee's methodology for determining data and calculating reported values was reviewed. The inspectors also reviewed a sample of control room logs and licensee event reports and other applicable records to validate performance indicator accuracy.

b. Issues and Findings

No findings were identified during this inspection. The licensee was appropriately implementing the NRC/Industry guidance in the reactor safety performance indicator data collecting and reporting process.

4OA6 Management Meetings

.1 Exit Meeting Summary

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

PARTIAL LIST OF PERSONS CONTACTED

Licensee

W. O'Connor, Vice President, Nuclear Operations
P. Fessler, Assistant Vice President, Nuclear Operations
J. Korte, Director, Nuclear Security
N. Peterson, Director, Nuclear Licensing
B. Sheffel, Director, Performance Engineering
K. Howard, Director, Plant Support Engineering
D. Noetzel, Director, System Engineering
S. Stasek, Manager, Nuclear Assessment
D. Cobb, Superintendent, Mechanical
K. Hlavaty, Superintendent, Operations
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S. Booker, Superintendent, Work Control
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J. Conen, Assistant to Manager, Nuclear Assessment
K. Harsley, Licensing

NRC

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

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

• 2515/144	TI	Performance Indicator Data Collecting and Reporting Process
• 50-341/96-003	LER	Emergency Core Cooling System Outage Design Basis During Emergency Safety Feature 64C Undervoltage Protection Functional Testing
• 50-341/98-001	LER	Automatic Reactor Scram due to Main Turbine Trip
• 50-341/98-004	LER	Manual Scram in Response to Reactor Power Fluctuations

Discussed

None

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
Number	Title	Section
71111-04	Equipment Alignment	1R04
71111-05	Fire Protection	1R05
71111-12	Maintenance Rule Implementation	1R12
71111-13	Maintenance Risk Assessment and Emergency Work Evaluation	1R13
71111-14	Nonroutine Events	1R14
71111-15	Operability Evaluations	1R15
71111-16	Operator Workarounds	1R16
71111-19	Post Maintenance Testing	1R1
71111-22	Surveillance Testing	1R22
71111-23	Temporary Plant Modifications	1R23
TI2515/144	Performance Indicator Data Collection and Reporting Process Review	4OA1
71153	Event Follow-up	4OA3
(none)	Other	4OA4