

September 27, 2006

Mr. Donald K. Cobb  
Assistant Vice President  
Nuclear Generation  
The Detroit Edison Company  
6400 North Dixie Highway  
Newport, MI 48166

SUBJECT: NRC INSPECTION REPORT 050-00016/06-14 (DNMS)  
ENRICO FERMI UNIT 1

Dear Mr. Cobb:

On August 30, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Enrico Fermi Unit 1 facility. The purpose of the inspection was to determine whether decommissioning activities were conducted safely and in accordance with NRC requirements in the areas of facility management and control, and radiological safety. At the conclusion of the inspection on August 30, 2006, the NRC inspector discussed the findings with members of your staff.

The inspection consisted of an examination of activities at the facility as they relate to safety and compliance with the Commission's rules and regulations. Areas examined during the inspection are identified in the enclosed report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, field observations of activities in progress, and interviews with personnel.

Based on the results of this inspection, the NRC did not identify any violations.

In accordance with 10 CFR 2.390 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). The NRC's document system is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

D. Cobb

-2-

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

Sincerely,

**/RA/**

Jamnes L. Cameron, Chief  
Decommissioning Branch

Docket No. 050-00016  
License No. DPR-9

Enclosure: Inspection Report 050-00016/06-14(DNMS)

cc w/encl: Compliance Supervisor  
G. White, Michigan Public Service Commission  
Planning Manager, Emergency Management Division  
MI Department of State Police  
R. Gatson, Manager, Nuclear Licensing  
D. Pettinari, Legal Department  
Michigan Department of Environmental Quality  
Waste and Hazardous Materials Division  
M. Yudasz, Jr., Director, Monroe County  
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Supervisor - Electric Operators  
Wayne County Emergency Management Division

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No. 050-00016  
License No. DPR-9

Report No. 050-00016/06-014(DNMS)

Licensee: Detroit Edison Company

Facility: Enrico Fermi Unit 1

Location: 6400 North Dixie Highway  
Newport, MI 48166

Dates: August 29-30, 2006

Inspector: Peter J. Lee, Ph.D., CHP, Health Physicist

Approved by: Jamnes L. Cameron, Chief  
Decommissioning Branch

Enclosure

## EXECUTIVE SUMMARY

### Enrico Fermi Unit 1 NRC Inspection Report 050-00016/06-014(DNMS)

This routine decommissioning inspection included reviews of facility management and control, and radiological safety.

#### Facility Management and Control

- The inspector determined that the licensee maintained adequate organizational staffing to continue the decommissioning process. (Section 1.1)
- The inspector concluded that the conditions of the facility and equipment were adequate and capable of supporting sodium removal activities. (Section 1.2)

#### Radiological Safety

- The inspector determined that the licensee continued to be effective in preventing the spread of contamination and in maintaining dose to workers well below the regulatory limits. (Section 2.1)
- The inspector verified that the licensee maintained effluent releases well below the 10 CFR Part 20 release limits. (Section 2.2)
- The inspector determined that the licensee had complied with NRC and Department of Transportation regulations for shipments of radioactive waste. (Section 2.3)

## Report Details<sup>1</sup>

### Summary of Plant Activities

During the inspection period, the licensee was preparing for sodium removal from the reactor.

#### **1.0 Facility Management and Control**

##### 1.1 Organization, Management and Cost Controls (36801)

###### a. Inspection Scope

The inspector evaluated the licensee's decommissioning staffing to determine whether the licensee maintained adequate staffing levels to effectively conduct its decommissioning activities. The inspector interviewed licensee personnel and reviewed records of selected training completed during 2005 and 2006.

###### b. Observations and Findings

The licensee conducted training for contractor workers and licensee personnel in accordance with the provisions of the licensee's training program. The training included radiation protection, sodium handling safety, and asbestos awareness.

###### c. Conclusions

The inspector determined that the licensee maintained adequate organizational staffing to continue the decommissioning process.

##### 1.2 Decommissioning Performance and Status Review at Permanently Shut Down Reactors

###### a. Inspection Scope (71801)

The inspector toured the Reactor Building and the Sodium Building Primary Cold Trap Room to assess the working conditions of the sodium removal process.

###### b. Observations and Findings

The contract workers involved in sodium removal operations wore appropriate protective equipment and followed established procedures. The caustic solution generated from the previous sodium removal operations had been neutralized and safely stored. Generally, the licensee maintained the plant in good material condition, with adequate lighting, shielding, and personnel barriers installed to support decommissioning activities. All radiological areas were adequately marked and posted.

