October 30, 2003

Mr. William T. O'Connor, Jr.
Vice President - Nuclear Generation
Detroit Edison Company
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: FERMI 2 - ISSUANCE OF AMENDMENT RE: REVISED ACTION FOR SCRAM DISCHARGE VOLUME VENT AND DRAIN VALVES (TAC NO. MB9745)

Dear Mr. O'Connor:

The Commission has issued the enclosed Amendment No. 157 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated June 24, 2003.

The amendment revises TS 3.1.8, "Scram Discharge Volume (SDV) Vent and Drain Valves," to allow a vent or drain line with one inoperable valve to be isolated instead of requiring the valve to be restored to Operable status within 7 days.

A copy of our safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Harold K. Chernoff, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-341

Enclosures: 1. Amendment No. 157 to NPF-43
2. Safety Evaluation

cc w/encls: See next page

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DATE	07/29/03	10/27/03	10/27/03	10/30/03

OFFICIAL RECORD COPY

Fermi 2

cc:

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Norman K. Peterson
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DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 157
License No. NPF-43

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Detroit Edison Company (the licensee) dated June 24, 2003, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment 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;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. NPF-43 is hereby amended to read as follows:

   Technical Specifications and Environmental Protection Plan

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 157, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. DECo shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 90 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA by MShuaibi for/

L. Raghavan, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 30, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 157

FACILITY OPERATING LICENSE NO. NPF-43

DOCKET NO. 50-341

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

REMOVE	INSERT
3.1-24	3.1-24

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 157 FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By application dated June 24, 2003, the Detroit Edison Company (the licensee) requested changes to the Technical Specifications (TSs) for Fermi 2. The proposed changes would revise the required action within TS 3.1.8, "Scram Discharge Volume (SDV) Vent and Drain Valves," for the condition of having one or more SDV vent or drain lines with one valve inoperable. These changes are based on Technical Specifications Task Force (TSTF) Change Traveler TSTF-404 (Revision 0) that has been approved generically for NUREG-1433, Revision 2, "Standard Technical Specifications - General Electric Plants, BWR [Boiling-Water Reactor]/4," and NUREG-1434, Revision 2, "Standard Technical Specifications - General Electric Plants, BWR/4." A notice announcing the availability of this proposed TS change using the consolidated line item improvement process (CLIIP) was published in the *Federal Register* on April 15, 2003 (68 FR 18294). The Nuclear Regulatory Commission (NRC) staff has made minor editorial changes to the model safety evaluation that was published in the *Federal Register*.

2.0 REGULATORY EVALUATION

NRC regulations and review standards such as Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, include specific requirements for reactor protection and reactivity control systems. The reactor protection systems for BWRs use a hydraulic system to insert control rods into the reactor core. During an actuation of the reactor protection system (a scram), water is exhausted from the control rod drive mechanisms to the SDVs. Proper maintenance and operation of the SDVs in terms of instrumentation and limiting water volumes are essential for assuring the reliability of the reactor protection system (see NRC Bulletin 80-17, "Failure of Control Rods to Insert During a Scram at a BWR," related Orders to specific facilities, and information provided in plant final safety analysis reports and TS Bases). Maintaining the SDVs to ensure that accumulated water does not hamper or slow the insertion of control rods requires vent and drain valves. The vent and drain valves isolate during a scram to limit the amount of coolant discharged so that adequate core cooling is maintained and offsite doses remain within regulatory limits.

Specific regulatory requirements for SDV vent and drain valves are defined in TS 3.1.8. Existing Limiting Condition for Operation 3.1.8 requires that each SDV vent and drain valve be operable. The operability of all SDV vent and drain valves ensures that the SDV vent and drain valves will close during a scram to contain reactor water discharged to the SDV piping. Since the vent and drain lines are provided with two valves in series, the single failure of one valve in the open position will not impair the isolation function of the system. Additionally, the valves are required to open on scram reset and during plant operation to control the amount of water accumulating in the SDV. If one or more SDV vent and drain lines have a single valve that is inoperable, the existing required action is to restore the valve(s) to operable status within 7 days. If an inoperable valve is not restored to operable status, a plant shutdown to MODE 3 is required within 12 hours.

