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DTE Energy



August 28, 2006
NRC-06-0059

U. S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Washington, D.C. 20555

Reference: Enrico Fermi Atomic Power Plant, Unit 1
NRC Docket No. 50-16
NRC License No. DPR-9

Subject: Enrico Fermi Atomic Power Plant, Unit 1
Annual Report Period Ending June 30, 2006

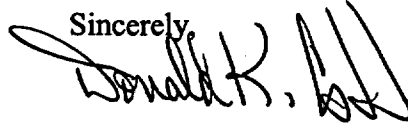
Pursuant to Section I.8 (Reporting Requirements) of the Technical Specifications for Provisional Operating License No. DPR-9, enclosed is the annual report for the period ending June 30, 2006 for the SAFSTOR Fermi 1 facility.

NMSS01

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Should you have any questions, please contact Lynne S. Goodman, Manager, Fermi 1
at 734-586-1205.

Sincerely,

A handwritten signature in black ink, appearing to read "Donald K. Cobb", with a stylized flourish at the end.

Donald K. Cobb
Assistant Vice President, Nuclear Generation

DKC/CF/ljd

Enclosure

cc: NRC Regional Administrator, Region III
T. Smith, NRC (Washington, D.C.)
NRC Resident Inspector- Fermi 2
P. Lee, NRC Region III
T. Strong (Michigan Dept of Environmental Quality)

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bcc: D. Breiding
D. Cobb
W. Colonnello
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L. Goodman
R. Janssens
W. Lipton
R. Nearhoof
S. Stasek
J. Thorson
R. Vergiels
D. Niemeyer
Fermi 1 Staff

Information Management (140 NOC) - Fermi 1 Records
NRR Chron File (Licensing)
NRC Notebook (Fermi 1)

DETROIT EDISON COMPANY
ENRICO FERMI ATOMIC POWER PLANT, UNIT 1

Docket No. 50-16
License No. DPR-9

Annual Report for Period
July 1, 2005 through June 30, 2006

Approved by:



Lynne S. Goodman
Custodian

Date:

8/24/06

ENRICO FERMI ATOMIC POWER PLANT, UNIT 1
ANNUAL REPORT

JULY 1, 2005 THROUGH JUNE 30, 2006

1.0 PREFACE

This report provides a summary of the activities performed and the results of the facility surveillance program of the Enrico Fermi Atomic Power Plant, Unit 1 Decommissioning Project, during the past twelve (12) months ending June 30, 2006.

In summary, required activities were conducted in accordance with the Operating License and Technical Specifications. Fermi 1 continues decommissioning activities with the removal of contaminated components as well as residual sodium to achieve license termination. There were no radioactive spills to the environment, unexpected exposures, or other events requiring a License Event Report during this period.

2.0 SAFSTOR STATUS

2.1 Health Physics

2.1.1 Personnel Exposure

From July 1, 2005, through June 30, 2006, all personnel monitored at Fermi 1 wore Thermoluminescent Dosimeters (TLDs) and wore Direct Reading Dosimeters (DRDs). All visitors were appropriately escorted and wore temporary DRDs as a minimum when entering all Radiological Restricted Areas (RRA).

The accumulative whole body dose from activities associated with Fermi 1, as measured by TLDs, was 148 millirem for this reporting period.

2.2 Surveillance Program

2.2.1 Environmental Surveys

No liquid radiological releases occurred during this period; therefore, environmental monitoring samples were not obtained.

2.2.2 Weekly Tests and Inspections

- **General area ---** Walk through and visual inspections were performed as required by Technical Specifications. The Reactor Building HEPA unit was found to be

unplugged on December 26, 2005. The unit was plugged in and this event was recorded as a near miss. The unit had been unplugged shortly before and no activities requiring an effluent system in the building were in progress during the time the unit was unplugged. Actions to better control such equipment plugs were implemented per the corrective action program. Other minor issues were addressed.

2.2.3 Monthly Inspections

- **Controlled Area Inspections** --- Visual inspections of the fences, gates, and doors; were conducted within the specified intervals and the water level in the sump pumps from the top access of all active sumps was surveyed.
- Sump pump #4 was found to be continuously running on one occasion and upon troubleshooting it was found to be leaking internally. It was replaced with a new pump and new pipes.
- Monthly inspections identified a number of minor issues during the period. Each was appropriately resolved.

2.2.4 Quarterly Surveillances

- **Radiological Surveys** --- The Reactor Building and the Fuel and Repair Building (FARB) were checked for presence of gamma radiation and beta, gamma, and alpha contamination. The results of the quarterly contamination surveys indicated general area walkways remain <500-dpm/100 cm² beta/gamma and <20-dpm/100-cm² alpha. No changes were observed in radiation or contamination levels.

