



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

DCS-016

MAR 20 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: Issuance of Facility Operating License NPF-33, Fermi-2

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Facility Operating License NPF-33, together with the Technical Specifications and the Environmental Protection Plan for the Fermi-2 facility. License No. NPF-33 authorizes operation of Fermi-2 at reactor core power levels not in excess of 3292 megawatts thermal (100% power). Pending Commission approval, operation is restricted to power levels not to exceed 5 percent of full power (165 megawatts thermal).

Enclosed is a copy of a related notice, the original of which has been forwarded to the Office of the Federal Register for publication.

Three signed copies of Amendment No. 26 to Indemnity Agreement No. B-20 which covers the activities authorized under License No. NPF-33 are also enclosed. Please sign all copies and return one to this office.

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the Final Environmental Statement (NUREG-0769) may be purchased at current rates from the National Technical Information Service, Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161, and through the NRC GPO sales program by writing to the U. S. Nuclear Regulatory Commission, Attention: Sales Manager, Washington, D. C. 20555. GPO deposit account holders may call 301-492-9530.

Dated at Bethesda, Maryland this *20<sup>th</sup>* day of *March*, 1985

FOR THE NUCLEAR REGULATORY COMMISSION

*15/*

B. J. Youngblood, Chief  
Licensing Branch No. 1  
Division of Licensing

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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. CPPR-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;

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\*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 and special nuclear material as nuclear fuel 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 completing the startup test program, 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)

DECo shall accomplish during the first fuel cycle, all the tasks described in its letter dated March 6, 1985, regarding the series of SRV tests which will confirm its methodology for measuring the suppression pool bulk temperature.

(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) Control Room Habitability (Section 6.4.1, SSER #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 propose a technical specification which provides for periodic leakage testing to assure the integrity of those external portions of the control room air-conditioning system.

\*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.

(8) 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.

(9) Modifications for Fire Protection (Section 9.5.1, SSER #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 which occurs after 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.

- (e) Prior to exceeding five percent of full power, DECo shall complete the installation of all early warning fire detectors and have all fire door assemblies labeled or listed by a nationally recognized testing laboratory. Additionally, DECo shall complete the hydrostatic testing of fire protection yard piping prior to exceeding five percent of full power.

(10) Emergency Diesel Generator Lube Oil Surveillance Program  
(Section 9.5.7, SSER #5)

DECo shall implement its commitments regarding the surveillance program for the lubricating oil system of the emergency diesel-generators as described in its letters dated March 6, March 14 and March 15, 1985.

(11) 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.

(12) Liquid Radwaste Treatment System (Section 11.2.1, SSER #5)

Prior to exceeding five percent of full power, DECo shall demonstrate that the permanent liquid radwaste treatment system will perform its intended function.

(13) Retention of Persons with BWR 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 advisors 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 or suitably qualified replacements 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)(2) 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. Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, DECo shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within 24 hours to the NRC Operations Center via the Emergency Notification System with written followup within thirty days in accordance with the procedures described in 10 CFR 50.73(b), (c) and (e).
- H. This license is effective as of the date of issuance and shall expire at Midnight on March 20, 2025.

FOR THE NUCLEAR REGULATORY COMMISSION

*15*  
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-1089)
- 4. Appendix B - Environmental Protection Plan

Date of Issuance: ~~MAR 20~~ 1985

\*SEE PREVIOUS PAGE FOR CONCURRENCES  
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ATTACHMENT 1

PREOPERATIONAL TEST, STARTUP TESTS AND OTHER ITEMS

FERMI-2

DOCKET NO.: 50-341

This attachment identifies certain preoperational tests and other items which must be completed to the Commission's satisfaction and identifies the required timing for their completion.

