

FEB 26 1985

Docket No.: 50-341

Dr. Wayne Jens  
Vice President - Nuclear Operations  
The Detroit Edison Company  
2000 Second Avenue  
Detroit, Michigan 48226

Dear Dr. Jens:

Subject: Revised Draft License for Fermi-2

As you are aware, the staff is preparing a revised draft license for the Fermi-2 facility. We had previously sent you the prior draft license in our letter dated November 27, 1984. Enclosed is a draft copy of this revised license (without attachments and appendices) for your information. We have incorporated some of your comments on the first draft into this second draft. We believe that this present draft accurately reflects the commitments required of you as described in the FSAR, SER, and other documents.

We have added some additional conditions to this draft (Conditions 4, 5, 9 and 17) and eliminated those related to inadequate core cooling and non-qualified surface coatings. We have indicated significant changes in this second draft by a line in the right-hand margin and by underlining if appropriate.

If you have any questions relating this draft license, contact the Fermi-2 Project Manager, M. D. Lynch, at (301) 492-7050.

Sincerely,

LSI

Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

Enclosure: As stated

cc: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

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Sincerely,

A handwritten signature in cursive script, appearing to read "Tom Novak".

Thomas M. Novak, Assistant Director  
for Licensing  
Division of Licensing

Enclosure: As stated

cc: See next page

FERMI

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

DOCKET NO. 50-341

FERMI-2

FACILITY OPERATING LICENSE

License No. NPF-33

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for license filed by the Detroit Edison Company and Wolverine Power Supply Cooperative, Incorporated (licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
  - B. Construction of Fermi-2 (the facility) has been substantially completed in conformity with Construction Permit No. CPPP-87 and the application, as amended, the provisions of the Act, and the regulations of the Commission;
  - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission, (except as exempted from compliance in Section 2.D below);
  - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
  - E. The Detroit Edison Company\* is technically qualified to engage in the activities authorized by this license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
  - F. Detroit Edison Company and Wolverine Power Supply Cooperative, Incorporated, have satisfied the applicable provisions of 10 CFR Part 140 "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

\*Detroit Edison Company is authorized to act as agent for Wolverine Power Supply Cooperative, Incorporated, and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
  - H. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of this Facility Operating License No. NPF-33, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
  - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40 and 70.
2. Based on the foregoing findings and the Initial Decision issued by the Atomic Safety and Licensing Board dated October 29, 1982, regarding this facility, Facility Operating License No. NPF-33 is hereby issued to the Detroit Edison Company and the Wolverine Power Supply Cooperative, Incorporated (the licensees) to read as follows:
- A. The license applies to Fermi-2, a boiling water nuclear reactor and associated equipment (the facility), owned jointly by the Detroit Edison Company, and Wolverine Power Supply Cooperative, Incorporated. The facility is located in Frenchtown Township, Monroe County, Michigan, and is described in the licensees' "Final Safety Analysis Report", as supplemented and amended, and in the licensees' Environmental Report, as supplemented and amended.
  - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
    - (1) The Detroit Edison Company (DECO), pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the designated location in Monroe County, Michigan, in accordance with the procedures and limitations set forth in this license;
    - (2) Wolverine Power Supply Cooperative, Incorporated, to possess the facility at the designated location in Monroe County, Michigan, in accordance with the procedures and limitations set forth in this license;
    - (3) DECO, pursuant to the Act and 10 CFR Part 70, to receive, possess and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

- (4) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material such as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
  - (5) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
  - (6) DECo, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

The Detroit Edison Company is authorized to operate the facility at reactor core power levels not in excess of 3292 megawatts thermal (100% power) in accordance with the conditions specified herein and in Attachment 1 to this license. The preoperational tests, startup tests and other items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license. Pending Commission approval, this license is restricted to power levels not to exceed 5 percent of full power (165 megawatts thermal);

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan;

(3) Antitrust Conditions

Detroit Edison Company shall abide by the agreements and interpretations between it and the Department of Justice relating to Article I, Paragraph 3 of the Electric Power Pool Agreement between Detroit Edison Company and Consumers Power Company as specified in a letter from DECo to the Director of Regulation, dated August 13, 1971, and the letter from Richard W. McLaren, Assistant Attorney General, Antitrust Division, U. S. Department of Justice, to Bertram H. Schur, Associate General Counsel, Atomic Energy Commission, dated August 16, 1971.

