

THE DETROIT EDISON COMPANY

Enrico Fermi Unit I Decommissioned

Atomic Power Plant

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Report for

year beginning July 1, 1981 and ending June 30, 1982

EF-128

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I

PREFACE

This annual report is issued by The Detroit Edison Company in compliance with the provisions of the United States Nuclear Regulatory Commission, Provisional Operating License No. DPR-9, as amended, and is intended to provide a summary of the status and events at the decommissioned Enrico Fermi Atomic Power Plant during the past twelve (12) months.

II

RETIREMENT STATUS

Primary System

The primary system, established during decommissioning, and consisting of the reactor vessel, primary sodium piping, primary shield tank, machinery dome, primary sodium service system and secondary sodium system extending out to welded pipe caps remains blanketed with carbon dioxide. This was done to provide a passivating atmosphere for any sodium that remains. A continuous supply of carbon dioxide maintains this cover gas at approximately 2 inches of water column pressure.

Primary Sodium Storage

There has been no change in sodium inventory from the previous annual report (EF-127), dated June 30, 1981. Periodic inspections for evidence of sodium leakage were performed in accordance with Technical Specifications and described in Section IV of this report.

### Administrative and Surveillance Procedures

The tables in Section V were revised to reflect the appointments of W. D. Gilbert, replacing G. W. Bethke (resigned) to the Review Committee; M. A. Nelson replacing R. G. Rateick to the Audit Subcommittee; and E. M. Page to the Custodial Agents List. Telephone numbers listed in Section VII, Table IV, were verified to ensure they were current and accurate. There were no other deletions or additions to the Administrative and Surveillance procedures during this reporting period.

## III

### HEALTH PHYSICS

#### Personnel Exposure

There are thirty-four (34) thermoluminescent dosimeters processed monthly. Records indicate two (2) exposures greater than 10 mREM. The exposures were 11 and 10 mREM.

#### Environmental Surveys

A total of twenty (20) environmental sample analyses of raw surface water, raw city water and sediment were reported during this period. Sample analyses covered the period from June, 1981 through June, 1982. The results of these samples were within the normal range experienced in the past. These values are given in the Periodic Test Activities, Section IV.

IV

Periodic Test Activities

Weekly Tests and Inspections

1. Water Intrusion Alarm - Continuity tests of the water intrusion alarm circuits for FARB, lower Reactor Building and biological shield wall areas, were conducted as required by Technical Specification. No discrepancies were encountered during this reporting period.
2. Sodium - Storage tanks and drums of frozen sodium stored in the Reactor Building were inspected for evidence of leakage. Weekly inspections revealed no leakage or discrepancies.

Monthly Inspections

1. Controlled Area Inspections - Visual inspection of fence, gates, doors (locked), operation of sump pump and liquid level of MK-15 in the FARB were conducted within specified intervals. No discrepancies were found during this reporting period.

Quarterly Tests

1. Smear Surveys - The Reactor Building and FARB were checked for presence of gamma radiation and transferable contamination. The results of these smear surveys indicated no decontamination procedures were required.

Typical Smear Test Values in dpm/100cm<sup>2</sup>

Date	REACTOR BUILDING	
8/21/81	All Smears	< 1000
10/1/81	All Smears	< 1000
2/11/82	All Smears	< 1000
6/5/82	All Smears	< 1000

Date	FUEL AND REPAIR BUILDING (FARB)	
8/21/81	All Smears	< 1000
10/1/81	All Smears	< 1000
2/11/82	All Smears	< 1000
6/5/82	All Smears	< 1000

Semi-Annual Tests

Water Intrusion Alarms - Both of the required semi-annual functional tests of the water intrusion detectors in the FARB, lower Reactor Building and biological shield wall were successfully conducted; one on 6/19/81 and the other on 1/29/82.

RAW WATER GAMMA ACTIVITY

DATE	LOCATION	Cs-137	Ra <sup>226</sup>	K <sup>40</sup>
10/13/81	Reactor Channel	< 3.09x10 <sup>-9</sup>	< 1.33x10 <sup>-8</sup>	< 4.9x10 <sup>-8</sup>
10/13/81	Swan Creek	< 4.37x10 <sup>-9</sup>	< 1.33x10 <sup>-8</sup>	< 9.8x10 <sup>-8</sup>
10/13/81	Lake Erie	< 3.00x10 <sup>-9</sup>	< 1.75x10 <sup>-8</sup>	< 4.9x10 <sup>-8</sup>
10/13/81	South Lagoon	< 3.00x10 <sup>-9</sup>	< 1.4x10 <sup>-8</sup>	< 1.00x10 <sup>-9</sup>
10/13/81	Fermi I	< 3.09x10 <sup>-9</sup>	< 1.23x10 <sup>-8</sup>	< 8.49x10 <sup>-9</sup>
10/13/81	Monroe	< 3.09x10 <sup>-9</sup>	< 1.51x10 <sup>-8</sup>	< 1.00x10 <sup>-9</sup>
10/13/81	Detroit	< 3.09x10 <sup>-9</sup>	< 3.3x10 <sup>-8</sup>	< 1.00x10 <sup>-9</sup>
*6/18/82	Reactor Channel	< 1.16x10 <sup>-8</sup>	< 2.21x10 <sup>-8</sup>	< 2.13x10 <sup>-7</sup>
6/18/82	Swan Creek	< 1.16x10 <sup>-8</sup>	< 2.55x10 <sup>-8</sup>	< 2.05x10 <sup>-7</sup>
6/18/82	Lake Erie	< 1.05x10 <sup>-8</sup>	< 2.68x10 <sup>-8</sup>	< 1.89x10 <sup>-7</sup>
6/18/82	South Lagoon	< 1.02x10 <sup>-8</sup>	< 2.70x10 <sup>-8</sup>	< 1.70x10 <sup>-7</sup>
6/18/82	Fermi I	< 1.36x10 <sup>-8</sup>	< 2.80x10 <sup>-8</sup>	< 1.39x10 <sup>-7</sup>
6/18/82	Monroe	< 1.11x10 <sup>-8</sup>	< 3.08x10 <sup>-8</sup>	< 1.71x10 <sup>-7</sup>
6/18/82	Detroit	< 1.36x10 <sup>-8</sup>	< 2.14x10 <sup>-8</sup>	< 1.97x10 <sup>-7</sup>

