

September 12, 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 05000016/2003-004 (DNMS) - FERMI UNIT 1

Dear Mr. O'Connor:

On August 14, 2003, the NRC completed the 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, and radiological monitoring. Specifically, the inspectors reviewed activities conducted during the set up for processing sodium in the primary sodium vapor traps, maintenance work on cranes, and removal of cable in the reactor building. At the conclusion of the inspection on August 14, 2003, 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>.

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

Sincerely,

/RA/

Christopher G. Miller, Chief
Decommissioning Branch

Enclosure: Inspection Report 050000016/2003-004(DNMS)

Docket No. 05000016
License No. DPR-9

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REGION III

Docket No. 05000016
License No. DPR-9

Report No. 05000016/2003-004(DNMS)

Licensee: Detroit Edison Company

Facility: Enrico Fermi Unit 1

Location: 6400 North Dixie Highway
Newport, MI 48166

Dates: June 30-July 3, 2003
August 11-14, 2003

Inspectors: Edward L. Kulzer, CIH, CSP, Radiation Specialist
Peter J. Lee, PhD, CHP, Radiation Specialist

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

EXECUTIVE SUMMARY

Enrico Fermi Unit 1 NRC Inspection Report 05000016/2003-004(DNMS)

This routine decommissioning inspection covered aspects of licensee management and cost control, safety reviews, self-assessments, and radiological monitoring.

Facility Management and Control

- The licensee organization and decommissioning funds 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 Part 50.75. (Section 1.2)
- The licensee's safety screenings were adequate in scope, and appropriate personnel conducted the screenings as required by Procedure 1.6. The licensee's safety review program conformed to the requirements contained in 10 CFR Part 50.59. (Section 1.3)
- The licensee was performing effective management reviews for audits, self assessments and observations. The inspectors found that the weekly observations were less formal, could be hand written, and looked at human performance factors. The inspectors had no concerns in this area. (Section 1.4)
- The licensee's corrective action program including identification, root cause evaluation, resolution and prevention of problems was effective. The licensee took appropriate actions that would prevent recurrence. (Section 1.5)

Decommissioning Support Activities

- The licensee adequately maintained the physical condition of the plant. There were no concerns in the areas of scheduling or prioritization of work. (Section 2.1)

Radiological Waste

- 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 3.2)
- There were no hazardous waste shipments made since the last NRC inspection. (Section 3.3)

Report Details

Summary of Plant Activities

The licensee conducted activities including preparation for sodium removal from the primary sodium vapor traps, cutting and removal of the reactor dome, removal of transite asbestos and cables from cable trays in the reactor building, and replacement of potentially defective bolts from Whiting cranes.

1.0 Facility Management and Control

1.1 General

The inspectors reviewed current and planned decommissioning activities, and discussed changes in decommissioning funding 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 number of staff at Fermi 1 had not changed since our last inspection. The inspectors discussed the future projected short fall in decommissioning funding with the Decommissioning Manager. The Nuclear Decommissioning Trust (NDT) will review this shortfall. The NDT has requested a list of options, which is being prepared. NDT and Fermi 1 Management will evaluate these options. The Decommissioning Manager indicated that the Fermi 1 decommissioning shortfall was included in a briefing to Detroit Edison's Board of Directors Nuclear Review Committee which requested that the decommissioning project proceed as planned.

At daily management meetings, the managers discussed maintenance work activities and set work priorities on items needing immediate attention. The inspectors attended the daily pre-job briefs which included present work schedules and future prioritization of work.

c. Conclusions

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

1.3 Safety Reviews, Design Changes, and Modifications (37801)

a. Inspection Scope

The inspectors reviewed the licensee's safety review process and procedures to determine whether the program conformed to 10 CFR Part 50.59 requirements. The following items were reviewed:

Fermi 1 Administrative Controls, Section 1.6, "10 CFR Part 50.59 Evaluations," Rev. 58, dated June 2003;

Enrico Fermi Atomic Power Plant Unit 1 Amendment to Facility Operating License, Amendment 19, Section B (1), "Pursuant to the Section 104 (c) of the Act and 10 CFR Part 50 . . . ,"

Fermi 1 Safety Analysis Report, Section 6.2.4, "Design Control," Rev. 2, dated November 2002;

Fermi 1 Form 10, "Work Request," Rev. 61, dated August 2002;

Fermi 1 Form 01, "Change Request," Rev. 49, dated March 2001; and

Fermi 1 Form 02, "Fermi 1 10 CFR 50.59 Evaluations," Rev. 49, dated March 2001.

b. Observations and Findings

The inspectors verified that the requirements in the procedure found in Section 1.6 of the Administrative Controls Manual conformed to 10 CFR Part 50.59 requirements. For example, the inspectors determined that the criteria specified in 10 CFR Part 50.59 for determining whether NRC approval was required for a change, test, or experiment, were adequately addressed by the licensee. The inspectors also determined that appropriate personnel conducted the screenings.