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<sup>1</sup>A list of acronyms used and all documents reviewed in these "Details" are provided at the end of the report.

c. Conclusions

The inspector concluded that the conditions of the facility and equipment were adequate and capable of supporting sodium removal activities.

**2.0 Radiological Safety**

2.1 Occupational Radiation Exposure (83750)

a. Inspection Scope

The inspector reviewed the results of air sampling, direct radiation surveys, and contamination surveys performed from March 2006 to August 2006, during preparation for sodium removal from the reactor and during sodium removal from piping removed from the Loop 1 of primary sodium loops, and reviewed the external exposure records for the first and second quarter of 2006, to determine if the licensee was meeting regulatory dose limits for worker exposure.

b. Observations and Findings

The results of air sampling did not indicate any potential intake of radioactive material by the workers. The results of personnel monitoring, reviewed by the inspector, indicated all exposures were less than 10 percent of any applicable occupational limit in 10 CFR Part 20.

The results of contamination surveys did not indicate any spread of contamination during processing sodium removal. The direct radiation surveys from the work areas did not indicate any significant potential exposure for the workers.

c. Conclusions

The inspector determined that the licensee continued to be effective in preventing the spread of contamination and in maintaining dose to workers well below the regulatory limits.

2.2 Radioactive Waste Treatment, Effluent and Environmental Monitoring (84750)

a. Inspection Scope

The inspector reviewed the analytical data for gaseous effluent releases for particulates and tritium during first and second quarter of 2006 to verify that the licensee met 10 CFR Part 20 effluent release limits.

b. Observations and Findings

The air sampling at the effluence release did not indicate any positive result for particulates. The highest tritium concentration was about  $9.4 \times 10^{-10}$  microcuries per milliliter ( $\mu\text{Ci/ml}$ ), compared to the limit in 10 CFR Part 20, Appendix B of  $1.0 \times 10^{-7}$   $\mu\text{Ci/ml}$ .

c. Conclusions

The inspector verified that the licensee maintained effluent releases well below the 10 CFR Part 20 release limits.

2.3 Solid Radioactive Waste Management and Transportation of Radioactive Materials (86750)

a. Inspection Scope

The inspector reviewed radioactive waste shipping documents and conducted interviews of the responsible individual to ensure compliance with NRC and U. S. Department of Transportation (DOT) regulations.

b. Observations and Findings

On July 19, 2006, the licensee made one LSA-II shipment of 19200 gallons of liquid waste generated from sodium removal processing. The waste was stored temporarily in the former primary sodium storage tanks, before being shipped by rail to Energy Solution, LLC, for processing and eventual disposal. The licensee's shipping manifest showed that personnel packaged, labeled, and marked each shipping container according to the DOT and 10 CFR Part 71 transportation requirements. The licensee verified that the results of radiation and removable contamination levels were within applicable limits. The waste manifest included all required information.

c. Conclusions

The inspector determined that the licensee had complied with NRC and Department of Transportation regulations for shipments of radioactive waste.

**3.0 Exit Meeting**

The inspector presented the inspection results to members of the licensee's staff at the conclusion of the inspection on August 30, 2006. The licensee did not identify any of the documents or processes reviewed by the inspector as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **PARTIAL LIST OF PERSONS CONTACTED**

W. Colonnello, Director, Nuclear Support  
S. Stasek, Director, Nuclear Project  
L. Goodman, Manager, Fermi 1 (Custodian)  
D. Crain, Radiation Protection Manager, Fermi 1  
W. Lipton, Principal Engineer, Fermi 2  
D. Breiding, Fermi 1 Project Coordinator  
D. Swindle, Sodium Project Manager  
C. Aldridge-Nunn, Office Administration  
L. Davis, Office Specialist

All of the above were in attendance at the exit meeting on August 30, 2006.

### **LIST OF PROCEDURES USED**

IP 86750: Solid Radioactive Waste Management and Transportation of Radioactive Materials  
IP 83750: Occupational Radiation Exposure  
IP 84750: Radioactive Waste Treatment and Effluent and Environmental Monitoring  
IP 71801: Decommissioning Performance and Status Review at Permanently Shut Down Reactors

### **LIST OF ACRONYMS USED**

ADAMS Agency Document and Management System  
CFR Code of Federal Regulations  
DNMS Division of Nuclear Materials Safety  
NRC Nuclear Regulatory Commission

### **LICENSEE DOCUMENTS REVIEWED**

Licensee documents reviewed and utilized during the course of this inspection are specifically identified in the "Report Details" above.

### **ITEMS OPENED, CLOSED, AND DISCUSSED**

None