May 2, 2000

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

SUBJECT: NRC RADIATION SAFETY INSPECTION REPORT 50-341/2000004(DRS)

Dear Mr. Gipson:

On April 21, 2000, the NRC completed a routine inspection at your Fermi 2 Nuclear Station. The results of this inspection were discussed on April 21, 2000, with Mr. Paul Fessler 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 radiation 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 the implementation of your radiological access control, ALARA (as-low-as-is-reasonably-achievable) planning and controls, and radiation worker practices during Refueling Outage (RFO-07). In addition, we reviewed your staff's evaluation of the performance indicator for the occupational radiation safety cornerstone.

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

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Electronic Reading Room (PERR) link at the NRC homepage, http://www.nrc.gov/NRC/ADAMS/index.html.

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

Sincerely,

/RA/

Wayne Slawinski, Acting Chief
Plant Support Branch

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

Enclosure: Inspection Report 50-341/2000004(DRS)

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

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-341
License No:	NPF-43
Report No:	50-341/2000004(DRS)
Licensee:	Detroit Edison Company (DEC)
Facility:	Enrico Fermi, Unit 2
Location:	6400 N. Dixie Hwy. Newport, MI 48166
Dates:	April 17 to 21, 2000
Inspectors:	M. Mitchell, Radiation Specialist D. Nelson, Radiation Specialist
Approved by:	Wayne Slawinski, Acting Chief, Plant Support Branch Division of Reactor Safety

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

Enrico Fermi, Unit 2
NRC Inspection Report 50-341/2000004(DRS)

The report covers a 1-week period of announced inspection by two regional radiation specialists. This inspection focused on occupational radiation safety and included a review of the access control program, radiation worker practices, and ALARA (as-low-as-is-reasonably-achievable) planning and controls in conjunction with Refueling Outage 07 (RFO-07). In addition, the inspectors reviewed the licensee's performance indicator (PI) associated with the occupational radiation safety cornerstone.

RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

- There were no inspection findings identified or documented.

Performance Indicator Verification

- Occupational Radiation Safety Performance Indicator (PI). The inspectors verified that the licensee had properly assessed the PI for this cornerstone, which was in the licensee response band (green).

Report Details

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control

.1 Plant Walkdowns and Radiological Boundary Verifications

a. Inspection Scope

The inspectors performed walkdowns of the radiologically restricted area (RRA) to verify the adequacy of radiological boundaries and postings. Specifically, the inspectors performed confirmatory radiation measurements in the Reactor, Turbine, and Radwaste Buildings to verify that radiologically significant work areas (high radiation areas (HRAs), radiation areas, and airborne radioactivity areas) were properly posted and controlled in accordance with 10 CFR Part 20 and the licensee's procedure.

b. Observations and Findings

There were no findings identified and documented during this inspection.

.2 Reviews of Radiation Work Permits

a. Inspection Scope

The inspectors reviewed radiation work permits (RWPs) and electronic dosimeter (ED) alarm set points for both dose rate and accumulated dose to verify that adequate work controls were in place to maintain worker exposures ALARA (as-low-as-is-reasonably-achievable).

b. Observations and Findings

There were no findings identified and documented during this inspection.

.3 Reviews of Radiologically Significant Work

a. Inspection Scope

The inspectors reviewed the conduct of work activities in the RRA that were expected to result in significant radiological exposures. Specifically, the inspectors verified the adequacy of radiological controls (e.g., radiation work permits and ALARA reviews), surveys, and ALARA pre-job briefings for the following work activities:

- Breach of valve B2103F016 located in the Drywell;
- Repair of valve E1100F050B internals located in the Drywell.

b. Observations and Findings

There were no findings identified and documented during this inspection.

2OS3 Radiation Monitoring Instrumentation

.1 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors verified the calibration of selected radiation survey instruments and observed Radiation Protection (RP) technicians' selection and operational checks of portable radiation survey instruments for several jobs requiring technician job coverage.

b. Observations and Findings

There were no findings identified and documented during this inspection.

2OS4 Radiation Worker Performance

a. Inspection Scope

During work evolutions (Section 2OS1.3), the inspectors observed radiological control practices of personnel within the RRA. Additionally, the inspectors attended Radiation Protection technician and management shift turnover meetings and outage shift briefing meetings.

b. Observations and Findings

There were no findings identified and documented during this inspection.

4 OTHER ACTIVITIES

4OA1 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed Condition Assessment and Resolution Documents (CARDs) associated with technician performance, radiation worker practices, radiological instrumentation, and control of HRAs, initiated since November of 1999.

b. Observations and Findings

There were no findings identified and documented during this inspection.

