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**Detroit Edison**



10CFR50.92

March 1, 2000  
NRC-00-0006

U. S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington D C 20555-0001

- References:
- 1) Fermi 2  
NRC Docket No. 50-341  
NRC License No. NPF-43
  - 2) Detroit Edison Letter to NRC, NRC-99-0102  
“Submittal of Improved Technical Specifications (ITS) Mark-Up and Typed Pages for the Proposed Technical Specification Change (License Amendment) – Oscillation Power Range Monitor Upscale Trip Function in the Average Power Range Monitor”, dated December 17, 1999
  - 3) Detroit Edison Letter to NRC, NRC-99-0048  
“Proposed Technical Specification Change (License Amendment) - Oscillation Power Range Monitor Upscale Trip Function in the Average Power Range Monitor”, dated July 30, 1999
  - 4) Detroit Edison Letter to NRC, NRC-97-0105,  
“Proposed Technical Specification Change (License Amendment) – Neutron Monitoring System”, dated December 10, 1997
  - 5) Licensing Topical Report NEDO-32465-A,  
“Reactor Stability Detect and Suppress Solutions Licensing Basis Methodology for Reload Applications”, dated August 1996

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- 6) Licensing Topical Report, "Nuclear Measurement Analysis and Control Power Range Neutron Monitor (NUMAC-PRNM) Retrofit Plus Option III Stability Trip Function", NEDC-32410P-A, October 1995, and its Supplement 1 dated November 1997
- 7) NEDO-31960-A and NEDO-31960-A Supplement 1, "BWR Owner's Group Long-Term Stability Solutions Licensing Methodology", November 1995

Subject: Supplemental Information for Proposed Technical Specification Change (License Amendment) - Oscillation Power Range Monitor Upscale Trip Function in the Average Power Range Monitor

This letter provides supplemental information in response to a telephone conversation between Detroit Edison and the NRC staff on February 17, 2000. References 2 and 3 requested changes to the Fermi 2 Technical Specifications (TS) necessary to support final implementation of Option III stability trip function described by Reference 7, the Boiling Water Reactor Owners' Group (BWROG) Long-Term Stability Solutions Licensing Methodology. License Amendment 122 allowed the initial implementation of the Power Range Neutron Monitor described in Reference 6. This implementation included installation of the stability trip function in a monitoring mode to allow data collection and evaluation for sensitivity tuning prior to enabling this trip.

As described in References 2 and 3, proposed TS changes implementing the Oscillation Power Range Monitor (OPRM) were developed based on Reference 6. As discussed between our staffs on February 17, 2000, the Reference 6 topical reports (with the clarifications and exceptions previously discussed in References 2 and 3 and in Reference 4 in support of Fermi 2 License Amendment 122) are applicable to the Fermi 2 implementation of the OPRM stability trips.

References 2 and 3 proposed addition of CONDITION J with REQUIRED ACTION J.1 and J.2 to TS 3.3.1.1. The associated COMPLETION TIME of 12 hours and 120 days, respectively, is identical to the times justified and accepted by the NRC in Reference 6 and the justification provided in Reference 6 for these times is applicable to Fermi 2.

References 2 and 3 also proposed addition of SURVEILLANCE SR 3.3.1.1.20 with a FREQUENCY of 24 months. This FREQUENCY was chosen to be consistent with the FREQUENCY for related SURVEILLANCE requirements (e.g. SR 3.3.1.1.18), and it is identical to the FREQUENCY justified and accepted by the

NRC in Reference 6. The justification provided in Reference 6 for this FREQUENCY is applicable to Fermi 2.

Enclosure 4 of Reference 3 provided data collected during the system tuning conducted during this operating cycle. Based on that data, Detroit Edison had proposed a corner frequency of 3.0 Hertz (Hz) and a period tolerance of 50 milliseconds (ms). As stated in Reference 3, Fermi 2 testing indicates that the OPRM more closely meets the General Electric (GE) tuning criteria when these values are used than when using the values in Table 3-1 of Reference 5.

To further elaborate on that point, performance data was taken over a range of reactor power and drive flow values. The objective of taking this data was to tune the system for optimal sensitivity over its required operating range. The data showed that at higher power, the system was overly susceptible to nuisance alarms even at the least sensitive period tolerance of 50 ms, given the number of occurrences of Maximum Continuous Period Confirmation (MCPC) counts of 5 or more. It similarly shows that, for high power conditions, the system was more than adequately sensitive for the range of tested corner frequencies and period tolerances, as illustrated by a large number of occurrences of lower MCPC count values (MCPC count of 2 or more). Sensitivity was not significantly influenced by the corner frequency during high power testing. However, at lower power levels, the data showed that sensitivity was reduced at lower corner frequencies, all other things remaining equal. Therefore, in order to achieve the desired sensitivity at low power, the maximum corner frequency of 3.0 Hz was chosen. In this way, Detroit Edison has chosen the corner frequency and period tolerance to optimize system sensitivity while minimizing its susceptibility to nuisance alarms.

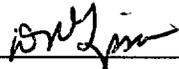
Should you have any questions or require additional information, please contact Mr. Norman K. Peterson of my staff at (734) 586-4258.

Sincerely,



cc: A. J. Kugler  
M. A Ring  
NRC Resident Office  
Regional Administrator, Region III  
Supervisor, Electric Operators,  
Michigan Public Service Commission

I, DOUGLAS R. GIPSON, do hereby affirm that the foregoing statements are based on facts and circumstances which are true and accurate to the best of my knowledge and belief.

  
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DOUGLAS R. GIPSON  
Senior Vice President, Nuclear Generation

On this 1st day of March, 2000 before me personally appeared Douglas R. Gipson, being first duly sworn and says that he executed the foregoing as his free act and deed.

  
\_\_\_\_\_  
Notary Public

KAREN M. REED-OCKERMAN  
Notary Public, Monroe County, MI  
My Commission Expires Sep. 2, 2003