(4) Safety/Relief Valve In-Plant Testing (Section 3.8.1, SSER #5)\*

Prior to full power operation, DECo shall perform a series of in-plant tests of the safety/relief valves (SRVs). The acceptance criteria for these tests are contained in Section 2.13.9, "SRV Load Assessment by In-Plant Tests" of NUREG-0661, "NRC Acceptance Criteria for the Mark I Containment Long-Term Program." The results of these tests shall be reported to the NRC staff within six months of completing this test series.

(5) Suppression Pool Temperature Measurements (Section 3.8.1, SSER #5)

- (a) Prior to operation at full power, DECo shall accomplish the following tasks during the series of SRV tests performed in accordance with Section 2.C.4 of this license:
- (i) Measure the pool temperatures in all eight sectors of the suppression pool at frequent time intervals.
  - (ii) Demonstrate that all adjacent temperature readings are within 45°F of each other throughout an individual SPV test and determine whether and when suppression pool mixing occurred due to operation of the reactor heat removal system pump.
  - (iii) Perform an SPV actuation test without any suppression pool mixing or cooling and record the test data in the manner described in Sections 2.C.5.a(i) and 2.C.5.a(ii) of this license. Measure temperatures in all eight sectors of the suppression pool for 48 hours or until thermal equilibrium of the pool is reached. Demonstrate that using the seven sector method excluding the highest suppression pool temperature reading, will yield a conservative value for the bulk temperature of the suppression pool within a 48-hour period.

\*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report (SER) and/or its supplements wherein the license condition is discussed.

- (b) During the first year of normal operation, DECo shall gather the following information:
- (i) Record the suppression pool temperatures in all eight sectors every 24 hours.
  - (ii) Record the conditions in the suppression pool which would promote mixing (e.g., cooling of the suppression pool or actuation of an SRV).
- (c) Within six months of completing the data gathering tasks described in Sections 2.C.5.a and 2.C.5.b of this license, DECo shall submit a report to the NRC staff containing the results of these tests.

(6) Environmental Qualification (Section 3.11, SSER #5)

No later than November 30, 1985, DECo shall environmentally qualify all electrical equipment according to the provisions of 10 CFR 50.49.

(7) Hydrodynamic Stability (Section 4.4.1, SFP)

Prior to startup following the first refueling outage, DECo shall provide for NRC staff review and approval, a revised stability analysis.

(8) Pipe Breaks in the Scram System (Section 6.3.4, SSER #5)

Within two years or prior to startup following the next refueling outage, whichever is later, after the issuance of the generic SER resolving the NRC staff concerns in NUREG-0803, DECo shall have implemented all actions and modifications specified by the NRC staff in its generic SER which are applicable to Fermi-2.

(9) Control Room Habitability (Section 6.4.1, SSEP #5)

Prior to exceeding five percent of full power, DECo shall provide assurance to the NRC staff that potential contamination pathways through those portions of the control room air-conditioning system which are external to the control room zone, will not have a significant adverse impact on control room habitability, or will have established a technical specification which provides for periodic leakage testing to assure the integrity of those external portions of the control room air-conditioning system.



(10) Study of Multiple Control System Failures (Section 7.7.2, SER)

Prior to startup following the first refueling outage, DECo shall provide the NRC staff for its review and approval, the necessary analysis or modifications needed to resolve the impact of control system failures due to a failure or malfunction of power sources or sensors which provide power or signals to two or more control systems.

(11) Modifications for Fire Protection (Section 9.5.1, SSEP #5)

- (a) DECo shall implement and maintain in effect all provisions of the approved fire protection program as described in its Final Safety Analysis Report for the facility through Amendment 60 and as approved in the SER through Supplement No. 5, subject to provisions (b) and (c) below.
- (b) DECo may make no change to the approved fire protection program which would decrease the level of fire protection in the plant without prior approval of the Commission. To make such a change, DECo must submit an application for a license amendment pursuant to 10 CFR 50.90.
- (c) DECo may make changes to features of the approved fire protection program which do not decrease the level of fire protection without prior Commission approval provided:
  - (i) such changes do not otherwise involve a change in a license condition or Technical Specification or result in an unreviewed safety question (see 10 CFR 50.59), and
  - (ii) such changes do not result in failure to complete the fire protection program approved by the Commission prior to license issuance.

