

April 3, 2003

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

SUBJECT: NRC INSPECTION REPORT 05000016/2003-005 (DNMS) - FERMI UNIT 1

Dear Mr. O'Connor:

On March 5, 2003, the 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 areas of facility management and control, decommissioning support, radiological monitoring, training, and radiological safety. Specifically, the inspectors reviewed activities conducted during the removal of sodium from the primary sodium storage tanks and systems. At the conclusion of the inspection on March 5, the NRC inspectors discussed the findings with members of your staff.

The inspection consisted of an examination of activities at the Fermi 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. The decommissioning activities reviewed were being conducted in accordance with applicable regulations and license conditions.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

W. O'Connor

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

Sincerely,

/RA/

Christopher G. Miller, Chief
Decommissioning Branch

Enclosure: Inspection Report 050000016/2003-005(DNMS)

Docket No. 05000016

License No. DPR-9

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No. 05000016
License No. DPR-9

Report No. 05000016/2003-005(DNMS)

Licensee: Detroit Edison Company

Facility: Enrico Fermi Unit 1

Location: 6400 North Dixie Highway
Newport, MI 48166

Dates: March 3-5, 2003

Inspector: Edward Kulzer, CIH, CSP, Radiation Specialist

Approved by: Christopher G. Miller, Chief
Decommissioning Branch
Division of Nuclear Materials Safety

EXECUTIVE SUMMARY

Enrico Fermi Unit 1 NRC Inspection Report 05000016/2003-005(DNMS)

This routine decommissioning inspection covered aspects of licensee management and cost control, training and surveillance, radiological waste, and radiological safety.

Facility Management and Control

- The inspectors found the decommissioning funds, organization, and schedules were adequate to continue the decommissioning process. The licensee is taking steps to ensure that a shortfall in decommissioning funding is addressed in order to meet decommissioning funding requirements of 10 CFR 50.75. (Section 1.2)
- The licensee adequately characterized changes to the facility and procedures to ensure compliance with 10 CFR 50.59. The screening process was effective. (Section 1.3)

Decommissioning Support Activities

- The inspectors determined that radiological controls and postings were in full compliance with procedural requirements and regulatory requirements of 10 CFR Part 20 and that the material integrity of systems, structures and components necessary for the conduct of safe decommissioning was maintained. (Section 2.1)

Radiological Waste

- Inspectors found that new members of the decommissioning staff were adequately trained. (Section 3.2)
- The inspectors determined that effluent monitoring was acceptable. Gaseous and liquid effluents were well below the regulatory criteria specified in the Fermi 1 license. (Section 3.3)
- There were no hazardous waste shipments made since the last NRC inspection. (Section 3.4)

Report Details

Summary of Plant Activities

The licensee began work activities associated with the removal of sodium from the primary system. The licensee also completed work orders for the removal of radiologically contaminated duct work. The inspectors reviewed completed work orders and environmental monitoring results.

1.0 Facility Management and Control

1.1 General

The inspectors reviewed current as well as planned decommissioning activities, and discussed planned staffing changes that had taken place since the last inspection.

1.2 Organization, Management and Cost Controls (36801)

a. Inspection Scope

The inspectors evaluated the licensee's decommissioning organization and staffing, and cost controls to determine whether adjustments were made to accommodate changes in the status of decommissioning.

b. Observations and Findings

The decommissioning activities for Fermi 1 are scheduled to be completed in 2008, at which time license termination will be requested. The licensee was tentatively planning to decommission the site to meet the NRC release guidelines in accordance with the "Multi-Agency Radiation Survey and Site Investigation Manual" (MARSSIM), but leave the site buildings standing. This approach will require further review to determine its feasibility.

The inspectors evaluated Fermi 1 staffing which had increased from 16 workers to 30 workers due to the increase in decommissioning activities. The inspectors also discussed decommissioning funding with the Decommissioning Manager who indicated that there was approximately \$22 million at present committed to continue the decommissioning program. The licensee estimated that a total of \$31 million would be required to leave the area below NRC guidelines, with on-site buildings standing.

The shortfall of \$9 million was due to increases in estimated costs for decommissioning work as well as to losses in the fund caused by a downturn in the economy. The licensee wrote Corrective Action Resolution Document 03-12013, "Revision to 10 CFR 50.75 on Decommissioning Funding and Revision 1 to Regulatory Guide 1.159" to ensure that adequate financial assurance is in place by the end of 2003 in order to meet the requirements of 10 CFR 50.75. The licensee did not anticipate any difficulties in recovering the funds necessary to complete the decommissioning process. The inspectors found no immediate problems with funding and will review the licensee's actions in future inspections.

The inspectors reviewed the Fermi 1 decommissioning schedule to determine whether the licensee was meeting the appropriate milestones. The original completion date had not changed, but the schedule required periodic adjustment. When unexpected events occurred that were not anticipated, the licensee stopped work and revised procedures. The license completion date of 2008 was still on track, although the regular work schedule was behind approximately one month.

c. Conclusions

The inspectors found the decommissioning funds, organization, and schedules were adequate to continue the decommissioning process. The licensee is taking steps to ensure that a shortfall in decommissioning funding is addressed in order to meet decommissioning funding requirements of 10 CFR 50.75.