- A. The preoperational tests and testing deficiencies identified in Attachments A and B, respectively, of the March 16, 1985, letter from Wayne H. Jens to J. G. Keppler shall be completed in accordance with the schedule commitments contained in those attachments.
- B. The following open and unresolved items must be resolved prior to entering the operational condition indicated:
  1. Items Requiring Resolution Prior to Entering Operational Condition 2 (Criticality)
    - a. Provide measures to ensure the accessibility of all safety-related valves for serviceability and for manual operation.
  2. Items Requiring Resolution Prior to Entering Operational Condition 1 (Prior to Exceeding Five Percent of Full Power)
    - a. Correct all drawing deviations categorized as "B" items (as described in the Final Report of 10 CFR 50.55(e), Item No. 143, "Deviations of As-Built Plant from Design Documents," from W. H. Jens to J. G. Keppler dated February 16, 1985).
    - b. Fabricate and install the Intrinsic Germanium detector system post-accident collimator.
    - c. Complete a comprehensive review of the technical adequacy and commitment compliance including final procedure approval and completion of training for the effluent monitoring system in conjunction with the accident radioactive release quantification program.
    - d. Demonstrate that the pipe cleanliness program has resolved problems reported pursuant to 10 CFR 50.55(e) concerning debris found in safety-related pipe and components during the fast flush while in the heatup phase.

3. Item Requiring Resolution Prior to Startup After the First Refueling Outage

- a. Correct all remaining drawing deviations (not completed prior to fuel load or addressed in Item 2.a above) identified during walkdowns associated with the resolution of 10 CFR 50.55(e), Item No. 143, "Deviations of As-Built Plant from Design Documents". Demonstrate that all design documents reflect the as-built configuration of the plant.

## 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. SSER 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

The safety parameter display system (SPDS) shall be operational by December 31, 1985.

APPENDIX B

TO FACILITY OPERATING LICENSE NO. NPF-33

FERMI-2

DETROIT EDISON COMPANY

WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED

DOCKET NO. 50-341

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

FERMI-2

ENVIRONMENTAL PROTECTION PLAN  
(NON-RADIOLOGICAL)

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## 1.0 Objectives of the Environmental Protection Plan

The Environmental Protection Plan (EPP) is to provide for protection of environmental values during construction and operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (1) Verify that the station is operated in an environmentally acceptable manner, as established by the FES and other NRC environmental impact assessments.
- (2) Coordinate NRC requirements and maintain consistency with other Federal, State and local requirements for environmental protection.
- (3) Keep the NRC informed of the environmental effects of facility construction and operation and of actions taken to control those effects.

Environmental concerns identified in the FES which relate to water quality matters are regulated by way of the licensee's NPDES permit.

## 2.0 Environmental Protection Issues

In the FES-OL dated August, 1981, the staff considered the environmental impacts associated with the operation of the Fermi-2 facility. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

### 2.1 Aquatic Issues

The NRC will rely on the Michigan Department of Natural Resources for the protection of the aquatic environment from non-radiological operational impacts via the NPDES permit (FES-OL Section 6.b, Summary and Conclusions). The NPDES permit provides effluent limitations for thermal and chemical discharges, as well as requirements for a one-year monitoring of entrainment and impingement at the general service water pumphouse (FES-OL Section 5.3.2). The NPDES permit is reproduced in Appendix D of the FES-OL.

### 2.2 Terrestrial Issues

Those issues requiring monitoring programs previously identified are listed below.

- (1) The need to detect long-term or sudden changes in vegetation due to operation of the Fermi-2 facility (FES-OL Section 5.3.3).
- (2) The need for controlled use of herbicides on transmission rights-of-way (FES-OL Section 4.2.2).

NRC requirements with regard to terrestrial issues are specified in Section 4.2 of this EPP.

### 3.0 Consistency Requirements

#### 3.1 Plant Design and Operation

The licensee may make changes in station design or operation or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question, and do not involve a change in the Environmental Protection Plan. Changes in plant design or operation or performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.