DECo shall maintain, in an auditable form, a current record of all such changes, including an analysis of the effects of the changes on the fire protection program, and shall make such records available to NRC inspectors upon request. All changes to the approved program made without prior Commission approval shall be reported annually to the Director of the Office of Nuclear Reactor Regulation, together with supporting analyses.

(d) The independent alternate shutdown system shall be operational prior to startup after the first refueling outage or prior to startup after the first known extended outage of three weeks or longer following NRC staff approval of the technical specifications applicable to this alternate shutdown system. DECo shall submit these technical specifications for the independent alternate shutdown system no later than September 30, 1985. In either case, the interim operating period should not extend beyond December 31, 1986, even if a shutdown is required to complete the modifications. The interim procedures and measures described in Section 9.5.1 and Appendix E of SSER #5 shall be in place prior to initial criticality, including removal of power from the Division 1 cooling tower bypass valve (No. E1150-F603A) and from either the single series valve (No. E1150-F008) in the reactor heat removal (RHR) system or the two parallel RHR suction valves (Nos. E1150-F608 and E1150-F009) during normal plant operation.

(12) Low-Pressure Turbine-Disc Inspection (Section 10.2.2, SER)

DECo shall perform an inspection of the low-pressure turbine-discs during the second refueling outage, including volumetric examination of the disc base using ultrasonic techniques. The frequency of subsequent inspections shall be in accordance with the turbine manufacturer's recommendations.

(13) Retention of Persons with RWP Operating Experience on Shift (Section 13.1, SSER #5)

At all times the plant is in an operating condition other than cold shutdown or refueling, DECo shall have a licensed senior operator on each shift who has had at least six months of hot operating experience on a similar type plant, including at least six weeks at power levels greater than 20 percent of full power, and who has had start-up and shutdown experience. For those shifts where such an individual is not available on the plant staff, DECo shall provide an advisor who has had at least four years of power plant experience, including two years of nuclear plant experience, and who has had at least one year of experience on shift as a licensed senior operator at a similar type facility. Use of advisors who were licensed only at the reactor operator level or who otherwise do not fully meet the criteria for shift advisor, will be evaluated by the NRC staff on a case-by-case basis. As a minimum, DECo shall train these advisors on the procedures, technical specifications and plant systems for the Fermi-2 facility and DECo shall examine the advisors on these topics at a level which will assure their familiarity with the plant. For each shift, the remainder of the shift crew shall be trained in the role of the advisors. The training of the ad-

visors and the remainder of the shift crew shall be completed prior to achieving initial criticality. Prior to achieving criticality, DECo shall certify to the NRC staff the names of the advisors who have been examined and have been determined by DECo to be competent to provide advice to the operating shifts. These advisors shall be retained until at least one of the senior operators on each shift has the required experience. The NRC staff shall be notified at least 30 days prior to the release of any special assigned advisor who has been provided in accordance with this license condition.

(14) Inservice Inspection Program

Prior to September 30, 1985, DECo shall submit an initial inservice inspection program for NRC staff review and approval.

(15) Initial Test Program (Section 14, SER)

Any changes to the Initial Test Program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

(16) Post-Accident Sampling System (Section 22, Item II.B.3, SSER #5)

Prior to exceeding 5 percent of full power, DECo shall have installed and operational the post-accident sampling system.

(17) Iodine/Particulate Sampling System (Section 22, Item II.F.1, SSER #5)

Prior to startup following the first refueling outage, DECo shall demonstrate that the operating iodine/particulate sampling system will perform its intended function.

(18) Emergency Planning

In the event that the NRC finds that the lack of progress in completing the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of Section 50.54(s)(?) of 10 CFR Part 50 will apply.

(19) Emergency Response Capability (NUREG-0737, Supplement No. 1)

DECo shall complete the required emergency response capabilities as described in Attachment 2 to this license, which is incorporated into this license.

