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Detroit Edison



A DTE Energy Company

10CFR50.46

July 10, 2002
NRC-02-0071

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, Douglas R. Gipson to USNRC,
"30-Day 10CFR50.46 Special Report
Plant Specific ECCS Evaluation Changes",
dated May 28, 1996 (NRC-96-0052)
 - 3) Detroit Edison Letter, W. T. O'Connor, Jr. to USNRC,
"ECCS Cooling Performance Evaluation Model Report",
dated December 19, 2000 (NRC-00-0074)
 - 4) Detroit Edison Letter, W. T. O'Connor, Jr. to USNRC,
"ECCS Cooling Performance Evaluation Model Report",
dated June 7, 2001 (NRC-01-0046)

Subject: ECCS Cooling Performance Evaluation Model Report

In accordance with 10CFR50.46, "Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors," this report is being submitted to describe changes to or errors in an acceptable evaluation model used for calculating

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Emergency Core Cooling Systems (ECCS) performance. References 2, 3 and 4 describe errors in the evaluation model previously reported to the NRC.

On June 13, 2002 Global Nuclear Fuel (GNF) informed Detroit Edison, in General Electric (GE) 10CFR50.46 Notification Letters 2002-01 and 2002-02, of two additional errors found in the GE SAFER/GESTR-LOCA code. One of these errors resulted in too low a value being calculated for the core spray injection elevation. The other error resulted in too high a value used for the reactor pressure vessel initial liquid inventory because the steam dryer pressure drop was not properly accounted for. The total effect of the two errors results in an increase in the peak clad temperature (PCT) by 45 degrees Fahrenheit. With the 45 degree Fahrenheit increase in PCT, the current Licensing Basis PCT for Fermi 2 is 1757 degrees Fahrenheit and there still is 443 degrees Fahrenheit margin to the 2200 degrees Fahrenheit PCT limit given in 10CFR50.46.

Detroit Edison will continue to track future changes and errors in the SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis evaluation models to ensure that the analyzed PCT remains below the 10CFR50.46 limits, and to ensure that the 10CFR50.46 reporting requirements are met. Detroit Edison has no immediate plans to reanalyze the SAFER/GESTR-LOCA Loss-of-Coolant Accident Analysis for Fermi 2.

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

Sincerely,



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