Before engaging in additional construction or operational activities which may affect the environment, the licensee shall prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the Director, Office of Nuclear Reactor Regulation. Activities are excluded from this requirement if all measurable non-radiological effects are confined to the on-site areas previously disturbed during its preparation and plant construction. When such activity involves a change in the Environmental Protection Plan, such activity and change to the Environmental Protection Plan may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this appendix.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns: (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the final environmental statement, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level [in accordance with 10 CFR Part 51.5(b)(2)]; or (3) a matter not previously reviewed and evaluated in the documents specified in Item (1) of this section, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in facility design or operation and of tests and experiments carried out pursuant to this section. These records shall include a written evaluation which provides bases for the determination that the change, tests, or experiment does not involve an unreviewed environmental question nor constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of its Annual Environmental Operating Report (per Section 5.4.1), brief descriptions, analyses, interpretations, and evaluations of such changes, tests and experiments.

#### 3.2 Reporting Related to the NPDES Permits and State Certification

Changes to, or renewals of, the NPDES Permit or the State certification shall be reported to the NRC within 30 days following the date the change or renewal is approved. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The licensee shall notify the NRC of changes to the effective NPDES Permit proposed by the licensee by providing NRC with a copy of the proposed change at the same time it is submitted to the permitting agency. The licensee shall provide the NRC a copy of the application for renewal of the NPDES Permit at the same time the application is submitted to the permitting agency.

### 3.3 Changes Required for Compliance With Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments which are required to achieve compliance with other Federal, State, or local environmental regulations are not subject to the requirements of Section 3.1.

## 4.0 Environmental Conditions

### 4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event which indicates, or could result in, significant environmental impact causally related to plant operation, shall be recorded and promptly reported to the NRC within 24 hours followed by a written report per Section 5.4.2. The following are examples: excessive bird impaction events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, fish kills, and an increase in nuisance organisms or conditions.

No routine monitoring programs are required to implement this condition.

### 4.2 Terrestrial Monitoring

A special surveillance program will be conducted to measure key terrestrial parameters after startup of the Fermi-2 facility for comparison with corresponding measurements obtained prior to startup. These studies focus on effects due to the operation of cooling towers at the Fermi-2 site.

#### 4.2.1 Aerial Remote Sensing

Vegetative communities of the site and vicinity within 1 kilometer of the cooling towers in all directions shall be aerially photographed to detect and assess the significance of damage, or lack thereof, as related to cooling tower drift dispersions. Photography shall be done by aerial overflight prior to harvest. Monitoring shall include a program of low altitude, color infrared photography. The scale for full coverage shall be adequate to enable identification of vegetative damage over relatively small areas of terrain. Some circumstances may warrant inspection of photographs discerning individual trees. Such scale should be adequate to resolve impacted features. Photographs shall be compared with baseline data to ascertain changes in vegetation. Photographic interpretations shall be verified by ground inspection surveys to confirm areas of stress and non-stress. This program shall require aerial photographic monitoring during the first July-September period after the station has been in operation for one year and the program shall be repeated once the following year and alternate years for three (3) additional periods. A report shall be submitted as part of the annual report following each aerial photographic monitoring period. The report shall contain a description of the program, results, and interpretative analyses of environmental impacts. Results reported shall contain information encompassing but not limited to the following: sampling data; time of day; film types; and one (1) set of resultant color transparencies encompassing an area within about a one kilometer (1 km) radius of the cooling tower.

#### 4.2.2 Herbicide Application

The use of herbicides within the corridor rights-of-way of this station shall conform to the approved use of selected herbicides as registered by the Environmental Protection Agency and approved by State authorities and applied as directed by said authorities.

Records shall be maintained at the site concerning herbicide use. Such records shall include the following information: commercial and chemical names of materials used, concentration of active material in formulations diluted for field use; diluting substances other than water; rates of application; method and frequency of application; location; and the date of application. Such records shall be maintained for a period of five years and be made readily available to the NRC upon request. There shall be no routine reporting requirement associated with this condition.

