

Detroit Edison



TS 5.6.6
VP-86-0154
10CFR50.46

April 17, 2009
NRC-09-0025

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

Reference: Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: Submittal of 2008 Safety Relief Valve Challenge Report,
Main Steam Bypass Line Report, and ECCS Cooling
Performance Evaluation Model Changes or Errors Report

The Fermi 2 Technical Specifications (TS) contains a requirement for submitting an annual report for safety relief valve challenges (TS 5.6.6). Enclosure 1 provides the Safety Relief Valve Challenge Report for 2008.

Enclosure 2 provides the annual Service Life of the Main Steam Bypass Lines Report for 2007. This satisfies the commitment stated in Detroit Edison's letter to the NRC dated November 7, 1986 (VP-86-0154).

Enclosure 3 provides the annual Emergency Core Cooling System (ECCS) Cooling Performance Evaluation Model Changes or Errors Report for 2008. This report is provided in accordance with 10 CFR 50.46(a)(3)(ii).

Should you have any questions or require additional information, please contact me at (734) 586-5076.

Sincerely,



Rodney W. Johnson
Manager, Nuclear Licensing

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Enclosures:

1. Safety Relief Valve Challenge Report
2. Service Life of Main Steam Bypass Lines Report
3. ECCS Cooling Performance Evaluation Model Changes or Errors Report

cc: NRC Project Manager
NRC Resident Office
Reactor Projects Chief, Branch 4, Region III
Regional Administrator, Region III
Supervisor, Electric Operators,
Michigan Public Service Commission

**ENCLOSURE 1
TO NRC-09-0025**

FERMI 2

SAFETY RELIEF VALVE CHALLENGE REPORT

JANUARY 1 - DECEMBER 31, 2008

DETROIT EDISON COMPANY

NRC DOCKET NO. 50-341

FACILITY OPERATING LICENSE NO. NPF-43

Safety Relief Valve Challenges

There were no instances in 2008 where reactor pressure was high enough to require Safety Relief Valve (SRV) actuation. There were also no instances in 2008 where an SRV actuation was demanded by an automatic logic system.

**ENCLOSURE 2
TO NRC-09-0025**

FERMI 2

SERVICE LIFE OF MAIN STEAM BYPASS LINES REPORT

JANUARY 1 - DECEMBER 31, 2008

DETROIT EDISON COMPANY

NRC DOCKET NO. 50-341

FACILITY OPERATING LICENSE NO. NPF-43

Service Life of Main Steam Bypass Lines

In accordance with Detroit Edison's letter to the NRC dated November 7, 1986 (VP-86-0154), the cumulative time the main steam bypass lines are operated with the bypass valves between 30 and 45 percent open will be reported annually. A cumulative value of 100 days is not to be exceeded without prior NRC notification.

Evaluations performed by Detroit Edison contractor companies concluded that the bypass lines are acceptable for safe operation when operated within the 100 day constraint. Based on these evaluations, the main steam bypass piping that was installed in 1985 has a service life that will allow it to function for the life of the plant under anticipated operating conditions.

As of December 31, 2008, the main steam bypass lines cumulative usage was 41.38 days.

**ENCLOSURE 3
TO NRC-09-0025**

FERMI 2

**ECCS COOLING PERFORMANCE EVALUATION
MODEL CHANGES OR ERRORS REPORT**

JANUARY 1 - DECEMBER 31, 2008

DETROIT EDISON COMPANY

NRC DOCKET NO. 50-341

FACILITY OPERATING LICENSE NO. NPF-43

ECCS Cooling Performance Evaluation Model Changes or Errors

One error has been identified since last year's report:

General Electric 10CFR50.46 Notification Letter 2008-01, Revision 1, dated November 25, 2008, identified a 5 degree Fahrenheit (5°F) increase in the licensing basis Peak Cladding Temperature (PCT) for the GE14 fuel type small break Loss of Coolant Accident (LOCA) analysis. The limiting transient for the GE14 fuel is the small break LOCA; therefore, the error resulted in a 5°F increase in the licensing basis PCT for GE14 fuel.

The General Electric notification was the result of a Steam Flow Induced Error (SFIE) where water level could reach the bottom of the dryer and allow steam to bypass to the reactor pressure vessel annulus. This bypass affects the Level 3 water level measurement, which relies on pressure taps in the reactor pressure vessel annulus.

Scram from the Level 3 level indication is conservatively modeled in small break Emergency Core Cooling Systems (ECCS)-LOCA analyses assuming 10CFR50, Appendix K requirements. Since Fermi 2 has a limiting PCT defined by a small break assumption there is an effect on the licensing basis PCT. An assessment made by the fuel vendor of the effect on the Fermi 2 licensing basis PCT found an impact on the GE14 small break LOCA analysis only. Design Basis Accident (DBA) (large break) analyses are confirmed to be unaffected by SFIE as the modeling relies on signals other than Level 3 for scram and ECCS response.

The current licensing basis PCT for Fermi 2 is 1830 degrees Fahrenheit for GE11 fuel and 1990 degrees Fahrenheit for GE14 fuel. Fermi 2 currently maintains two LOCA analyses, one for each of 'Global Nuclear Fuel – Americas' GE11 and GE14 fuel types. A 5 degrees Fahrenheit will administratively be added to the GE14 small break LOCA PCT; therefore, the new licensing basis PCT for Fermi 2 becomes 1995 degrees Fahrenheit.