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July 17, 2026
NRC-26-0025

10 CFR 50.73

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: Licensee Event Report (LER) No. 2026-001-00

Pursuant to 10 Code of Federal Regulations (CFR) 50.73(a)(2)(iv)(A), DTE Electric Company (DTE) is submitting LER No. 2026-001-00, "Manual Reactor Scram due to Isophase Bus Duct Fire".

No new commitments are being made in this submittal.

Should you have any questions or require additional information, please contact Mr. Eric Frank, Manager – Nuclear Licensing, at (734) 586-4772.

Sincerely,

A handwritten signature in blue ink, appearing to read "Chris Domingos", with a large, stylized flourish extending to the right.

Christopher P. Domingos
Site Vice President

Enclosure: Licensee Event Report No. 2026-001-00, "Manual Reactor Scram due to Isophase Bus Duct Fire"

cc: NRC Project Manager
NRC Resident Office
Regional Administrator, Region III

**Enclosure to
NRC-26-0025**

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

**Licensee Event Report (LER) No. 2026-001-00
“Manual Reactor Scram due to Isophase Bus Duct Fire”**



LICENSEE EVENT REPORT (LER)

(See Page 3 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the FOIA, Library, and Information Collections Branch (T-6 A10M), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by email to Infocollections.Resource@nrc.gov, and the OMB reviewer at: OMB Office of Information and Regulatory Affairs, (3150-0104), Attn: Desk Officer for the Nuclear Regulatory Commission, 725 17th Street NW, Washington, DC 20503. The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the document requesting or requiring the collection displays a currently valid OMB control number.

1. Facility Name

Fermi 2



050



052



053

2. Docket Number

00341

3. Page

1 OF 4

4. Title

Manual Reactor Scram due to Isophase Bus Duct Fire

5. Event Date

Month	Day	Year	Year	Sequential Number	Revision No.	Month	Day	Year
05	18	2026	2026	- 001 -	00	07	14	2026

6. LER Number

7. Report Date

8. Other Facilities Involved

Facility Name

N/A



050

Docket Number

N/A

Facility Name

N/A



052

Docket Number

N/A

Facility Name

N/A



053

Docket Number

N/A

9. Operating Mode

1

10. Power Level

84

11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)

☒ 10 CFR Part 20	☐ 20.2203(a)(3)(i)	☐ 50.69(g)	☐ 50.73(a)(2)(v)(C)	☐ 53.1640(a)(2)(ii)(A)	☐ 73.77(a)(1)(ii)
☐ 20.2201(b)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(D)	☐ 53.1640(a)(2)(ii)(B)	☐ 73.77(a)(2)(i)(A)
☐ 20.2201(d)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(vii)	☐ 53.1640(a)(2)(iii)	☐ 73.77(a)(2)(i)(B)
☐ 20.2203(a)(1)	☒ 10 CFR Part 21	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(viii)(A)	☐ 53.1640(a)(2)(iv)	☐ 73.1200(a)
☐ 20.2203(a)(2)(i)	☐ 21.2(c)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(B)	☐ 53.1640(a)(2)(v)	☐ 73.1200(b)
☐ 20.2203(a)(2)(ii)	☒ 10 CFR Part 50	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(ix)(A)	☐ 53.1640(a)(2)(vii)(A)	☐ 73.1200(c)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(x)	☐ 53.1640(a)(2)(viii)(A)	☐ 73.1200(d)
☐ 20.2203(a)(2)(iv)	☐ 50.36(c)(1)(ii)(A)	☒ 50.73(a)(2)(iv)(A)	☒ 10 CFR Part 53	☐ 53.1640(a)(2)(viii)(B)	☐ 73.1200(e)
☐ 20.2203(a)(2)(v)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 53.1640(a)(2)(i)(A)	☐ 53.1640(a)(2)(ix)	☐ 73.1200(f)
☐ 20.2203(a)(2)(vi)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 53.1640(a)(2)(i)(B)	☒ 10 CFR Part 73	☐ 73.1200(g)
			☐ 53.1640(a)(2)(i)(C)	☐ 73.77(a)(1)(i)	☐ 73.1200(h)



OTHER (Specify here, in abstract, or NRC 366A).