## 5.0 Administrative Procedures

### 5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the Environmental Protection Plan. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organizational structure utilized to achieve the independent review and audit function and the results of the audit activities shall be maintained and made available for inspection.

### 5.2 Records Retention

Records and logs relative to the environmental aspects of plant operation shall be made and retained in a manner convenient for review and inspection. These records and logs shall be made available to the NRC on request.

Records of modifications to plant structures, systems and components determined to potentially affect the continued protection of the environment shall be retained for the life of the plant. All other records, data and logs relating to this EPP shall be retained for five years or, where applicable, in accordance with the requirements of other agencies.

### 5.3 Changes in the Environmental Protection Plan

A request for change in the Environmental Protection Plan shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a license amendment incorporating the appropriate revision to the Environmental Protection Plan.

### 5.4 Plan Reporting Requirements

#### 5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the operating licenses. The period of the first report shall begin with the date of issuance of the operating license.

The report shall include summaries and analyses of the results of the environmental protection activities required by Section 4.0 of this Environmental Protection Plan for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous non-radiological environmental monitoring reports, and an assessment of the observed impacts of the plant operation on the environment. If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.

The Annual Environmental Operating Report shall also include:

- (a) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (b) A list of all changes in station design or operation, tests, and experiments made in accordance with Section 3.1 which involved a potentially significant unreviewed environmental issue.
- (c) A list of nonroutine reports submitted in accordance with Section 5.4.2.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

#### 5.4.2 Nonroutine Reports

A written report shall be submitted to the NRC within 30 days of the occurrence of an unusual or important environmental event. The report shall: (1) describe, analyze, and evaluate the event, including the extent and magnitude of the impact and the plant operating characteristics; (2) describe the probable cause of the event; (3) indicate the action taken to correct the reported event; (4) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems; and (5) indicate the agencies notified and their preliminary responses.

Events reportable under this section which also require reports to other Federal, State or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this section. The NRC shall be provided a copy of such report at the same time it is submitted to the other agency.

7590-01

DETROIT EDISON COMPANY  
WOLVERINE POWER SUPPLY COOPERATIVE, INCORPORATED  
FERMI-2  
DOCKET NO. 50-341  
NOTICE OF ISSUANCE OF FACILITY OPERATING LICENSE

Notice is hereby given that the U. S. Nuclear Regulatory Commission (the Commission or NRC), has issued Facility Operating License No. NPF-33 to Detroit Edison Company and Wolverine Power Supply Cooperative, Incorporated (licensees) which authorizes operation of Fermi-2 (the facility), at reactor core power levels not in excess of 3292 megawatts thermal in accordance with the provisions of the License, the Technical Specifications and the Environmental Protection Plan with a condition currently limiting operation to five percent of full power (165 megawatts thermal). Authorization to operate beyond five percent of full power will require specific Commission approval.

Fermi-2 is a boiling water reactor located in Frenchtown Township, Monroe County, Michigan. The license is effective as of the date of issuance.

The application for the license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I which are set forth in the License. Prior public notice of the overall action involving the proposed issuance of an operating license was published in the Federal Register on May 18, 1975 (40 FR 23122).

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The Commission has determined that the issuance of this license will not result in any environmental impacts other than those evaluated in the Final Environmental Statement since the activity authorized by the license is encompassed by the overall action evaluated in the Final Environmental Statement.

For further details with respect to this action, see (1) Facility Operating License No. NPF-33, with Technical Specifications (NUREG-1089) and the Environmental Protection Plan; (2) the report of the Advisory Committee on Reactor Safeguards, dated August 11, 1981; (3) the Commission's Safety Evaluation Report, dated July 1981 (NUREG-0798), and Supplements 1 through 5 (4) the Final Safety Analysis Report and Amendments thereto; (5) the Environmental Report and supplements thereto; (6) the Final Environmental Statement, dated August 1981; and (7) Assessment of the Effect of License Duration on Matters Discussed in the Final Environmental Statement for the Fermi-2 Facility.