3.0 DECOMMISSIONING PROJECT

The Fermi 1 Decommissioning Project continued during this period. Sodium cleanup is discussed below. The dose rates were mapped for the inside of the reactor to support planning. The rotating plug was placed in its final position and the hold-down mechanism (HDM) spider assembly was lowered onto the core supports. A sleeve was removed from the transfer rotor container (TRC) exit port. The offset handling mechanism (OHM), drive mechanism, and plug sleeves were removed. The TRC drive mechanism and drive shaft sleeve were removed. The TRC drive shaft was disengaged from the fuel pot carousel. The rotating plug alignment penetration plug was removed. Set up of the processed loop # 1 to serve as a heat sink for future processing systems was initiated. Scaffolding was built around loops # 2 and # 3 to support separating the 6" and 14" lines from the reactor. The 30" lines between loops # 2 and # 3 and the reactor were separated.

Other accomplishments include loading approximately 19,000 gallons of radiologically contaminated salt water (aqueous sodium hydroxide solution, which is

a byproduct of the sodium processing, neutralized with muriatic acid) in preparation for shipment to EnergySolutions.

Periodic groundwater sampling was conducted during this period to obtain information for license termination planning. No plant related isotopes were detected.

The Fermi 1 decommissioning team cut up the previously processed fission product detector (FPD) and Inert Gas (IG) sodium vapor traps and verified that all of the residual sodium and sodium-potassium were successfully processed. The team cut up the previously processed IG vacuum tank and hold up tank and verified that all of the residual sodium was successfully processed.

On March 8, 2006 the Fermi 1 team discovered depleted uranium while dismantling the Fuel Transport Facility Reactor Building gripper cask valve. The depleted uranium was discovered in two parts of this mechanism. NRC was notified on March 9, 2006 and the depleted uranium was shipped offsite on May 4, 2006. The total volume of depleted uranium was less than 1 ft³.

3.1 Sodium Cleanup

Primary sodium cleanup activities continued. The residual sodium in several batches of pipe and equipment was processed using the new reaction chamber. The residual sodium in the primary loop # 1 was processed.

3.2 Radiological Surveys

No unexpected radiological conditions were encountered during this reporting period.

3.3 Radiological Shipments

The following materials were shipped from Fermi 1 during the reporting period:

Material Description	Destination	Shipment Category	Activity (mCi)	Volume (ft3) Gross	Weight (lbs) Gross
Dry Active Waste	Envirocare, Clive UT	Limited Quantity	6.34E+00	721	37,300
Dry Active Waste	Duratek, Oak Ridge, TN	LSA-II	1.91E+00	2560	16,431
Laundry	Unitech Services Group, Morris, IL	Limited Quantity	4.81E-01	103	1,522
Laundry	Unitech Services Group, Morris, IL	Limited Quantity	4.79E-01	103	1,507
Lead Paint -- Sample	General Engineering Lab, Charleston, SC	Exempt	Exempt	N/A	N/A
Water Sample	General Engineering Lab, Charleston, SC	Limited Quantity	3.81E-03	N/A	N/A
Lead and Depleted Uranium	ALARON, Corporation, Wampum PA	Limited Quantity	1.99E+02	94	2,500
Laundry	Unitech Services Group, Morris, IL	Limited Quantity	4.77E-01	103	1,467

4.0 RADIOLOGICAL EFFLUENTS

There were no unmonitored radiological gaseous or particulate effluent releases for the reporting period. There were no particulate releases for the reporting period. All measurable releases were associated with the sodium removal project. The maximum dose to an offsite member of the public from these releases was 1.7E-5 mrem total effective dose equivalent from tritium. The total activity of tritium released was 3.03E+4 μ Ci. The gaseous effluent releases were below the Technical Specification air dose limit of 10 mrad of gamma radiation and 20 mrad of beta radiation per year. The individual dose due to gaseous effluent releases was below the Technical Specification air dose limit of 5 mrem TEDE.

50.59 EVALUATIONS AND DESIGN CHANGES

5.1 10 CFR 50.59

No 10 CFR 50.59 screenings conducted during this period determined that a 50.59 evaluation was required.

5.2 Design Changes

There were no formal design changes implemented during this report period. Removal of abandoned systems continued using work request documents per the Fermi 1 Quality Assurance Program.

6.0 AUDIT SUBCOMMITTEE

The Audit Subcommittee inspected the physical facility and reviewed the Technical Specification surveillance records twice during the reporting period. No major problems were found.

All audit reports are maintained on file.