4OA2 Performance Indicator Verification

a. Inspection Scope

The inspectors verified the licensee's assessment of its performance indicator (PI) for occupational radiation safety. Specifically, the inspectors reviewed historical Condition Assessment and Resolution Documents (CARDs) concerning locked HRA control problems.

b. Observations and Findings

The licensee reported a green PI in the occupational radiation safety cornerstone. Based on the licensee's evaluation, one occurrence was identified in this PI. The inspectors independently reviewed the licensee's records and did not identify any other occurrences applicable to the PI. The inspectors found no problems with the accuracy or completeness of the licensee's PI data submission.

4OA4 Other

(Closed) Unresolved Item (URI), URI 50-341/2000001-03, Contaminated material released from the radiological restricted area. This was a minor radiological issue and was closed. The inspectors verified the corrective actions described in the licensee's CARD 00-10749 were reasonable and complete. No similar problems were identified.

4OA5 Management Meetings

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. Paul Fessler and other members of licensee management and staff at the conclusion of the inspection on April 21, 2000. The licensee acknowledged the findings presented and did not identify any information discussed as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Bragg, Nuclear Quality Assurance
D. Craine, Radiation Protection
L. Craine, Radiation Protection
L. Crissman, Radiation Protection
J. Davis, Outage Management
R. Delong, Plant Staff
P. Fessler, Operations
R. Gillmore, Radiation Protection
T. Holmberg, Training
L. Kantola, Outage Management
E. Kokosky, Radiation Protection
T. Lashley, REMP, Radiation Protection
B. Nearhoof, Chemistry
W. O'Connor, Nuclear Assessment
M. Offerle, Radioactive Waste
J. Pendergast, Licensing Compliance
N. Peterson, Licensing Compliance
P. Smith, Licensing
S. Stasek, ISEG
D. Williams, Radiation Protection

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-341/2000001-03	URI	Contaminated material released from the radiological restricted area.

Discussed

None

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
CARD	Condition Assessment and Resolution Document
DRS	Division of Reactor Safety
ED	Electronic Dosimeter
HRA	High Radiation Area
PERR	Public Electronic Reading Room
PI	Performance Indicator
RP	Radiation Protection
RRA	Radiologically Restricted Area
RFO-07	Refueling Outage 07
RWP	Radiation Work Permit
URI	Unresolved Item

LIST OF DOCUMENTS REVIEWED

Assessments and Audits

Nuclear Generation Memorandum: Radiation Protection NRC Performance Indicator Historical Data, dated January 3, 2000;
RF-07 Plan of the Day;
Fermi 2 Daily Outage Plant Status Reports April 17 to 20, 2000;
Radiation Protection Weekly Outage RFO7 Update;
Spent Fuel Pool FME (Foreign Material Exclusion) Material Control Log.

Radiation Work Permits

Radiation Work Permit No. 00-1056 (Rev. 2);
Radiation Work Permit No. 00-1063 (Rev. 0);
Radiation Work Permit No. 00-1073 (Rev. 0);
Radiation Work Permit No. 00-1083 (Rev. 1);
Radiation Work Permit No. 00-1087 (Rev. 3);
Radiation Work Permit No. 00-1089 (Rev. 0);
Radiation Work Permit No. 00-1089 (Rev. 1).

ALARA Reviews

ALARA Task Summary, dated April 18, 2000;
Pre-job ALARA Review 00-1089 (Rev. 0);
Job Progress ALARA Review 00-1087 (Rev. 1).

Condition Assessment and Resolution Documents (CARDs)

99-15113, Entry made into Locked High Radiation Area without stay-time tracking;
00-10749, Contaminated EECW Piping Found Outside the RPA;
00-13045, RP Continuing Training Feedback;
00-13266, Worker inadvertently entered High Radiation Area on top of Torus;
00-14052, RPA Access Denial;
00-14089, RPA Access Denial;
00-14094, Material Received at Warehouse “B” with Radioactive Labels;
0015027, Workers accessed Drywell on wrong RWP;
00-15081 Head Injury in Drywell;
00-15139, Laceration to Left Index Finger.

Procedures

Radiation Protection Conduct Manual MRP05 (Rev. 5), “ALARA/RWPs;”
Radiation Protection Conduct Manual MRP06 (Rev. 3) , “Accessing and Control of High Radiation, Locked High Radiation and Very High Radiation Areas.”

LIST OF BASELINE INSPECTIONS PERFORMED

The following inspectable area procedures were used to complete the inspection. Documented findings are contained in the body of the report.

Inspection Procedure		
Number	Title	Report Section
71121-01	Access Control to Radiologically Significant Areas	20S1, 40A1
71121-02	ALARA Planning and Controls	20S1, 40A1
71121-03	Radiation Monitoring Instrumentation	20S3, 40A1
71151	Performance Indicator Verification	40A2