These items are available for inspection at the Commission's Public Document Room located at 1717 H Street., N. W., Washington, D. C. 20555 and at the Monroe County Library Systems, Reference Department, 3700 Custer Road, Monroe, Michigan 48161. A copy of Facility Operating License NPF-33 may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing. Copies of the Safety Evaluation Report and Supplements 1 through 5 (NUREG-0798) and

Dr. Wayne Jens

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An Assessment of the Effect of License Duration on Matters Discussed in the Final Environmental Statement for the Fermi-2 is provided in Enclosure 4.

Sincerely,

For Frank J. Miraglia  
Hugh L. Thompson Jr., Director  
Division of Licensing  
Office of Nuclear Reactor Regulation

Enclosures:

1. Facility Operating License NPF-33
2. Federal Register Notice
3. Amendment No. 26 to Indemnity Agreement No. B-20
4. Assessment of the Effect of License Duration on Matters Discussed in the FES

cc w/enclosures:  
See next page

DISTRIBUTION:  
See attached page

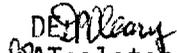
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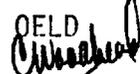
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

Docket Nos. 50-16  
50-341

AMENDMENT TO INDEMNITY AGREEMENT NO. B-20  
AMENDMENT NO. 26

Effective March 20, 1985, Indemnity Agreement No. B-20, between The Detroit Edison Company, Wolverine Power Supply Cooperative, Inc. and the Atomic Energy Commission, dated March 26, 1962, as amended, is hereby further amended as follows:

Item 2a. of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 2 - Amount of financial protection

- a. \$ 1,000,000 (From 12:01 a.m., January 25, 1961, to 12:00 midnight, July 10, 1963 inclusive)
- \$ 1,500,000 (From 12:01 a.m., July 11, 1963, to 12:00 midnight, December 16, 1965 inclusive)
- \$ 3,500,000 (From 12:01 a.m., December 17, 1965, to 12:00 midnight, March 21, 1966 inclusive)
- \$12,100,000 (From 12:01, March 22, 1966, to 12:00 midnight, July 5, 1966 inclusive)
- \$18,000,000 (From 12:01 a.m., July 6, 1966, to 12:00 midnight, August 6, 1967 inclusive)
- \$22,200,000 (From 12:01 a.m., August 7, 1967, to 12:00 midnight, October 8, 1970 inclusive)
- \$29,600,000 (From 12:01 a.m., October 9, 1970, to 12:00 midnight, October 15, 1970 inclusive)
- \$44,400,000 (From 12:01 a.m., October 16, 1970, to 12:00 midnight, December 31, 1972 inclusive)
- \$1,000,000 (From 12:01 a.m., January 1, 1973, to 12:00 midnight, March 19, 1985)

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\$160,000,000\* (From 12:01 a.m., March 20, 1985)

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefor:

Item 3 - License number or numbers

SNM-426 (From 12:01 a.m., January 25, 1961, to 12:00 midnight, July 10, 1963 inclusive)

DPR-9 (From 12:01 a.m., July 11, 1963)

SNM-1915 (From 12:01 a.m., May 31, 1983, to 12:00 midnight inclusive)

NPF-33 (From 12:01 a.m., March 20, 1985 )

Item 5 of the Attachment to the indemnity agreement is amended by adding the following:

Nuclear Energy Liability Policy (Facility Form) No. MF-120, issued by Mutual Atomic Energy Liability Underwriters.

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

  
Jerome Saltzman, Assistant Director  
State and Licensee Relations  
Office of State Programs

Accepted \_\_\_\_\_, 1985

Accepted \_\_\_\_\_ 1985

By \_\_\_\_\_  
THE DETROIT EDISON COMPANY

By \_\_\_\_\_  
WOLVERINE POWER SUPPLY  
COOPERATIVE

\* and, as of August 1, 1977, the amount available as secondary financial protection.