The inspectors reviewed the Fermi 1 Safety Analysis Report Section 6.2.4, which states, "Design change documents are used to modify installed Fermi 1 systems in the Fermi 1 controlled area. Modifications to systems or components previously disconnected from Fermi 1 current systems and/or abandoned may be performed with either a design change or other work control document." Modifications and work orders require and receive separate 10 CFR Part 50.59 screenings. Fermi 1 Form 10 addresses work request screenings and Fermi 1 Form 02 addresses design change screenings.

The licensee prepared the following safety screenings for work requests (Fermi 1 Form 10's) for various activities since the last inspection:

Process Inert Gas Sodium Vapor Trap System, EF1-03-028;

Remove NaK Lines between NaK Room & Cold Trap Room, EF1 - 03-030;

Process Fission Product Detector Sodium Vapor Trap System, EF1-03-029;

The licensee prepared the following safety screenings for changes (Fermi 1 Form 02's) for various activities since our last inspection:

Decommissioning Funding Status Report for Fermi 1, 03-004;

Process Inert Gas & Fission Product Detector Sodium Vapor Trap, Sections 03.3.3.6 & 03.3.3.7, 03-005;

Manual Change to Incorporate new Procedure MEF-120, "Processing Residual Sodium in FARB Overflow & Expansion Tank," 03-006.

The inspectors determined that the licensee's conclusions regarding NRC approval were appropriate.

c. Conclusions

The licensee's safety screenings were adequate in scope, and appropriate personnel conducted the screenings as required by Procedure 1.6. The licensee's safety review program conformed to the requirements contained in 10 CFR Part 50.59.

1.4 Self-Assessment (40801)

a. Inspection Scope

At Fermi 1, the licensee conducts three types of assessments. These are: audits conducted either by internal or external personnel, self-assessments conducted by internal personnel (Fermi 1), and observations conducted at random by Fermi 1 management. The licensee had one external audit and two self assessments conducted since NRC's last inspection. The licensee conducted weekly observations that are reviewed quarterly to determine trends. The inspectors evaluated the audit, self-assessments, and observations, and assessed whether effective corrective actions were initiated to implement the resulting recommendations.

b. Observations and Findings

The NRC inspectors reviewed the audit, "Enrico Fermi Power Plant, Unit 1, Audit Subcommittee Report, Audit No. 03-001," conducted May 28, 29, and 30, 2003. The audit team recommended that Fermi 1 and Fermi 2 personnel review the requirements of 10 CFR Part 71.101(f) and consider updating the Quality Assurance Program description in the Fermi 1 Safety Analysis Report to allow the use of the Fermi 2, (NRC approved 10 CFR Part 50, Appendix B) Quality Assurance program for radioactive material packaging and transportation activities within the scope of 10 CFR Part 71 of Fermi 1. The inspectors found that this recommendation may be appropriate for some radioactive waste shipments that may occur in the future.

The audit team recommended that work request completions be reviewed for missing signage. The NRC inspectors also concluded that a focused assessment of work request completions and documentation was needed in this area.

The inspectors reviewed two (all) self-assessments and 12 observations conducted since NRC's last inspection. The two self-assessments were:

“Reactor Building Cable Removal,” dated June 23, 2003; and

“Management Oversight Critique from NaK Cooling System Processing,” dated March 27, 2003.

The NRC inspectors reviewed the corrective actions that resulted from the self-assessments. The inspectors determined these corrective actions were effective in finding potential problems and correcting them. The last self-assessment addressed the NaK Cooling System. This audit team recommended the replacement of the oxygen monitor, which the licensee had completed.

c. Conclusions

The licensee was performing effective management reviews for audits, self-assessments and observations. The inspectors found that the weekly observations were less formal, could be hand written, and looked at human performance factors. The inspectors had no concerns in this area.

1.5 Corrective Action (40801)

a. Inspection Scope

The inspectors reviewed the licensee’s corrective action program for the identification, resolution and prevention of problems, including Section 1.2.2 of Fermi 1 Administrative Controls Manual, “Corrective Action Program,” Rev. 55.

b. Observations and Findings

Section 1.2.2 of Fermi 1 Administrative Controls Manual detailed the licensee’s program for documenting problems. From March through August 2003, licensee personnel issued 13 Condition Assessment Resolution Documents (CARDs).

