UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
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July 26, 2023

EA-23-091

Peter Dietrich
Senior VP and Chief Nuclear Officer
DTE Electric Company
Fermi 2 – 260 TAC
6400 North Dixie Highway
Newport, MI 48166

SUBJECT: NOTICE OF ENFORCEMENT DISCRETION (NOED) FOR FERMI POWER PLANT, UNIT TWO – TECHNICAL SPECIFICATION 3.7.2, EMERGENCY EQUIPMENT COOLING WATER (EECW) / EMERGENCY EQUIPMENT SERVICE WATER (EESW) SYSTEM AND ULTIMATE HEAT SINK (UHS)

Dear Peter Dietrich:

By your letter dated July 24, 2023, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML23205A139), you requested that the U.S. Nuclear Regulatory Commission (NRC) exercise discretion to not enforce compliance with Action A.1 required in Fermi-2 Technical Specification (TS) Limiting Condition for Operation (LCO) 3.7.2, “Emergency Equipment Cooling Water (EECW)/Emergency Equipment Service Water (EESW) and Ultimate Heat Sink (UHS).”

Your letter documented information previously discussed with the NRC in a telephone conference on July 20, 2023, at 5:00 p.m. (All times discussed in this letter refer to Eastern Daylight Time). The principal NRC staff members who participated in the telephone conference are listed in the Enclosure. The staff determined the information in your letter requesting the Notice of Enforcement Discretion (NOED) was consistent with your verbal request.

On July 18, 2023, at approximately 2:45 p.m., you notified the senior resident inspector of the potential request for a NOED. On July 20, 2023, at 5:00 p.m., you verbally requested that a NOED be granted pursuant to the NRC's Enforcement Manual, Appendix F, "Notices of Enforcement Discretion," dated October 1, 2019. Specifically, you requested the NOED be effective up to 115 hours past the TS 3.7.2, LCO Action A.1 expiration, (i.e., until 11:24 p.m. on Tuesday, July 25, 2023). You asked for enforcement discretion to allow continued plant operation during the time needed to restore Division II residual heat removal service water (RHRSW) mechanical draft cooling tower (MDCT) fan “D” and the Division II RHRSW reservoir to operation to allow the corresponding EECW/EESW/UHS systems to be returned to an operable status. This letter documents the issue and our telephone conversation on July 20, 2023, at 5:00 p.m., during which NRC staff granted this NOED request at 6:45 p.m. on July 20, 2023. We understand you restored the EECW/EESW/UHS systems to an operable status at 3:57 p.m. on July 22, 2023, after returning the Division II RHRSW MDCT fan “D” and

the corresponding RHRSW reservoir to service. Approximately 35.5 hours of the 115 hours approved by this NOED were used to complete your restoration activities.

During the teleconference on July 20, 2023, you stated Division II RHRSW MDCT fan "D" was started in the early morning hours of July 18, 2023, and ran for approximately 40 minutes before automatically shutting down (i.e., tripping) due to a high vibration condition. This caused you to enter TS LCO 3.7.2, Condition A due to the UHS being inoperable. Inoperability of the UHS, EECW and EESW systems also caused entry into TS 3.8.7, "Distribution Systems – Operating," Conditions A and B, TS 3.8.4, "DC Sources – Operating," Condition B, and TS 3.7.8, "Emergency Diesel Generator Service Water EDGSW) System," Condition A which initiated entry into TS 3.8.1, "AC Sources – Operating," Condition B. You immediately began troubleshooting activities to determine the cause of the high vibration. On July 19, 2023 (approximately 36 hours into the 72-hour TS LCO completion time), you identified the vibrations were caused by a degraded mounting between the gear reducer and its pedestal, degraded bushings on the driveshaft coupling to the gear reducer, or both. Although DTE reviewed alternatives to enforcement discretion, the remaining time available between identifying the cause(s) of the vibration and the TS LCO completion time was not sufficient to prepare, submit, and receive NRC approval of a license amendment under 10 CFR 50.90, "Application for Amendment of License, Construction Permit, or Early Site Permit." You also stated the maintenance activities necessary to restore Division II RHRSW MDCT fan "D", the Division II RHRSW reservoir, and the corresponding EECW/EESW/UHS systems were estimated to take up to an additional 115 hours beyond the end of the 72-hour TS LCO completion time. The requested NOED period would ensure sufficient margin existed to return the equipment discussed previously to an operable status.

You also stated during the teleconference on July 20, 2023, and as further elaborated in your July 24, 2023, letter that this requested enforcement discretion would not result in a more than a minimal increase in risk and no adverse consequences to the environment would occur. You stated that your staff reached this conclusion after consideration of the safety significance and potential consequences of extending the TS LCO completion time.

