November 30, 2004

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: CHANGES TO THE SAFETY LIMIT MINIMUM CRITICAL POWER RATIO (TAC NO. MC4748)

Dear Mr. O'Connor:

The Commission has issued the enclosed Amendment No. 164 to Facility Operating License No. NPF-43 for the Fermi 2 facility. The amendment is in response to your application dated October 7, 2004, as supplemented by letters dated November 12, and November 18, 2004. The amendment is being issued in response to exigent circumstances at Fermi 2 as detailed in the application.

The amendment increases the safety limit minimum critical power ratio value contained in Technical Specification 2.1.1.2 from $1.07 to $1.08 for dual recirculation loop operation.

Enclosures 2 and 3 are the nonproprietary and proprietary versions, respectively, of the Nuclear Regulatory Commission (NRC) safety evaluation (SE) related to the preceding action. The nonproprietary version of the SE will be placed in the NRC Public Document Room and added to the Agencywide Documents Access and Management System's Publicly Available Records System library. (Note: Public access to ADAMS has been temporarily suspended so that

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security reviews of publically available documents may be performed and potentially sensitive information removed. Please check the NRC Web site for updates on the resumption of ADAMS access.) The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

David P. Beaulieu, 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. to NPF-43
2. Safety Evaluation (Non-Sensitive)
3. Safety Evaluation (Sensitive)

cc w/o Enclosure 3: See next page

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Fermi 2

cc w/ encls 1, 2, and 3 (**SENSITIVE**):

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Fermi 2

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DETROIT EDISON COMPANY

DOCKET NO. 50-341

FERMI 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 164
License No. NPF-43

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

   A. The application for amendment by the Detroit Edison Company (DECo) dated October 7, 2004, as supplemented by letters dated November 12 and November 18, 2004, 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. 164, 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 the date of its issuance and shall be implemented prior to startup for Fermi 2 Cycle 11 operation.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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: November 30, 2004

ATTACHMENT TO LICENSE AMENDMENT NO. 164

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
2.0-1	2.0-1

Enclosure 2
Safety Evaluation
Nonproprietary

(The blank space between the brackets [ ] in this enclosure shows where information was removed to create this nonproprietary version of this safety evaluation.)

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 164 FACILITY OPERATING LICENSE NO. NPF-43

DETROIT EDISON COMPANY

FERMI 2

DOCKET NO. 50-341

1.0 INTRODUCTION

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated October 7, 2004, as supplemented by letters dated November 12 and November 18, 2004, the Detroit Edison Company (the licensee) requested changes to the Technical Specifications (TSs) for Fermi 2. The amendment request proposes increasing the dual recirculation loop operation safety limit minimum critical power ratio (SLMCPR) value in TS 2.1.1.2 from 1.07 for Cycle 10 to 1.08 for Cycle 11. The application also includes response to Global Nuclear Fuel-Americas' (GNF-A) Title 10 of the *Code of Federal Regulations* (10 CFR) Part 21 report (ML042720293) as it applies to Fermi 2. The August 24, 2004, 10 CFR Part 21 report identified potential nonconservatism in the SLMCPR values calculated at the reduced core flow (minimum core flow) at rated power statepoint. GNF-A determined that the Fermi 2 SLMCPR value calculated at the minimum core flow statepoint (81 percent core flow/100 percent power) bound the SLMCPR value calculated at the rated power and flow statepoint. The application evaluates the Fermi 2 Cycle 10 operating history and outlines the interim compensatory actions implemented at Fermi 2 upon receipt of the 10 CFR Part 21 report. Fermi 2 is currently in Refueling Outage 10. The letters of November 12, and November 18, 2004, did not expand the scope of the amendment request or change the NRC staff's proposed notice of no significant hazards consideration.

