

THE DETROIT EDISON COMPANY

Enrico Fermi Unit I Decommissioned

Atomic Power Plant

Docket No. 50-16

License No. DPR-9

Report for

year beginning July 1, 1979 and ending June 30, 1980

EF - 126

Approved by:

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Date: 7-29-80

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Date: 7/29/80

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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 months.

RETIREMENT STATUSPrimary 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-124), dated June 30, 1978. 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

Revision 1 to the Administrative and Surveillance Procedures Manual was prepared during the year for approval at the 1980 Annual Review Committee Meeting

Need for this revision was brought about by the formation of a new Nuclear Operations Organization, headed by a Vice President, within the Detroit Edison Company. Delegation of responsibility for the decommissioned facility was changed from the Manager - Power Systems Operations down through the Production Department to the Vice President - Nuclear Operations down through the Manager - Nuclear Operations.

The need to also report abnormal occurrences to the State of Michigan Department of Public Health was included in Section 11F Page 2-5 and the requirements for the Plant Review Audit Subcommittee to meet was changed to twice a year rather than once every six months.

Section VI D.6.c (Annual Report) was changed to show the need to identify this report with the docket and license number and to send an additional copy to the NRC Document Management Branch as required in the NRC letter "Reports to the Nuclear Regulatory Commission (NRC)" #21-02335-03 from James G. Keppler dated April 25, 1980.

For convenience, the address to which the fifty (50) copies of the Annual Report must be sent was also added to this section. The tables in Section VII were revised to reflect personnel changes brought about by retirements, transfers and resignations and changed approval authority brought about by the above mentioned organization change. Telephone numbers on Table IV were checked to ensure they were current and accurate.

HEALTH PHYSICSPersonnel Exposure

There are twenty (20) thermoluminescent dosimeters processed monthly. Records indicate one (1) exposure greater than 10 mREM. The exposure was 14 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, 1979 through June, 1980. 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 ActivitiesWeekly 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. One repair was made following a malfunction of a weekly test.
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 NK-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/ft²

Reactor Building

| <u>Date</u> | <u>High</u> | <u>Low</u> | <u>Avg.</u> |
|-------------|-------------|------------|-------------|
| 7/16/79 | 47 | <3.6 | 14 |
| 10/29/79 | 40 | <3.6 | 14 |
| 1/8/80 | 10 | <3.6 | 8 |
| 4/3/80 | 65 | <3.6 | 11 |

Fuel & Repair Building

| <u>Date</u> | <u>High</u> | <u>Low</u> | <u>Avg.</u> |
|-------------|-------------|------------|-------------|
| 7/16/80 | 15 | <3.6 | 3 |
| 10/29/79 | 18 | <3.6 | 8 |
| 1/9/80 | 10 | <3.6 | 4 |
| 4/3/80 | 68 | <3.6 | 11 |

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 7/12/79 and the other on 1/11/80.

Raw Water Gross Beta Activity uCi/ml

| <u>Location</u> | <u>9/25/79</u> | | <u>Date</u> |
|-----------------|-----------------------|-----------------------|-------------|
| Reactor Channel | 3.44×10^{-9} | 8.2×10^{-9} | 5/15/80 |
| Swan Creek | 7.05×10^{-9} | 9.1×10^{-9} | 5/15/80 |
| Lake Erie | 3.51×10^{-9} | 11.0×10^{-9} | 4/15/80 |
| South Lagoon | 5.57×10^{-9} | 20.0×10^{-9} | 5/15/80 |
| Fermi I | 3.45×10^{-9} | 7.2×10^{-9} | 4/15/80 |
| Monroe | 3.18×10^{-9} | 4.2×10^{-9} | 4/25/80 |
| Detroit | 2.47×10^{-9} | 5.1×10^{-9} | 4/25/80 |

Sediment Samples Gamma Activity uCi/dry gram

| <u>9/25/79</u> | <u>Cs¹³⁷</u> | <u>Ra²²⁶</u> | <u>K⁴⁰</u> |
|-----------------|-------------------------|-------------------------|-----------------------|
| Reactor Channel | * | 1.28×10^{-6} | 3.09×10^{-6} |
| Swan Creek | 2.13×10^{-6} | 1.82×10^{-6} | * |
| South Lagoon | * | 2.10×10^{-6} | 4.09×10^{-6} |
| <u>4/15/80</u> | <u>Cs</u> | <u>Ra</u> | <u>K</u> |
| Reactor Channel | $< 0.07 \times 10^{-6}$ | $< 0.6 \times 10^{-6}$ | 13.0×10^{-6} |
| Swan Creek | 0.057×10^{-6} | 0.73×10^{-6} | 14.0×10^{-6} |
| South Lagoon | 0.35×10^{-6} | 1.4×10^{-6} | 17.0×10^{-6} |

* Measurement errors greater than 100 percent computed at the 95 percent confidence level.

The above results are similar to past results indicating no influence from the plant.

Carbon Dioxide Cover Gas Pressure

The semi-annual test of the Hi and Lo Pressure alarm settings were successfully completed on 7/13/79 and 1/11/80. 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 6/23/80. The relief actuation pressure of 4.9 PSIG was verified.

V

Review Committee

Members of the Review Committee

E. L. Alexanderson - Chairman
W. W. White - Custodian
R. E. Baer - Secretary
D. H. Fauser
R. G. Rateick
J. E. Meyers
E. H. Newton

The Committee met on July 23, 1979. Formal minutes of these meetings are on file.

Audit Subcommittee

Present members of the Audit Subcommittee are: Mr. E. M. Page and Mr. R. G. Rateick. They only did one series of inspections this year due to a breakdown in the addressograph notification system. Steps have been taken to avoid a recurrence. The Subcommittee met at the facility on April 16, May 6, and May 20, 1980 for inspection of the facility and review of records and procedures in accordance with Technical Specifications. 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, 1980 and August 31, 1980.

Noteworthy ItemsReactor Building Painting

The outside of the Reactor Building and the below floor cooling piping were painted in November 1979.

Lower Reactor Building (LRB) Water Intrusion Alarm

The LRB water intrusion alarm came in on 4/11/80. The affected area was checked and found dry. The instrument department personnel found and replaced a faulty relay in the circuit. The system was returned to operation.

Biological Shield Wall (BSW) Area Water Intrusion Alarm

The BSW area water intrusion alarm came in intermittently on 6/8/80. An inspection of the area showed no water, but high humidity. Instrument department personnel checked out and adjusted circuit to prevent further alarms due to high humidity.

FARB Back-Up Hot Sump Pump

The FARB Back-Up Hot Sump Pump, which became inoperative in the spring of 1979, was removed and determined to be unrepairable. It is now stored in the Hot Sump Room. A replacement pump was not considered.