The inspectors conducted a detailed review of the following Fermi 1 Condition Assessment Resolution Documents (CARDs), which included a review of the licensee’s evaluation and corrective actions:

- CARD No. 03-13994, Lost M & TE Dynamometer 0-100,000 lbs., DY-013-M, written 3/03/03;
- CARD No. 03-12006, RAND Contractor Lost Site Badge, written 4/07/03;
- CARD No. 03-18227, Failed Calibration of Dynamometer 0-100,000 lbs. on work completed by Fermi 1, written 5/29/03;
- CARD No. 03-11853, Fermi 1 Workers Encounter Unexpected Asbestos Containing Material while working in the Rx Building, written 6/09/03;
- CARD No. 03-11851, Work request #EF1-02-053 prerequisite performed not signed off, written 6/03/03;
- CARD No. 03-18512, Water intrusion Alarm-Annulus, written 6/18/03;

- CARD No. 03-18332, Fermi 1 does not have QA program in accordance with 10 CFR 71, Subpart H, written 6/10/03;
- CARD No. 03-10499, Evaluate Practices using Information Tag at Fermi 1, written 6/30/03;
- CARD No. 03-12007, Individual Briefly Entered EF1-RRA Without Signing RWP, written 6/30/03;
- CARD No. 03-10924, EF1 Water Intrusion, written 7/06/03;
- CARD No. 03-12008, Improve Survey Sheet Documentation for Fermi 1 Quarterly Tech Spec Rad Surveys, written 7/09/03;
- CARD No. 03-11854, Light Ballast in EF1 Rx Bldg. Leaked Potential PCB Containing Oil, written 7/11/03; and
- CARD No. 03-19310, Address EF1 Audit Report No. 03-001 recommendation regarding implementation of 49 CFR Part 173.475 (d), (e), (g) and (h), written 7/30/03.

The NRC inspectors determined that the licensee's actions taken following the initiation of CARDS were adequate. Licensee staff assigned appropriate levels of significance for follow-up actions on CARDS and ensured that root cause analyses were complete and were adequate in scope and in corrective actions.

c. Conclusions

The licensee's corrective action program for the identification, root cause evaluation, resolution and prevention of problems was effective in addressing problems and taking appropriate actions that would prevent recurrence.

2.0 Decommissioning Support Activities

2.1 Maintenance and Surveillance (62801)

a. Inspection Scope

The inspectors conducted a tour of the plant facilities to assess the general physical condition of the structures, systems and components. The inspectors observed the replacement of defective bolts on the 30 and 150-ton Whiting cranes. This work was scheduled after the licensee received a 10 CFR Part 21 notification regarding defective crane bolts.

b. Observations and Findings

The inspectors toured the plant facilities and determined that the overall condition of the structures, systems and components were adequate. Fermi 1 management found the defective bolt problem on the Whiting cranes by scanning the Worldwide Web and finding a Daily Event Report from the NRC.

The licensee identified the cranes in question and tagged out the cranes until the bolts could be replaced. The inspectors attended the pre-job brief on the second day of the crane work on the 150-ton crane. The workers could not complete the required replacement work on this crane at the time of this inspection. The licensee found that scaffolding was required to access these bolts. The licensee then limited the crane to half of its lifting capacity until the bolt replacement work could be completed.

c. Conclusions

The licensee adequately maintained the physical condition of the plant. There were no concerns in the areas of scheduling or prioritization of work.

3.0 Radiological Safety

3.1 General

The inspectors reviewed monitoring conducted in conjunction with the removal of primary sodium from the sodium vapor traps in order to assess the overall radiological safety program. Specific findings are detailed in the sections below.

3.2 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 sodium vapor traps, 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.

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

The licensee shipped no radioactive waste since the NRC's last inspection.

The licensee had prepared four waste shipments containing pieces of the reactor dome. The inspectors reviewed and observed the scanning and the wipes collected from the dome and determined that no radioactive waste hazard existed from the portions of the dome that had been released. The licensee removed paint containing poly chlorinated byphenols (PCBs) from both the interior and exterior of the dome where cuts were

made. The licensee cut the dome into pieces and placed them in a recycle bin. The licensee sent this steel for chemical processing and treatment to remove the remaining lead and PCB contaminated paint. The licensee recycled the steel to conserve decommissioning funds.

4.0 Exit Meeting Summary

The inspectors presented the inspection results to members of licensee management at the conclusion of the inspection on August 14, 2003.

PARTIAL LIST OF PERSONS CONTACTED

L. Goodman, Manager, Fermi 1 (Custodian)
J. Couillard, Radiological Engineer, Fermi 1
R. Laubenstein, Fermi 1, Shift Manager
W. Lipton, Principal Engineer
R. Nearhauf, General Supervisor-chemistry
D. Swindle, Fermi 1
D. Craine, Fermi 1 Health Physicist
J. Slaback, Fermi 1, Safety Officer
C. Aldridge-Nunn, Office Administrator
B. Duke, Fermi 1 Staff
L. Davis, Fermi 1 Staff

All of the above were in attendance at the exit meeting on August 14, 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 Shutdown Reactors
IP 71801: Decommissioning Performance and Status at Permanently Shutdown Reactors
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

CARD	Condition Assessment Resolution Document
CFR	Code of Federal Regulations
DOT	Department of Transportation
FY	Fiscal Year
HP	Health Physics
INPO	Institute of Nuclear Power Operators
NaK	Sodium/Potassium
NDT	Nuclear Decommissioning Task
NRC	Nuclear Regulatory Commission
PCBs	Poly chlorinated byphenols
QA	Quality Assurance
SAR	Safety Analysis Report

LICENSEE DOCUMENTS REVIEWED

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