2.0 REGULATORY EVALUATION

Appendix A to 10 CFR Part 50, General Design Criterion (GDC) 10 states, in part, that the reactor core and associated coolant, control, and protective system must be designed to assure that specified acceptable fuel design limits (SAFDLs) are not exceeded during any condition of steady-state operation, normal operational transients, and anticipated operational occurrences (AOOs).

Section 4.2 of the standard review plan (SRP) specifies the acceptance criteria for the evaluation of the fuel design limits as it relates to the thermal limits. SRP Section 4.4 provides guidance on the review of the thermal-hydraulic design in meeting the requirements of GDC-10 and the fuel design criteria established in SRP 4.2.

For the critical power correlation, there should be a 95 percent probability at 95 percent confidence level that the hot rod in the core does not experience a departure from nucleate

boiling or boiling transition condition during normal operation or AOO, or for the critical power ratio (CPR) correlations, the limiting (minimum) CPR is to be established such that 99.9 percent of the fuel rods in the core would be expected not to experience boiling transition during normal operation or AOOs. SRP 4.4 also states that the uncertainties in the values of process parameters, core design parameters and calculational methods used in the assessment of the thermal margin should be treated with at least 95 percent probability at a 95 percent confidence level.

For each fuel design, the boiling transition is predicted, using correlations (critical power correlation) derived from test data. Fuel design limits can likely be exceeded if the core exceeds critical power. Critical power is a term used for the power at which the fuel departs from nucleate boiling and enters a transition to film boiling. For boiling-water reactors (BWRs), the critical power is predicted using a correlation known as the GE critical quality boiling length correlation, or better known as the GEXL correlation. Due to core wide and operational variations, the margin to boiling transition is most easily described in terms of a CPR, which is defined as the rod critical power as calculated by GEXL divided by the actual rod power. The more a CPR value exceeds 1.0, the greater the margin to boiling transition is. The SLMCPR is calculated using a statistical process that takes into account all operating parameters and the uncertainties. The reactor core should be designed and operated within the applicability range of the correlation. To meet the GDC-10 requirements, the steady state SLMCPR is calculated such that 99.9 percent of the fuel rods do not experience boiling transition, during steady-state operation. The operating limit minimum critical power ratio (OLMCPR) assures that the SLMCPR will not be exceeded as a result of an AOO.

Safety limits are specified in the Fermi TS. The SLMCPR is calculated on a cycle-specific basis because it is necessary to account for the core configuration-specific neutronic and thermal-hydraulic response.

3.0 TECHNICAL EVALUATION

3.1 Fermi Unit 2 Cycle 11

For Cycle 11, the licensee requests changing the minimum critical power ratio (MCPR) value specified in TS 2.1.1.2 as follows:

> MCPR shall be ~~$1.07~~ 1.08 for two recirculation loop operation or $1.09 for single recirculation loop operation.

For Cycle 11, the Fermi 2 core will consist of 764 fuel assemblies with 192 fresh GE14 fuel assemblies and 572 GE11 fuel assemblies (212 once-burned, 204 twice-burned, and 156 thrice-burned).

3.2 Methodology

GNF performed the cycle-specific SLMCPR calculation for the rated power and flow statepoints using NRC approved methodologies and uncertainties. These are as follows:

- NEDC-32601-P-A “Methodology and Uncertainties for Safety Limit MCPR Evaluations”

- NEDC-32694-P-A “Power Distribution Uncertainties for Safety Limit MCPR Evaluations”
- NEDE-24011-P-A “General Electric Standard Application for Reactor Fuel”
- NECD-32505-P-A “R-Factor Calculation Method for GE11, GE12 and GE13 Fuel”
- NEDO-10958-A “General Electric BWR Thermal Analysis Basis (GETAB): Data Correlation and Design Application”

Plant-specific use of these methodologies must adhere to certain restrictions.