All Activities in uCi/ml

SEDIMENT GAMMA ACTIVITY

DATE	LOCATION	Cs-137	Ra <sup>226</sup>	K <sup>40</sup>
10/10/81	Reactor Channel	6.088x10 <sup>-7</sup>	2.63x10 <sup>-6</sup>	1.26x10 <sup>-4</sup>
10/12/81	Swan Creek	1.49x10 <sup>-7</sup>	3.74x10 <sup>-7</sup>	7.28x10 <sup>-6</sup>
10/12/81	South Lagoon	1.22x10 <sup>-7</sup>	2.43x10 <sup>-7</sup>	6.98x10 <sup>-6</sup>
6/18/82	Reactor Channel	< 2.02x10 <sup>-8</sup>	2.07x10 <sup>-7</sup>	9.20x10 <sup>-6</sup>
6/18/82	Swan Creek	< 9.84x10 <sup>-9</sup>	1.10x10 <sup>-7</sup>	8.23x10 <sup>-7</sup>
6/18/82	South Lagoon	< 3.58x10 <sup>-8</sup>	5.13x10 <sup>-7</sup>	8.79x10 <sup>-6</sup>

All Activities in uCi/gram

\* See Noteworthy Item

Carbon Dioxide Cover Gas Pressure

The semi-annual test of the Hi and Lo Pressure alarm settings were successfully completed on 6/12/81 and 1/28/82. Setpoints were within the limits established and no adjustments were required.

Annual Tests

Carbon Dioxide Cover Gas Pressure Relief Valve

The annual test of the carbon dioxide cover gas pressure relief valve setting was successfully completed on 6/18/82. The relief actuation pressure less than 5 PSIG was verified.

V

Review Committee

Members of the Review Committee

E. L. Alexanderson - Chairman  
E. P. Griffing - Custodian  
W. D. Gilbert  
W. G. Harrison  
P. J. Lavelly  
J. E. Meyers  
M. A. Nelson  
E. H. Newton  
E. M. Page  
R. G. Rateick

The Committee met on July 9, 1981. Formal minutes of these meetings are on file.

Audit Subcommittee

Present members of the Audit Subcommittee are: Mr. M. A. Nelson and Mr. E. M. Page. The Subcommittee met at the facility on December 23, 1981 and June 24, 1982 for inspection of the facility and review of records and procedures. Memorandums containing their findings are on file. The Review Committee will discuss the findings of the Audit



Subcommittee in their regular annual meeting required to be convened between June 30, 1981 and August 31, 1982.

## VI

### Noteworthy Items

#### Biological Shield Wall (BSW) Water Intrusion Alarm

On January 30, 1982, the Biological Shield Wall Water Intrusion Alarm annunciated. The annulus floor drains between the Reactor Building and the Biological Shield Wall were inspected. This inspection revealed a shallow accumulation of water around the West floor drain. Inspection of the sump pump well in the steam generator room basement, which receives the drain water, showed a level high enough to back water into the annulus floor drain. Upon inspecting the area for the cause of the high sump level, a frozen and cracked Steam Generator Room roof drain trap was found just below the operating floor level. The sump pump discharge pipe is connected to this line at the trap area. The cracked trap allowed all roof drain and sump pump discharge water to run back into the sump. The trap was repaired and wrapped with electric heat tracing to prevent a re-occurrence.

#### Fuel and Repair Building (FARB) MK-15 Liquid Waste Tank and Hot Sump

On January 4, 1982, the hot sump high level alarm annunciated. The sump was pumped down raising the MK-15 liquid waste holding tank level from 60 to 66 inches. Again on February 4, 1982, the hot sump required pumping down, raising the MK-15 tank level from 66 to 74 inches. The water intrusion into the hot sump was caused by snow and ice buildup on the Fuel and Repair Building roof, which blocked

the roof drains, causing water leakage into the building from the roof. Some below grade ground water intrusion was also experienced and is believed to be caused by a higher ground water table elevation in this area.

On May 27, 1982, the MK-15 Liquid Waste Tank reached a level of 75 inches. The Custodian was notified in accordance with Administrative and Surveillance Procedure, Section 6-8 (2).

Presently, arrangements are being made to evacuate the tank or select an alternate holding tank in accordance with Administrative and Surveillance Procedures.

#### Semi-Annual Raw Water and Sediment Samples

The samples due in April, 1982 were analyzed incorrectly. A new set of samples were taken June 18, 1982. (pg. 4 of this report) Results were similar to past readings.

#### Nuclear Regulatory Commission Inspection

On July 14, 1981 a complete tour and review of the decommissioned facility was made by NRC Inspectors L. Hueter and B. Little. The Health Physics Building slab and debris from demolishing the building were also inspected. No debris material was found to be contaminated to levels greater than 5 micro R/hr with a 5-7 micro R/hr background. The inspection disclosed no problem areas.

#### Site Improvements

The Fuel and Repair Building and Sodium Storage Building roofs were repaired by applying tar patches this Spring.