July 24, 2000

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

SUBJECT: FERMI - NRC INSPECTION REPORT 50-341/2000007(DRS)

Dear Mr. O'Connor:

On June 30, 2000, the NRC completed a routine inspection at your Fermi 2 Nuclear Station. The results of this inspection were discussed on June 30, 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 occupational radiation safety and the radiation monitoring instrumentation. In addition, we reviewed your staff's processes for evaluation of the performance indicator for the occupational radiation safety cornerstone.

Based on the results of this inspection, no inspection findings were identified.

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 question you have concerning this inspection.

Sincerely,

***/RA by Thomas Ploski Acting For/***

Gary L. Shear, Chief
Plant Support Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-341/2000007(DRS)

See Attached Distribution

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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: | 50-341/2000007(DRS) |
| Licensee: | Detroit Edison Company (DEC) |
| Facility: | Enrico Fermi Power Plant, Unit 2 |
| Location: | 6400 North Dixie Highway<br>Newport, MI 48166 |
| Dates: | June 26 to 30, 2000 |
| Inspector: | M. Mitchell, Radiation Specialist |
| Approved by: | Gary L. Shear, Chief, Plant Support Branch<br>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 Power Plant, Unit 2
NRC Inspection Report 50-341/2000007(DRS)

The report covers a one week period of announced inspection by a regional radiation specialist. This inspection focused on occupational radiation safety and included a review of radiation worker practices and radiological instrumentation. In addition, the inspector reviewed the licensee's performance indicator (PI) data collection and assessment program.

**RADIATION SAFETY**

**Cornerstone: Occupational Radiation Safety**

- There were no findings identified.

Report Details

## 2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control

.1 Plant Walkdowns and Radiological Boundary Verifications

a. Inspection Scope

The inspector performed walkdowns of the radiologically controlled area (RCA) to verify the adequacy of radiological boundaries and postings. Specifically, the inspector performed confirmatory radiation measurements in the Reactor and Turbine Buildings to verify that radiologically significant work areas were properly posted and controlled.

b. Findings

There were no findings identified.

.2 Reviews of Radiation Work Permits

a. Inspection Scope

The inspector 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. Findings

There were no findings identified.

.3 Reviews of Radiologically Significant Work

a. Inspection Scope

The inspector reviewed the current conduct of work activities and records of recent work in the RCA. Specifically, the inspector verified the adequacy of radiological controls (e.g., radiation work permits and ALARA reviews), surveys, leak tests and source accountability for the following work activities:

- Standby Gas Treatment Exhaust Division 1 Accident Range Radiation Monitoring System Calibration and Functional Testing,

- Steam Tunnel Cooler Motor Replacement at Power.

b. Findings

There were no findings identified.

2OS3 Radiation Monitoring Instrumentation

.1 Source Tests and Calibration of Radiological Instrumentation

a. Inspection Scope

The inspector verified that area radiation monitors' (ARMs) locations were as described in the Updated Final Safety Analysis Report and that selected ARMs were appropriately calibrated in 1999 and 2000. The inspector reviewed calibration records for the whole body counters, selected personnel contamination monitors (PCMs), selected portable radiation survey instruments and selected continuous air monitors for 1999 and 2000. The inspector observed source checks of a whole body monitor, PCM and portable radiation survey instruments to verify compliance with procedures. The inspector reviewed the calibration procedures with staff that would conduct the calibrations of the whole body counters and ARMs.

b. Findings

There were no findings identified.

.2 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspector observed several Radiation Protection (RP) technicians' selection and operational checks of portable radiation survey instruments used for RP technician job coverage. The inspector observed instrument use associated with check source handling described in 2OS1.3 and 20S3.1.

b. Findings

There were no findings identified.

.3 Self-Contained Breathing Apparatus Program

a. Inspection Scope

The inspector verified the adequacy of the program to provide Self-Contained Breathing Apparatus (SCBA) for unknown or emerging conditions. The inspector walked down the available equipment, reviewed the status and surveillance records of SCBA staged for use in the plant, verified the licensee's capability for refilling and transporting SCBA bottles to the control room and support locations in the plant, verified the training and qualification records of selected individuals in 2000, reviewed the licensees response to Information Notices 98-20 and 99-05 (no specific response was required by the notices)

and interviewed control room operations staff regarding the use of SCBA in the control room.

b. Findings

There were no findings identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed the licensee's self-assessments and audits, which had been performed by the licensee during 1999 to verify that the staff conducts radiation monitoring instrument program assessments. The scope and findings of the licensee reviews were reviewed. In addition, the inspector reviewed several Condition Assessment and Resolution Documents (CARDs) concerning RP technician performance, radiation worker practices, radiological instrumentation, and control of High Radiation Areas (HRAs), which had been initiated since April 2000, to verify proper implementation of the corrective action program.

b. Findings

There were no findings identified.

2OS4 Radiation Worker Performance

a. Inspection Scope

During work evolutions (Section 2OS1.3), the inspector observed radiological control practices of personnel within the RCA to assess worker performance and adherence to expected radiological work practices associated with source handling and instrument calibration.

b. Findings

There were no findings identified.