Currently, the GNF-A SLMCPR methodology is limited to calculating the SLMCPR at the rated power and flow statepoint. However, GNF-A performed the SLMCPR calculations for the minimum core flow at the rated power statepoint consistent with the NRC-approved methods and codes. Attachment 1, “GNF-A Summary of Technical Basis for Revised SLMCPR Value,” to the amendment request provided specifics on the minimum core flow SLMCPR calculations that are not covered in the current licensing methodologies. In addition, the request for additional information (RAI) responses also provided additional specifics relevant to the review of the minimum core flow SLMCPR calculational method.

3.3 Methodology Restrictions

Based on the NRC review of Topical Reports NEDC-32601-P-A, NEDC-32694-P-A, and Amendment 25 to NEDE-24011-P-A (GESTAR II), the NRC staff applied the following restrictions on the use of these Topical Reports:

1. The lattice physics code (TGBLA) fuel rod power calculational uncertainty should be verified when applied to fuel designs not included in the benchmark comparison of Table 3.1 of NEDC-32601-P-A, since changes in fuel design can have a significant effect on calculation accuracy.

2. The effect of the correlation of rod power calculation uncertainties should be reevaluated to insure the accuracy of R-Factor uncertainty when the methodology is applied to a new fuel lattice.

3. In view of the importance of the [ ] criterion and its potential sensitivity to changes in fuel bundle designs, core loading, and operating strategies, the [ ] criterion should be reviewed periodically as part of the procedural review process to insure that the specific value recommended in NEDC-32601-P-A is applicable to future designs and operating strategies.

4. The 3D-MONICORE bundle power calculational uncertainty should be verified when applied to fuel and core designs not included in the benchmark comparisons in Tables 3.1 and 3.2 of NEDC-32694-P-A.

For the 572 GE11 fuel assemblies, the licensee meets restrictions (1) and (2) because the GE11 fuel design was specifically covered in the NEDC-32601-P-A review. In a September 24, 2001, letter to the NRC, GNF-A submitted confirmation of the applicability of the 10x10 (GE14) fuel design as required by restrictions (1) and (2). The bundle-by-bundle indicator [

] Therefore, for Fermi 2 Cycle 11, restriction (3) is still applicable to the current fuel and core design.

Restriction (4) refers specifically to the use of the reduced power uncertainties as defined in NEDC-32694-P-A, which are applicable to plants that use the 3D MONICORE core monitoring system. Fermi 2 uses 3D MONICORE for core monitoring. The uncertainties for the 10x10 fuel design was also confirmed in Reference 10.

The NRC staff finds that the licensee complies with the restrictions of the Topical Reports NEDC-32601-P-A, NEDC-32694-P-A, and Amendment 25 to NEDE-24011-P-A (GESTAR II) and that the use of these reports to evaluate the Fermi Unit 2 Cycle 11 SLMCPR is acceptable.

3.4 SLMCPR Result Evaluation

3.4.1 SLMCPR 10 CFR Part 21 Notification

GNF-A previously calculated the SLMCPR at the rated power and flow statepoint based on the control rod patterns used for the rated power/flow. NEDC-32601-P-A (Reference 5) states that the bundle power distribution is a function of the control blade pattern for a particular operating statepoint. For a given statepoint, there is a variety of control rod patterns that could be used to establish the initial conditions. The GNF-A methodology restricts the initial conditions to those conditions where the limiting bundles are operating close to the MCPR limits while avoiding unreasonable power distribution and violation of the linear heat generation rate (LHGR) limits. Therefore, the objective in establishing the initial power distribution is to satisfy the total power and local limits and to reasonably bound the total rods expected to experience boiling transition.

GNF-A determined that using limiting control rod blade patterns developed for less than rated flow at rated power conditions could sometimes yield more limiting bundle-by-bundle MCPR distributions and/or more limiting bundle axial power shapes than the limiting control rod patterns developed for a rated flow/rated power SLMCPR calculation. Consequently, GNF-A

issued a 10 CFR Part 21 report, and currently calculates the SLMCPR at the rated power/rated flow and at the minimum core flow/rated power conditions, using appropriate limiting control rod patterns. In addition, GNF-A calculates the single loop operation (SLO) with different rod patterns.