Your staff performed a quantitative risk assessment of operating the plant with Division II RHRSW MDCT fan "D", the corresponding RHRSW reservoir, and the Division II EECW/EESW/UHS equipment unavailable in support of repairs to MDCT fan "D" for a period of up to five days for enforcement discretion. Other unavailable equipment incorporated into the risk assessment included:

- Main Steam Drain Line Inboard Isolation Valve B2103F016
- Main Steam Drain Line Outboard Isolation Valve B2103F019
- Division II EECW Heat Exchanger P4400B001B
- Combustion Turbine Generator 11-2

Your risk assessed demonstrated that the risk associated with operating Fermi, Unit 2 with Division II RHRSW MDCT fan "D" and the corresponding RHRSW reservoir, EECW/EESW/UHS systems and equipment inoperable and unavailable for a period of five days met the incremental conditional core damage probability (ICCDP) thresholds provided in NRC Enforcement Manual, Appendix F, "Notices of Enforcement Discretion," dated October 1, 2019 (ML19193A003). However, you were only able to meet the NRC Enforcement Manual, Appendix F thresholds for incremental conditional large early release probability (ICLERP) for a period of 2.71 days, rather than five days. You also indicated the thresholds provided in the NRC's Enforcement Manual

were guidance rather than specific pass/fail criteria for approving NOEDs. Although not currently credited in your probabilistic risk assessment (PRA) of record, you performed a risk sensitivity analysis to understand the impacts of crediting FLEX equipment during the requested NOED period. This sensitivity analysis showed slight improvements in your overall risk numbers with the ICLERP improving from 2.71 days to 2.72 days. NRC risk analysts also independently corroborated your risk assessment. To mitigate and address the increase in risk associated with the duration of the enforcement discretion period, you stated that equipment protections would be in effect in accordance with your protected equipment procedures until the Division II RHRSW MDCT fan "D", the Division II RHRSW reservoir, and the associated EECW/EESW/UHS systems and equipment was restored. These protective actions included:

Deploying protected equipment postings on the following equipment:

- Division I EECW/EESW/UHS
- Division I Switchgear
- Division I Emergency Diesel Generators
- Reactor Core Isolation Cooling System
- Division I Core Spray System
- Division I RHR System
- Division I Standby Gas Treatment System
- Division I Control Center Heating, Ventilation and Air Conditioning
- High Pressure Coolant Injection System
- Hardened Containment Vent System
- Standby Feedwater System
- Combustion Turbine Generator 11-1
- FLEX Equipment

You also stated that any work required to be performed in these areas will follow the process defined in plant procedure, MOP05, "Control of Equipment," and be authorized by the Shift Manager prior to work being performed. In addition to the above, you also plan to do the following:

- Minimize transient combustibles
- Prohibit or limit hot work with adequate compensatory measures per plant procedure ODE-20
- Confirm availability of fire detection and suppression systems
- Confirm fire barriers are intact
- Inspect areas for fire source degradation
- Minimize electrical switching at panels as applicable or establish compensatory measures per plant procedure ODE-20

Lastly, you planned to implement the following compensatory measures to reduce the risk during the period of enforcement discretion:

- The Outage Control Center will remain staffed throughout the evolution and the maintenance activities will be completed utilizing 24-hour coverage. The offsite power supply and switchyard will be protected. This includes ensuring that switchyard access is restricted to only essential work and no elective maintenance within the switchyard is

performed that would challenge offsite power availability. This will reduce the likelihood of a loss of offsite power occurring.
- No intrusive surveillances or maintenance activities will be allowed that could potentially jeopardize plant operations, except for emergent issues. This reduces the likelihood of the unavailability of redundant trains during the period of enforcement discretion.
- Fire risk management actions will be established in areas listed below due to their high fire risk significance. These actions reduce the probability of a consequential fire in the risk significant areas of the plant.

Fire Area	**Description**
RB06	Reactor Building 2nd Floor
03AB	Relay Room
04ABN	Division I Switchgear Room
11ABE	Division 1 Portion Miscellaneous Room (Direct Current Motor Control Center Room)

During the period of enforcement discretion, your personnel will take the following actions to reduce the probability and severity of initiating events:

- Will not perform any elective maintenance on components that are credited for accident mitigation
- Will not perform any unnecessary switchyard work or work on Balance of Plant systems that may increase the probability that there is a Unit trip
- Will not perform any hot work in areas identified as significant in the PRA analysis
- A Compensatory Monitoring plan will be reviewed for flooding mitigation every four hours to include inspection of all credited watertight doors
- New Condition Reports and plant emergent issues will be reviewed twice per day for new conditions that may have impact on the current condition, any changes will be communicated to the NRC Office of Nuclear Reactor Regulation Project Manager

Based on the staff's evaluation of your request, the NRC concluded that granting this NOED was consistent with the NRC's Enforcement Policy and Manual and had no adverse impact on public health and safety or the environment. Therefore, we intend to exercise discretion not to enforce compliance with TS 3.7.2, Required Action A.1 for the period from July 21, 2023, at 4:24 a.m. until July 25, 2023, at 11:24 p.m. The verbal approval was provided on July 20, 2023, at 6:45 p.m.

After the verbal approval of the enforcement discretion, the NRC staff noted that you were able to restore the Division II RHRSW MDCT fan "D", the Division II RHRSW reservoir, and the associated EECW/EESW/UHS systems and equipment at 3:57 p.m. on July 22, 2023, which was approximately 35.5 hours into the 115 hours approved by this NOED. In addition, as discussed during the teleconference on July 20, 2023, the NRC staff agreed with your determination that a follow-up TS amendment was not necessary.

As stated in the NRC Enforcement Policy, the NRC will take action, to the extent that any violation was involved, for the root cause that led to the noncompliance for which this NOED was necessary. Per Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the

NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

Signed by Lara, Julio
on 07/26/23

Julio F. Lara, Director
Division of Operating Reactor Safety

cc: Distribution via LISTSERV®

Letter to Peter Dietrich from Julio Lara dated July 26, 2023.

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