## 4. OTHER ACTIVITIES

4OA5 Temporary Instruction 2515/144, "Performance Indicator Data Collecting and Reporting Process"

a. Inspection Scope

The inspector reviewed the performance indicator data collecting and reporting process for the "Occupational Radiation Safety-Occupational Exposure Control Effectiveness." was a review of: the collecting and reporting process, indicator definitions, data reporting elements, calculation methods and consistency with industry guidance

document NEI (Nuclear Energy Institute) 99-02, “Regulatory Assessment Performance Indicator Guideline (Revision 0).”

b. Findings

There were no findings identified.

4OA5 Management Meetings

.1 Exit Meeting Summary

The inspector presented the inspection results to Mr. Paul Fessler and other members of licensee management and staff at the conclusion of the inspection on June 30, 2000. The licensee acknowledged the findings presented and did not identify any information discussed as proprietary.

## PARTIAL LIST OF PERSONS CONTACTED

Licensee

L. Apker, Technician
H. Arora, Nuclear Licensing
B. Bertossi, Radiation Protection Instrumentation
J. Bragg, Nuclear Quality Assurance
K. Burke,
D. Craine, Radiation Protection
L. Craine, Radiation Protection
L. Crissman, Radiation Protection
R. Delong, Plant Staff
P. Duffy, Radiation Protection
P. Fessler, Operations
R. Gillmore, Radiation Protection
K. Hansley, Licensing
D. Harmon, Radiation Protection
C. Heitzenrater, Operations
E. Kokosky, Radiation Protection
T. Lashley, REMP, Radiation Protection
J. Louwers, Nuclear Quality Assurance
W. Miller, Director Engineering Projects
B. Nearhoof, Chemistry
M. Offerle, Radioactive Waste
J. Pendergast, Licensing Compliance
N. Peterson, Licensing Compliance
P. Roelant, System Engineering
S. Stasek, ISEG
D. Williams, Radiation Protection

## ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

| | |
|---|---|
| ADAMS | Agency's Documents Administration and Management System |
| ALARA | As-Low-As-Is-Reasonably-Achievable |
| ARMs | Area Radiation Monitors |
| CARD | Condition Assessment and Resolution Document |
| DRS | Division of Reactor Safety |
| ED | Electronic Dosimeter |
| HRA | High Radiation Area |
| NEI | Nuclear Energy Institute |
| NRC | Nuclear Regulatory Commission |
| PARS | Publicly Available Records |
| PI | Performance Indicator |
| PCM | Personnel Contamination Monitor |
| RCA | Radiologically Controlled Area |
| RP | Radiation Protection |
| RWP | Radiation Work Permit |
| SCBA | Self-Contained Breathing Apparatus |

LIST OF DOCUMENTS REVIEWED

Assessments and Audits

Audit Report 99-0104
Audit Report 99-0116
An Evaluation of the Monitoring Capabilities of the PCM-1B for Internally Deposited Radioactive Material, dated February 17, 2000

Instrument Calibrations and Quality Control Tests

PCM-1B Calibration, dated April 3, 2000
Alantec Alan-Scan Wholebody Counter Calibration and Source Check Records 1999 and 2000
AMS-3 Calibration Records for 2000
MGPI CDM21 Dosimeter Calibration Records for 2000
AMS-4 Air Monitoring Calibration Records for 2000
AREA Radiation Monitor Calibration Status for 2000

Miscellaneous

Shift Assignments for June 29, 2000
RPMS_OPS_9_1, Leak Test Record, dated June 2, 2000
Report of the Systems in the “Maintenance Rule”
Area Radiation Monitor Channel Data, ARM Listing
Log No. 96-034 (Revision 3) Maintenance Rule Program Position
Daily Plant Status Report June 28, 2000
SCBA Operability and Readiness Records for 2000

Condition Assessment and Resolution Documents (CARDs)

00-10699
00-18655
00-14801
00-17457

Procedures

44.080.301 (Revision 30), Area Radiation Monitoring System Functional Test
64.080.302 (Revision 9), Area Radiation Monitoring System Channel 6 Calibration
65.000.126 (Revision 4), Operation of Personnel Contamination Monitor (PCM-1B)
65.000.265 (Revision 0), Maintenance and Operation of Fermi 2 Wholebody Counters Using Renaissance Software
66.000.203 (Revision 3), Calibration of the Eberline E-520
66.000.205 (Revision 4), Calibration of Portable Ion Chamber Survey Instruments
66.000.223 (Revision 3), Calibration of the Eberline PCM-1B Personnel Contamination Monitor
66.000.226 (Revision 2), Calibration of the Dositec PR-7
66.000.232 (Revision 5), Calibration of the Hydro Nuclear Services Model ATF-1 Automated Tool Frisker

66.000.241 (Revision 3), Calibration of the SAIC Telemetry System
66.000.243 (Revision 2), Calibration of MGPI CDM21 Dosimeter Calibrator
66.000.424 (Revision 2), Calibration of the Eberline AMS-4 Air Monitoring System

Radiation Work Permits (RWP)

RWP 001204 (Revision 1)
RWP 001009 (Revision 0)