For Fermi 2, GNF-A calculated the SLMCPR at rated flow and at the minimum core flow (81 percent) statepoints for Cycle 10 and 11. The minimum core flow statepoint SLMCPR was also calculated for the different exposures for which the rated calculation is performed. [

] The following table shows the calculated SLMCPR values for Cycle 10 and 11 for the two statepoints.

Table 1 - Pre-Part 21 Report

Rated Power/Flow	**Cycle 10**	**Cycle 11**
DLO	1.07	1.05
SLO	1.09	1.07
[ ]	No	Yes
[ ]	Yes	Yes
[ ]	No	No

Table 2 - Post- Part 21 Report Calculation

Rated Power /Minimum Core Flow (100 percent power / 81 percent core flow)	**Cycle 10**	**Cycle 11**
DLO	1.08	1.08
SLO	1.09	1.09
[ ]	No	Yes
[ ]	Yes	Yes
[ ]	No	Yes

3.4.2 Cycle Comparisons:

The SLMCPR is sensitive to the "flatness" of the bundle-by-bundle power distribution and the bundle pin-by-pin power distribution. GNF-A uses indicators that quantify the impact of the cycle-specific core loading on the SLMCPR. These indicators correlate the SLMCPR value to the (1) flatness of the core bundle-to bundle power distribution and (2) the flatness of the pin-by-pin power and R-Factor distribution. Therefore, these indicators also form the means to assess and compare the differences between core designs and their impact on the calculated SLMCPR. GNF-A reports that the SLMCPR indicators show that Cycle 11 is more peaked bundle and pin-wise, yielding a lower SLMCPR value. Table 1 above shows that at rated power/flow, the SLMCPR decreased for Cycle 11 for both DLO and SLO. [

] Additional contributions come from the increases in the uncertainties. [

]

In reviewing the indicators calculated for Cycle 10 and 11, the responses to the RAIs and the component contributions provided in Table 1, the NRC staff finds the reported changes in the SLMCPR for Cycle 11 relative to Cycle 10 are acceptable.

3.4.3 Limiting Control Rod Pattern

In the evaluations of the current SLMCPR licensing documents, the NRC staff had reviewed GNF-A's method of developing the reasonably limiting rod patterns. However, the control rod pattern used to perform the minimum core flow SLMCPR had not been evaluated by the NRC staff.

In the current NRC-approved GNF-A SLMCPR licensing methodology (See RAI 5 and 6 and NEDC-32601-P-A), the limiting rod patterns are selected such that the calculated SLMCPR values would reasonably bound the plant's SLMCPR responses based on the operating rod patterns. The limiting rod patterns used in the statepoint SLMCPR calculations are selected such that there is sufficient margin in the TS-specified cycle SLMCPR value without limiting the plant's operating flexibility. The NRC staff asked the licensee to confirm that the rod patterns used to calculate the SLMCPR at the minimum core flow (81 percent core flow) at rated power would result in power distribution that would reasonably bound the conditions at which Fermi would operate such that the calculated SLMCPR limit would not be invalidated during the plant operation (see RAI 1). The licensee stated that the rod patterns used to calculate the SLMCPR at 81 percent of rated flow and 100 percent of rated core power would produce a limiting MCPR distribution that reasonably bounds the MCPR distributions that would be expected during the operation of the Fermi 2 core throughout Cycle 11. The licensee stated that the SLMCPR value calculated from the limiting MCPR distribution reasonably bounds a SLMCPR value that would be obtained using any MCPR distribution obtained during the operation of Fermi 2 Cycle 11.

The NRC staff accepts the licensee's assurance that the control rod patterns assumed in SLMCPR calculation would reasonably bound rod patterns Fermi 2 operates with in Cycle 11.

