

April 24, 2008

Mr. Joseph Plona
Site Vice President
Nuclear Generation
The Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: NRC INSPECTION REPORT 050-00016/08-01(DNMS)
ENRICO FERMI UNIT 1

Dear Mr. Plona:

On April 2, 2008, 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 April 2, 2008, 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>.

J. Plona

-2-

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

Sincerely,

/RA/

Patrick L. Loudon, Chief
Decommissioning Branch

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

Enclosure:
Inspection Report 050-00016/08-01(DNMS)

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No.: 050-00016/08-01(DNMS)

Licensee: Detroit Edison Company

Facility: Enrico Fermi Unit 1

Location: 6400 North Dixie Highway
Newport, MI 48166

Inspection Dates: April 1 and 2, 2008

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

Approved by: Patrick L. Loudon, Chief
Decommissioning Branch

Enclosure

EXECUTIVE SUMMARY

Enrico Fermi Unit 1 NRC Inspection Report 050-00016/08-01(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's process for evaluating the safety impacts of facility changes was in compliance with the requirements of 10 CFR 50.59. (Section 1.1)
- The inspector determined that the licensee maintained adequate staffing levels and training to continue the decommissioning process. (Section 1.2)
- The inspector concluded that the conditions of the facility and equipment were adequate and capable of supporting sodium removal activities. (Section 1.3)
- The inspector determined that the licensee adequately implemented the audits of radiation protection in accordance with its Quality Assurance Program. (Section 1.4)

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 Details¹

Summary of Plant Activities

During the inspection period, the licensee was employing a steaming process on the reactor vessel to remove the residual sodium from the vessel metal.

1.0 Facility Management and Control

1.1 Safety Reviews, Design Changes, and Modifications (IP 37801)

a. Inspection Scope

The inspector reviewed the licensee's safety screening reviews to verify that completed reviews were consistent with the requirements of 10 CFR Part 50.59. The review included selected screening reviews completed since October 2007.

b. Observations and Findings

The licensee's Administrative Controls and Surveillance Procedures Manual, Section 1.6 was consistent with the NRC's requirements for 10 CFR Part 50.59 screening reviews. The licensee conducted several safety screening reviews of facility changes and none of the changes required a formal 10 CFR Part 50.59 safety evaluation.

c. Conclusions

The inspector determined that the licensee's process for evaluating the safety impacts of facility changes was in compliance with the requirements of 10 CFR Part 50.59.

1.2 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 reviewed records of the required training for contractor workers that the licensee recently hired.

b. Observations and Findings

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

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

c. Conclusions

The inspector determined that the licensee maintained adequate staffing levels and training to continue the decommissioning process.

1.3 Decommissioning Performance and Status Review at Permanently Shut Down Reactors

a. Inspection Scope (71801)

The inspector toured the Reactor Building to assess the working conditions of processing of the residual sodium in the reactor vessel.

b. Observations and Findings

The contract workers involved in sodium removal operations wore appropriate protective equipment and followed established procedures. The licensee maintained the work place with adequate shielding, personnel barriers, and enclosures with HEPA exhaust systems, all to minimize worker doses. All radiological areas were adequately marked and posted.

c. Conclusions

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

1.4 Self-Assessment, Auditing, and Corrective Action (40801)

a. Inspection Scope

The inspector reviewed the licensee's audit of its radiation protection program (Audit 07-002) conducted from November 29, 2007, through January 25, 2008. Selected corrective action work orders associated with identified deficiencies were also reviewed.

b. Observations and Findings

The audit of the radiation protection program (Audit 07-002) was appropriately focused in both scope and level of detail, and the licensee initiated appropriate corrective actions to resolve the audit findings. The findings identified were programmatic in nature and had no impact on the quality of products.

c. Conclusions

The inspector determined that the licensee adequately implemented the audits of radiation protection in accordance with its Quality Assurance Program.

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 November 2007 to March 2008, during the removal of neutron source from the reactor, sodium residue from piping and control rods, to determine whether the licensee adequately controlled doses to workers.

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 indicated all exposures were less than 10 percent of any applicable occupational limit in 10 CFR Part 20.

The results of contamination surveys and direct radiation surveys from the work areas did not indicate any spread of contamination and 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 of gaseous effluent releases for particulates and tritium from November 2007 to March 2008 to verify that the licensee met 10 CFR Part 20 effluent release limits.

b. Observations and Findings

Air sampling at the effluence release points did not indicate any positive results from particulates and tritium.

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 February 6, 2008, the licensee made one radioactive material low specific activity (LSA-II) shipment of depleted neutron source irradiated metal to Barnwell Waste Management Facility, Barnwell, South Carolina. On February 21, 2008, the licensee made one LSA-II shipment of processing liquid to Bear Creek Corporation in Oak Ridge, Tennessee. The licensee's shipping manifests 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 April 2, 2008. 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

- * L. Goodman, Manager, Fermi 1 (Custodian)
- * K..Lindsey, Radiation Protection Supervisor
- * T. Brown, Manager, Radiation Protection
 - D. Breiding, Fermi 1 Project Coordinator
 - D. Swindle, Sodium Project Manager
- * C. Aldridge-Nunn, Office Administration
- * L. Davis, Office Specialist

* Present at the April 2, 2008, exit meeting.

LIST OF PROCEDURES USED

- IP 37801: Safety Reviews, Design Changes, and Modifications
- IP 83750: Occupational Radiation Exposure
- IP 84750: Radioactive Waste Treatment and Effluent and Environmental Monitoring
- IP 86750: Solid Radioactive Waste Management and Transportation of Radioactive Materials
- IP 71801: Decommissioning Performance and Status Review at Permanently Shut Down Reactors
- IP 36801: Organization, Management and Cost Controls
- IP 40801: Self-Assessment, Auditing, and Corrective Action

LIST OF ACRONYMS USED

- ADAMS Agency Document and Management System
- CFR Code of Federal Regulations
- DOT Department of Transportation
- DNMS Division of Nuclear Materials Safety
- LSA-II Low Specific Activity Class II
- 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