

DTE Energy Company
6400 N. Dixie Highway
Newport, MI 48166



TS 5.6.6
10 CFR 50.46

April 6, 2017
NRC-17-0026

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

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

Subject: Submittal of 2016 Safety Relief Valve Challenge Report,
Main Steam Bypass Lines Report, and ECCS Cooling
Performance Evaluation Model Changes or Errors Report

The Fermi 2 Technical Specifications (TS) contain 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 2016.

Enclosure 2 provides the Service Life of the Main Steam Bypass Lines Report for 2016. This satisfies the commitment stated in Detroit Edison's letter to the NRC dated November 7, 1986 (VP-86-0154).

Enclosure 3 provides the Emergency Core Cooling System (ECCS) Cooling Performance Evaluation Model Changes or Errors Report for 2016. This report is provided in accordance with 10 CFR 50.46(a)(3)(ii).

No new commitments are being made in this submittal.

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

Sincerely,

A handwritten signature in black ink that reads "Scott A. Maglio". The signature is written in a cursive style with a large, sweeping flourish at the end.

Scott A. Maglio
Manager – Nuclear Licensing

Enclosures:

1. Safety Relief Valve Challenge Report 2016
2. Service Life of Main Steam Bypass Lines Report 2016
3. ECCS Cooling Performance Evaluation Model Changes or Errors Report 2016

cc: NRC Project Manager
NRC Resident Office
Reactor Projects Chief, Branch 5, Region III
Regional Administrator, Region III
Michigan Public Service Commission
Regulated Energy Division (kindschl@michigan.gov)

**Enclosure 1 to
NRC-17-0026**

**Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43**

Safety Relief Valve Challenge Report 2016

Safety Relief Valve Challenges (January 1, 2016 to December 31, 2016)

There were no instances in 2016 where reactor pressure was high enough to require Safety Relief Valve (SRV) actuation. There were also no instances in 2016 where an SRV actuation was demanded by an automatic logic system.

**Enclosure 2 to
NRC-17-0026**

**Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43**

Service Life of Main Steam Bypass Lines Report 2016

Service Life of Main Steam Bypass Lines (through December 31, 2016)

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.

As discussed in Detroit Edison's letter number VP-86-0154, the bypass lines are acceptable for safe operation when operated within the 100 day constraint.

As of December 31, 2016, the main steam bypass lines cumulative usage was 46.56 days.

**Enclosure 3 to
NRC-17-0026**

**Fermi 2 NRC Docket No. 50-341
Operating License No. NPF-43**

ECCS Cooling Performance Evaluation Model Changes or Errors Report 2016

Emergency Core Cooling System (ECCS) Cooling Performance Evaluation Model - Analysis of Record

On February 13, 2017, DTE Energy submitted a re-analysis of the SAFER/PRIME Loss of Coolant Accident (LOCA) (Reference 1). This re-analysis established a new licensing basis Peak Clad Temperature (PCT) of 1980°F which was associated with the Upper Bound analysis of the limiting small break LOCA.

ECCS Cooling Performance Evaluation Model Changes or Errors

Since the time of the submittal of the analysis of record identified above, General Electric - Hitachi (GEH) and Global Nuclear Fuel (GNF) have not issued any notifications which indicated that changes had been made in the ECCS-LOCA analyses inputs that affect Fermi 2.

Current LOCA Model Assessment for GE14 Fuel

Description	GE14 PCT
10CFR 50.46 Baseline Licensing Basis PCT (Reference 1)	PCT = 1980°F

References

1. DTE Letter to USNRC, "Submittal of Plant Specific Emergency Core Cooling System (ECCS) Evaluation Model Reanalysis," NRC-17-0016, dated February 13, 2017. (ML17045A668 / ML17045A669)