3.5 Uncertainties

The uncertainties used for the SLMCPR calculation are listed in the following table.

SLMCPR Methodology Uncertainties	
Non-Power Distribution Uncertainties	**Power Distribution Uncertainties**
Feedwater system flow	Channel to channel non-uniformity friction factor multiplier
Feedwater temperature measurement	GEXL R-Factor
Reactor pressure measurement	Random effective TIP reading
Core inlet temperature measurement	Systematic effective TIP reading
Total core flow measurement	Integrated effective TIP reading
Channel flow area variation	Bundle power
Channel friction factor multiplier	Effective total bundle power uncertainty

Table 2b of Attachment 1 lists the exceptions to the standard SLMCPR uncertainties that were used in the Fermi 2 SLMCPR calculation. The core flow rate, the GEXL R-Factor and the random effective TIP readings were increased from the standard values. In response to RAI 2, the licensee states that historically the core flow rate and the random effective TIP readings have been considered to be somewhat dependent on the core flow conditions. As an example, the licensee cited the SLO operation in which these uncertainties are increased to account for the reduced single recirculation loop flow condition. Therefore, GNF-A conservatively increases both uncertainties . For a given absolute uncertainty value, the core flow is decreased so that the percentage of the uncertainty increases in inverse proportion to the change in core flow. For Fermi minimum flow calculations, the core flow uncertainty increased from [ ] The random effective TIP reading increased from [ ] for dual loop operation. The NRC staff finds the increases in these uncertainties conservative and thus acceptable.

The R-factor is an input into the GEXL correlation used to account for the local pin-by-pin power peaking and distribution and the fuel assembly and channel geometry on the critical power for the specific fuel design. The R-factor uncertainty analysis includes an allowance for power peaking modeling uncertainty, manufacturing uncertainty, and channel bow uncertainty. GNF-A has increased this uncertainty for all SLMCPR calculations to account for the potential impact of control blade shadow corrosion induced bow. GNF-A conservatively increased the R-factor from [ ] proactively across the fleet because some BWR/6s had experienced some shadow corrosion-induced channel bow. The NRC staff finds this approach acceptable. Since there was no evidence that Fermi experienced channel bow, the NRC staff could not review the adequacy of the R-factor increase. To avoid blanket approval, RAI 2b asked the licensee to provide assurances that in the event Fermi 2 experiences channel bow an amendment request would be submitted in order for the NRC staff to assess if the proactive increase would be

sufficient. The licensee provided a commitment that should Fermi 2 channels show conclusive evidence that the control blade shadow corrosion-induced channel bow is occurring at a level that would cause the approved [ ] R-factor uncertainty to be exceeded, Detroit Edison Company would submit a license amendment for Fermi 2. The NRC staff finds this commitment acceptable.

3.6 Technical Conclusions

The NRC staff accepts the licensee's proposed Cycle 11 SLMCPR values. Based on the technical information provided in the amendment request, the RAI responses, and the use of NRC-approved methodology to perform the SLMCPR calculations, the NRC staff concludes that the increase in the Cycle 11 SLMCPR for DLO is acceptable.

3.7 References

1. Letter from William T. O'Connor, Jr. (Detroit Edison) to U.S. Nuclear Regulatory Commission Dated October 7, 2004, "Proposed License Amendment Request to Revise Technical Specification 2.1, Safety Limit Minimum Critical Power Ratio."

2. Letter from William T. O'Connor, Jr. (Detroit Edison) to U.S. Nuclear Regulatory Commission Dated November 12, 2004, " Response to NRC Request for Additional Information Pertaining to Fermi 2 SLMCPR Amendment Request."

3. Letter from William T. O'Connor, Jr. (Detroit Edison) to U.S. Nuclear Regulatory Commission Dated November 18, 2004, " Response to NRC Request for Additional Information Pertaining to Fermi 2 SLMCPR Amendment Request."