1.3 Safety Reviews, Design Changes and Modifications (37801)

a. Inspection Scope

The inspectors examined the licensee's safety review program to ascertain whether changes to the facility and/or procedures met the requirements of 10 CFR 50.59.

b. Observations and Findings

The inspectors selected four safety reviews that were performed during the conduct of decommissioning activities since the last inspection.

- "Scrubber System Service & Operation," FCR 02-028;
- "Fermi 1 Protected Area Key Log," FCR 02-021;
- "NaK [sodium potassium] Processing Procedure for Cooling Loop Equipment," FCR 02-031; and
- "Alkali Metal Processing for Piping, Valves, and Other Equipment," FCR 02-027MN.

One of the reviews required a 10 CFR 50.59 safety evaluation, and the licensee adequately determined that an unreviewed safety question did exist and required further NRC review. The inspectors compared three other safety reviews to the Fermi 1 safety analysis report (SAR) and determined that the Fermi 1 screening process was effective in determining which safety reviews required a 10 CFR 50.59 evaluation. All safety reviews were reviewed and signed by the originator, Health Physicist, Technical Engineer, Custodian, and Review Committee Chairman.

c. Conclusions

The licensee adequately characterized changes to the facility and procedures to ensure compliance with 10 CFR 50.59. The screening process was effective.

2.0 Decommissioning Support Activities

2.1 Tours of the Facility (71801)

The inspectors toured accessible areas of the facility and found that all areas were appropriately maintained for the decommissioning activities taking place. The inspectors determined that radiological controls and postings were in full compliance with procedural and regulatory requirements of 10 CFR Part 20 and that the material integrity of systems, structures and components necessary for the conduct of safe decommissioning was maintained.

3.0 Radiological Safety

3.1 General

The inspectors reviewed on-going activities in order to assess the overall radiological safety program. Specific findings are detailed in the sections below.

3.2 Occupational Radiation Exposure (83750)

The inspectors reviewed training of selected members of the licensee's radiation protection organization. All members of the staff had received the training required by Fermi 1, "Orientation Program," Revision 6, which addressed work with radioactive materials, asbestos, lead, hazard communication, and respiratory protection. The licensee implemented a separate training program for all employees working with sodium and potassium, which all workers had received. The Fermi 1 health physicist (HP) received current training in Radioactive Waste Packaging, Transportation, and Disposal. Members of the decommissioning staff were adequately trained.

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

a. Inspection Scope

The inspectors examined Fermi 1 Particulate Effluent Sample Information Logs, Fermi 1 Tritium Effluent Monitoring Offsite Exposure Logs, and Tritium Activity Calculation sheets.

b. Observations and Findings

The inspectors reviewed the monitoring data which was collected during the decommissioning of the primary system NaK tank removal process and compared the results to 10 CFR Part 20, Appendix B, Tables 1 and 2 for gaseous and liquid effluents. The results were well below the regulatory limits for gaseous and liquid effluents specified in the Fermi 1 license.

c. Conclusions

The inspectors determined that effluent monitoring was acceptable. Gaseous and liquid effluents were well below the regulatory criteria specified in the Fermi 1 license.

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

The inspectors requested hazardous waste shipping documents for all hazardous waste shipments since the last inspection. There were no hazardous waste shipments made since the last NRC inspection.

4.0 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on March 5, 2003.

PARTIAL LIST OF PERSONS CONTACTED

W. O'Conner, Vice President, Nuclear Generation
J. Couillard, Radiological Engineer, Fermi 1
L. Goodman, Manager, Fermi 1 (Custodian)
J. Conen, Review Committee Chairman
B. Duke, Fermi 1 Staff
D. Swindle, Sodium Project Manager
L. Davis, Fermi 1 Staff
D. Craine, General Superintendent Radiological Engineering/Fermi 1 HP
W. Lipton, Principal Engineer/Alternate Fermi 1 HP
D. Breiding, Fermi 1
R. Laubenstein, Fermi 1, Shift Manager
J. Slaback, Fermi 1, Safety Officer

All of the above were in attendance at the exit meeting on March 5, 2003.

LIST OF PROCEDURES USED

IP 36801: Organization, Management, and Cost Controls
IP 37801: Safety Reviews, Design Changes, and Modifications at Permanently Shutdown Reactors
IP 40801: Self-Assessment, Auditing, and Corrective Actions at Permanently Shut down Reactors
IP 71801: Decommissioning Performance and Status at Permanently Shutdown Reactors
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

LIST OF ACRONYMS USED

CFR Code of Federal Regulations
DOT Department of Transportation
FY Fiscal Year
HP Health Physics
NaK Sodium/Potassium
NRC Nuclear Regulatory Commission
SAR Safety Analysis Report