(20) Generic Letter 83-28 (Required Actions Based on Generic Implications of Salem ATWS Events)

DECo shall submit responses to and implement the requirements of Generic Letter 83-28 on a schedule which is consistent with that given in its letters dated November 3, 1983, and November 29, 1984.

- D. An exemption from certain requirements of Appendix J to 10 CFR Part 50, is described in Supplement No. 5 to the SER. This exemption is authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Therefore, this exemption is hereby granted pursuant to 10 CFR 50.12. With the granting of this exemption, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.
- E. DECo shall maintain in effect and fully implement all provisions of the Commission approved physical security, guard training and qualification and safeguards contingency plans, including amendments made pursuant to the authority of 10 CFR 50.54(p). The approved plans, which contain information described in 10 CFR 73.21 are collectively entitled, "Enrico Fermi Atomic Power Plant Unit 2 Physical Security Plan" Revision 4, dated April 1983 (transmitted June 29, 1983) (It is noted that Revision 4 is a completely reformatted revision which replaces all previous revisions); Amendment 5, dated July 1984 (transmitted July 24, 1984) with supplemental changes (transmitted September 26, 1984, November 29, 1984 and December 6, 1984); "Enrico Fermi Atomic Power Plant Unit 2 Safeguards Contingency Plan" Revision 1, undated (transmittal letter dated July 20, 1981); Amendment 1, dated April 1984 (transmittal letter dated July 3, 1984); and "Enrico Fermi Atomic Power Plant Unit 2 Personnel Training and Qualification Plan" Revision 1, undated (transmittal letter dated July 20, 1981), Amendment 1 dated July 1984 (transmittal letter dated November 29, 1984), with a supplemental page change (transmitted on December 14, 1984).
- F. With the exception of 2.C(2), DECo shall report any violations of the requirements contained in Section 2.C of this license. Initial notification shall be made within twenty four (24) hours to the NRC Operations Center via the Emergency Notification System with written followup in accordance with the procedures described in 10 CFR 50.73(b), (c) and (e), within thirty days.
- G. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.

H. This license is effective as of the date of issuance and shall expire at Midnight on 2025.

FOR THE NUCLEAR REGULATORY COMMISSION

Harold R. Denton, Director  
Office of Nuclear Reactor Regulation

Attachments/Appendices:

1. Attachment 1 - Preoperational Tests
2. Attachment 2 - Emergency Response Capabilities
3. Appendix A - Technical Specifications (NUREG- )
4. Appendix B - Environmental Protection Plan

Date of Issuance:

## ATTACHMENT 2

### EMERGENCY RESPONSE CAPABILITIES

DECo shall complete the following requirements of NUREG-0737, Supplement No. 1, on the schedule noted below:

1. Detailed Control Room Design Review (Section 22, Item I.D.1. SSEP No. 5)

- (a) DECo shall comply with the NRC staff requirements for the conduct of a detailed control room design review (DCRDR) contained in Supplement No. 1 to NUREG-0737. DECo shall submit a summary report of its DCRDR prior to September 30, 1985.
- (b) DECo's summary report shall describe the resolution of each control room design finding identified in the NRC staff's "Control Room Design Review/Audit Report," dated May 26, 1981, as having a Priority 3 rating. This summary report shall also describe the disposition of those findings which DECo, in its letters to the NRC staff dated June 4, 1981; July 31, 1981; July 25, 1984; and September 27, 1984, committed to evaluate and/or implement after issuance of this operating license.

2. Regulatory Guide 1.97, Revision 2 Compliance

DECo shall submit by June 30, 1985, a preliminary report describing how the requirements of Regulatory Guide 1.97, Revision 2, have been or will be met.

3. Upgrade Emergency Operating Procedures (EOPs)

- (a) Prior to July 31, 1986, DECo shall provide for NRC staff review and approval, a Procedures Generator Package (PGP) to meet the requirements of Section 7 to Supplement 1 to NUREG-0737.
- (b) Prior to startup following the first refueling outage, DECo shall complete training on, and have implemented, emergency operating procedures based on the PGP.

4. Safety Parameter Display System and the Emergency Response Information

Both the safety parameter display system (SPDS) and the emergency response information system (ERIS) shall be operational by December 31, 1985.