4. Global Nuclear Fuels Licensing Topical Report NEDE-24011-P-A-14, "General Electric Standard Application for Reactor Fuel," June 2000.

5. General Electric Nuclear Energy Licensing Topical Report NEDC-32601-P-A, "Methodology and Uncertainties for Safety Limit MCPR Evaluations," July 1999.

6. General Electric Nuclear Energy Licensing Topical Report NEDC-32505-P-A, "R-Factor Calculation Method for GE11, GE12, and GE13 Fuel," July 1999.

7. General Electric Nuclear Energy Licensing Topical Report NEDO-10958-A "General Electric BWR Thermal Analysis Basis (GETAB): Data, Correlation and Design Application," January 1977.

8. Letter, Frank Akstulewicz (NRC) to Glen A. Watford (GE), "Acceptance for Referencing of Licensing Topical Reports NEDC-32601-P-A, Methodology and Uncertainties for Safety Limit MCPR Evaluations, NEDC-32694-P-A, Power Distribution Uncertainties for Safety Limit MCPR Evaluation; and Amendment 25 to NEDE-24011-P-A on Cycle Specific Safety Limit MCPR," March 11, 1999.

9. Letter from J.S. Post (GE), MFN 04-081 “Part 21 Reportable Condition and 60-Day Interim Report; Notification: Non-Conservative SLMCPR,” August 24, 2004.

10. Letter from Glen A. Watford (GNF-A) to U.S. Nuclear Regulatory Commission Document Control Desk with attention to R. Pulsifer (NRC) Dated September 24, 2001, “Confirmation of the applicability of the GEXL 14 Correlation and Associated R-factor Methodology for calculating SLMCPR values in cores containing GE14 Fuel,” FLN-2001-017, October 1, 2001.

11. Letter from Glen A. Watford (GNF-A) to U.S. Nuclear Regulatory Commission Document Control Desk with attention to R. Pulsifer (NRC) Dated September 24, 2001, “Confirmation of the Applicability of the GEXL 14 Correlation and Associated R-factor Methodology for calculating SLMCPR values in cores containing GE14 Fuel,” FLN-2001-017, October 1, 2001.

4.0 STATEMENT OF EXIGENT CIRCUMSTANCES

The licensee requested approval of the license amendment in the application dated October 7, 2004, as supplemented by letters dated November 12 and 18, 2004. A Notice of Consideration of Issuance of Amendment, Proposed No Significant Hazards Consideration and Opportunity for Hearing was published in the *Federal Register* on November 9, 2004 (69 FR 64986). In accordance with the provisions of 10 CFR 50.91(a)(6), where the Commission finds that exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a *Federal Register* notice allowing 30 days for prior public comment, and it also determines that the amendment involves no significant hazards considerations, it may issue a *Federal Register* notice providing notice of an opportunity for hearing and allowing at least two weeks from the date of the notice for prior public comment.

The licensee’s application provided a description of the circumstances related to the requested license amendment. Following the receipt of the August 24, 2004, 10 CFR Part 21 notification from GNF-A, Detroit Edison Company determined that the existing TS SLMCPR values were incorrect and a license amendment was necessary. In accordance with guidance contained in NRC Administrative Letter (AL) 98-10, "Dispositioning of Technical Specifications That Are Insufficient to Assure Plant Safety," the licensee appropriately implemented administrative controls to preserve the SLMCPR pending development of supporting information for a license amendment request and evaluation of impact on Cycle 11 operation. The licensee received the information required to support the SLMCPR TS change for Cycle 10 and Cycle 11 from GNF-A on September 24, 2004. Therefore, the NRC staff determined that the October 7, 2004, application constitutes a timely submittal of an amendment request for both Cycle 10 and Cycle 11 operation.

