

DTE Energy Company
6400 N. Dixie Highway
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April 18, 2019
NRC-19-0018

TS 5.6.6
10 CFR 50.46

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

Fermi 2 Power Plant
NRC Docket No. 50-341
NRC License No. NPF-43

Subject: Submittal of 2018 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 2018.

Enclosure 2 provides the Service Life of the Main Steam Bypass Lines Report for 2018. 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 2018. 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 blue 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

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Enclosures: 1. Safety Relief Valve Challenge Report 2018
 2. Service Life of Main Steam Bypass Lines Report 2018
 3. ECCS Cooling Performance Evaluation Model Changes or Errors
 Report 2018

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-19-0018**

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

Safety Relief Valve Challenge Report 2018

Safety Relief Valve Challenges (January 1, 2018 to December 31, 2018)

There were no instances in 2018 where reactor pressure was high enough to require Safety Relief Valve (SRV) actuation. There were also no instances in 2018 where an SRV actuation was demanded by an automatic logic system.

**Enclosure 2 to
NRC-19-0018**

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

Service Life of Main Steam Bypass Lines Report 2018

Service Life of Main Steam Bypass Lines (through December 31, 2018)

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, 2018, the main steam bypass lines cumulative usage was 47.70 days. Note that the 2018 incremental usage included a conservative estimate of the contribution from the plant startup following the nineteenth refueling outage (RF19) due to incomplete data available during that startup.

**Enclosure 3 to
NRC-19-0018**

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

ECCS Cooling Performance Evaluation Model Changes or Errors Report 2018

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

Reference:

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)