ENCLOSURE 4

ASSESSMENT OF THE EFFECT OF LICENSE DURATION ON MATTERS DISCUSSED  
IN THE FINAL ENVIRONMENTAL STATEMENT FOR THE FERMI-2 FACILITY  
(DATED AUGUST 1981)

INTRODUCTION

The Final Environmental Statement (FES) for the operation of the Fermi-2 facility was published in August 1981. At that time it was staff practice to issue operating licenses for a period of 40 years from the date of the construction permit. For Fermi-2, the CP was issued in September 1972; thus, about 27 years of operating life would be available.

In its letter dated August 31, 1983, the Detroit Edison Company requested that the operating license for Fermi-2 have a duration of 40 years from the date of issuance. Additional justification was provided by letter dated February 1, 1985.

DISCUSSION

The staff has reviewed the Fermi-2 FES to determine which aspects considered in the FES are affected by the duration of the operating license. In general, the FES assesses various impacts associated with operation of the facility in terms of annual impacts and balances these against the anticipated annual energy production benefits. Thus, the overall assessment and conclusions would not be dependent on a specific operating life. There are, however, two areas in which a specific operating life was assumed:

1. Radiological assessments are based on a 15-year plant midlife.
2. Uranium fuel cycle impacts are based on one initial core load and annual refuelings.

These were assessed to determine whether the use of a 40-year operating period rather than a 30-year operating period would significantly affect our assessment concerning these areas.

EVALUATION:

The staff's appraisal of the significance of the use of 40 years of operation rather than 30 as it affects these three areas is presented in the following discussions:

1. Radiological Assessments - The NRC staff calculates dose commitments to the human population residing around nuclear power reactors to assess the impact on people from radioactive material released from these reactors. The annual dose commitment is calculated to be the dose which would be received over a 50-year period following the intake of radioactivity for 1 year under the conditions which would exist 15 years after the plant began operation.

The 15-year period is chosen as representing the midpoint of plant operation and factors into the dose models by allowing for buildup of long-life radionuclides in the soil. It affects the estimated doses only for radionuclides ingested by humans which have half-lives greater than a few years. For a plant licensed for 40 years, increasing the buildup period from 15 to 20 years would increase the dose from long life radionuclides via the ingestion pathways by 33 percent at most. It would have much less effect on doses from shorter-life radionuclides. Tables 4.6 and 4.7 in the Fermi-2 FES indicate that the estimated doses via the ingestion pathways are less than the regulatory design objectives. For example, the ingestion dose to the thyroid is 7.0 mrem/yr compared to an Appendix I design objective of 15 mrem/yr. Thus, even with an increase of as much as 33 percent in these pathways, the estimated doses would still remain within the Appendix I guidelines.

2. Uranium Fuel Cycle Impacts - The impacts of the uranium fuel cycle are based on 30 years of operation of a model light water reactor (LWR). The fuel requirements for the model LWR were assumed to be one initial core load and 29 annual refuelings representing about one-third new fuel for each reload. The annual fuel requirement for the model LWR averaged out over a 40-year operating life (1 initial core and 39 refuelings of about 1/3 core) would be reduced slightly as compared to the annual fuel requirement averaged for a 30-year operating life.

The net result would be about a 1.5 percent reduction in the annual fuel requirement for the model LWR. This small reduction in fuel requirements would not lead to significant changes in the impacts of the uranium fuel cycle. Accordingly, the staff does not believe that any changes to Table A in Appendix C (S-3) of the Fermi-2 FES, are necessary for a 40-year operation of the Fermi-2 facility. This conclusion is based on our assessment that the values in Table A become more conservative when a 40-year period of operation is considered.

CONCLUSION

The staff has reviewed the Fermi-2 FES and determined that only two of the areas related to its NEPA analysis discussed in this statement were tied directly to a 30-year operating life. We have concluded, based on the reasons discussed in the sections above, that the impacts associated with a 40-year operating license duration are not significantly different from those associated with a 30-year license duration and are not significantly different from those impacts assessed in the Fermi-2 FES.