If one or more SDV vent or drain lines have both valves inoperable, the associated line must be isolated within 8 hours. In this condition, the plant is allowed to operate indefinitely. A note associated with the required action clarifies that the valves may be opened under administrative controls to allow draining of the SDV. The existing SDV vent and drain valve required actions are inconsistent in that, although the operational and safety concerns are similar for having one or both valves in a line being inoperable, the actions for a single inoperable valve do not allow for the isolation of the line and administrative controls to support the draining of the SDV.

The proposed change would revise the required actions to be more consistent with the safety significance of one inoperable valve in an SDV line versus two inoperable valves in an SDV line.

3.0 TECHNICAL EVALUATION

The proposed changes to TS 3.1.8 are:

1. Required Action A.1 is revised from restoring the single inoperable SDV vent and drain valve in one or more SDV vent and drain lines to operable status to isolating the associated line.

2. The Note to Required Action B.1 which allows an isolated line to be unisolated under administrative controls for the purpose of draining and venting the SDV is moved to a note that applies to both Conditions A (single inoperable valve) and B (both valves inoperable).

With one SDV vent or drain valve inoperable in one or more lines, the isolation function would be maintained since the redundant valve in the affected line would perform its safety function of isolating the SDV. The current ACTION statement allows 7 days to repair the inoperable valve; the proposed change is to allow for the isolation of the affected line and continue operation. If the affected line is not isolated within the 7-day time period (or the inoperable valve is not restored), the licensee would then be required to proceed to MODE 3 in the next 12 hours. Maintaining the 7-day Completion Time is acceptable because of the low probability of the concurrent events of a scram within the 7 days of the Completion Time and a failure of the redundant valve(s). Alternately, if the inoperable valve was initially closed, there would be ample time and warning available to drain the SDV before an automatic scram would occur due to SDV high level.

The allowance to administratively open a line that is isolated to comply with the actions (to permit draining and venting the SDV) is allowed by existing Required Action B.1. This allowance is being moved to apply to all ACTIONS based on the change proposed to Required Action A.1. This would allow any accumulated water in the line to be drained, to preclude a reactor scram on SDV high level. A reactor scram is initiated if the SDV water level in the instrument volume exceeds a specified setpoint. The setpoint is chosen so that all control rods are inserted before the SDV has insufficient volume to accept a full scram. Regarding the isolation of the SDV, the remaining operable SDV vent and drain valve(s) would close automatically on a scram signal to isolate the lines. Or, if both valves in a line were inoperable (and opened under this provision), the reactor coolant release could be terminated by resetting the scram from the control room, or by manually closing the valves. Resetting the scram automatically closes the scram outlet valves, isolating the control rod drive discharge path to the SDV.

Based on the low probability of an event occurring during the defined Completion Time associated with this condition, the subsequent isolation of the affected lines, and the ability to open and drain the lines before an automatic scram due to SDV high water level, the proposed change maintains the necessary safety features and is therefore acceptable.

The change to TS 3.1.8 requires that the licensee revise the discussion in the associated TS Bases section. Although the licensee’s application included possible wording for the revised TS Bases discussion for TS 3.1.8, the licensee will formally address the change to the Bases in accordance with the Fermi 2 Bases Control Program. The NRC staff does not believe that the TS Bases change will require prior NRC approval when evaluated against the criteria in 10 CFR 50.59, "Changes, tests, and experiments," and, therefore, agrees that the revision of the Bases to TS 3.1.8 should be addressed separately from this amendment and should be included in a future update of the TS Bases in accordance with the Fermi 2 Bases Control Program.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (68 FR 49815). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: W. Reckley

Date: October 30, 2003