The licensee’s application states that the proposed license amendment is required for Fermi 2 operating Cycle 11 and that startup from Refueling Outage 10 was currently scheduled for November 27, 2004. A telephone conversation with the licensee on November 26, 2004, shows their projected startup date will not allow 30 days for prior public comment since the amendment was published in the *Federal Register* on November 9, 2004. The NRC staff has evaluated the licensee’s explanation of the exigent circumstances and has determined that a valid need exists for issuance of the TS in accordance with the exigent provisions of 10 CFR 50.91(a)(6).

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulations at 10 CFR 50.92 state that the Commission may make a final determination that a license amendment involves no significant hazards considerations, if operation of the facility, in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of any accident previously evaluated, (2) create the possibility of a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety.

This amendment has been evaluated against the standards in 10 CFR 50.92©). In its analysis of the issue of no significant hazards consideration, as required by 10 CFR 50.91(a), the licensee has provided the following:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

   The basis of the Safety Limit Minimum Critical Power Ratio (SLMCPR) is to ensure no mechanistic fuel damage is calculated to occur if the limit is not violated. The new CPR value preserves the existing margin to transition boiling and probability of fuel damage is not increased. The derivation of the revised SLMCPR for Fermi 2 for incorporation into the Technical Specifications, and its use to determine plant and cycle-specific thermal limits, have been performed using NRC approved methods. These plant-specific calculations are performed each operating cycle and if necessary, will require future changes to these values based upon revised core designs. The revised SLMCPR values do not change the method of operating the plant and have no effect on the probability of an accident initiating event or transient.

   Therefore, this proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different accident from any accident previously evaluated.

   The proposed change results only from a specific analysis for the Fermi 2 Cycle 10 and 11 cores. This change does not involve any new or different methods for operating the facility. No new initiating events or transients result from these changes. Therefore, this proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed change does not involve a significant reduction in the margin of safety.

> The new SLMCPR is calculated using NRC approved methods with plant and cycle-specific parameters for the Cycle 10 and 11 core designs. The SLMCPR value is established to ensure that greater than 99.9 percent of all fuel rods in the core will avoid transition boiling if the limit is not violated, thereby preserving the fuel cladding integrity. The operating MCPR limit is set appropriately above the safety limit value to ensure adequate margin when the cycle-specific transients are evaluated. Accordingly, the margin of safety is maintained with the revised values. Therefore, this proposed amendment does not involve a significant reduction in the margin of safety.

The NRC staff has review the licensee's analysis, and based on its review, has determined that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff finds that the amendment request involves no significant hazards consideration.

6.0 COMMITMENTS

As described above, in their RAI response dated November 12, 2004, the licensee made the following commitment:

> Should Fermi 2 have conclusive evidence that control blade shadow corrosion-induced channel bow is occurring at a level that would cause the approved basis for the R-factor uncertainty in Reference 3 (NEDC-32601-P-A, “Methodology and Uncertainties for Safety Limit Minimum Critical Power Ratio Evaluations,” dated August 1999) to be exceeded, Detroit Edison will submit a license amendment for Fermi 2.

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitments are provided by the licensee’s administrative processes, including its commitment management program. Should the licensee choose to incorporate a regulatory commitment into the emergency plan, final safety analysis report, or other documents with established regulatory controls, the associated regulations would define the appropriate change-control and reporting requirements. The NRC staff has determined that the commitments do not warrant the creation of regulatory requirements which would require prior NRC approval of subsequent changes. The NRC staff has agreed that NEI 99-04, Revision 0, “Guidelines for Managing NRC Commitment Changes,” provides reasonable guidance for the control of regulatory commitments made to the NRC staff. (See Regulatory Issue Summary 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff," dated September 21, 2000.) The commitments should be controlled in accordance with the industry guidance or comparable criteria employed by a specific licensee. The NRC staff may choose to verify the implementation and maintenance of these commitments in a future inspection or audit.

7.0 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.

8.0 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 NRC 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 published November 9, 2004 (69 FR 64986). 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.

9.0 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.

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