12. Licensee Contact for this LER

Licensee Contact

Eric Frank - Manager, Nuclear Licensing

Phone Number (Include area code)

734-586-4772

LICENSEE EVENT REPORT (LER) (Continued)

Page 2 OF 4

13. Complete One Line for each Component Failure Described in this Report

Cause	System	Component	Manufacturer	Reportable to IRIS		Cause	System	Component	Manufacturer	Reportable to IRIS
B	EL	IPBU	G080	Y						

14. Supplemental Report Expected

☐ No ☒ Yes (If yes, complete 15. Expected Submission Date)

15. Expected Submission Date

Month	Day	Year
09	11	2026

16. Abstract

On May 18, 2026, Fermi 2 was operating in MODE 1 at 84 percent power following Refueling Outage 23, during which the generator stator was replaced. At approximately 1750 Eastern Prevailing Time (EPT), plant personnel reported smoke and a slight haze on the second floor of the turbine building. A small fire was identified in the Y-phase bushing box of the isolated phase bus duct. At 1807 EPT, operators initiated a manual Reactor Protection System (RPS) actuation due to the reported fire. The reactor scram and turbine trip were uncomplicated, all control rods fully inserted, reactor water level remained above the top of active fuel, and decay heat removal was maintained using the Main Steam System and Turbine Bypass Valves. The fire was confirmed extinguished at 1810 EPT and remained localized. Offsite and emergency power remained available. No safety-related structures, systems, or components lost their required safety function, and no radiological release or personnel injuries occurred.

The event is reportable under 10 CFR 50.73(a)(2)(iv)(A) due to manual RPS actuation while critical. The cause remains under investigation, and a supplemental Licensee Event Report will be submitted following completion of the causal evaluation.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
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1. FACILITY NAME		2. DOCKET NUMBER	3. LER NUMBER		
Fermi 2	☒ 050	00341	YEAR	SEQUENTIAL NUMBER	REV NO.
	☐ 052		2026	001	00
	☐ 053				

NARRATIVE**INITIAL PLANT CONDITIONS**

MODE – 1

Reactor Power – 84 percent

There were no structures, systems, or components (SSCs) that were inoperable at the start of this event that contributed to this event.

DESCRIPTION OF THE EVENT

On 5/18/26 Fermi 2 was in MODE 1 at 84 percent power while increasing power following Refueling Outage 23, during which the generator stator was replaced. At approximately 1750 Eastern Prevailing Time (EPT), the smell of smoke and a slight haze on second floor of turbine building south was reported to the main control room. A small fire was observed in the overhead on the Y-phase bushing box, S1200S003, of the isophase bus [IPBU] duct [BDUC]. A responding operator utilized a dry-chemical fire extinguisher to extinguish the fire. At 1807 EPT, a manual reactor scram was initiated due to a reported fire on the Y-phase of the isophase bus ducts. The reactor scram and turbine trip had no complications with all systems responding normally. The fire occurred at the middle of the seal and did not spread towards either end of the box before it was extinguished. The fire was confirmed extinguished at 1810 EPT. Fire brigade was assembled and took over reflash watch and searched for extensions utilizing thermal imaging cameras.

Operations responded and stabilized the plant. Reactor water level was maintained at normal level. Lowest water level observed was approximately 139.5 inches above the top of active fuel. Decay Heat was removed by the Main Steam system [SB] to the main condenser using automatic operation of Turbine Bypass Valves [FCV]. All Control Rods inserted into the core.

SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

The isophase bus duct fire was promptly identified and extinguished within approximately ten minutes, and operators manually initiated a reactor scram to place the plant in a safe condition. The reactor protection system functioned as designed, all control rods fully inserted, reactor water level remained well above the top of active fuel, and decay heat removal was maintained through the Main Steam System and Turbine Bypass Valves. Offsite power and emergency power sources remained available throughout the event, no safety-related structures, systems, or components lost their required safety function, and no radiological release or personnel injuries occurred. The isophase bus duct is not a safety-related system and is not credited with any safety function. Therefore, the event did not result in a degraded principal safety barrier, an unanalyzed condition that significantly degraded plant safety, or a loss of safety function.

The event is reportable solely due to the manual actuation of the Reactor Protection System (RPS) [JPS] pursuant to 10 CFR 50.72(b)(2)(iv)(B) as an event or condition that results in the actuation of the RPS when the reactor is critical. An ENS report was made to the NRC at 2125 on 05/18/2026 (EN# 58286).

CAUSE OF THE EVENT

The fire was directly caused by localized overheating of the sealant between the CT enclosure and isophase bus duct due to induced currents creating a localized hot spot. This seal provides an air seal for the isophase bus duct cooling system that removes heat from the terminals during operation. A root cause investigation is currently in progress to identify any organizational, procedural, or human performance causes. A supplemental LER will be provided upon completion of the root cause investigation.



LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

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1. FACILITY NAME	☒ 050 ☐ 052 ☐ 053	2. DOCKET NUMBER	YEAR	3. LER NUMBER	REV NO.
Fermi 2		00341	2026	001	00

NARRATIVE

CORRECTIVE ACTIONS

Corrective actions taken in response to the condition were:

- Repaired and reconfigured damaged isophase duct.
- Installed four temporary 10 ton AC units to provide supplemental cooling to the isophase bus duct.
- Implemented enhanced thermal monitoring of isophase bus temperatures using thermal imaging equipment.
- Developed an Operational Decision-Making Issue (ODMI) to establish operating parameters with the known condition.
- Restarted the unit and limited reactor power to approximately 83 percent in accordance with the ODMI to maintain acceptable isophase bus temperatures.
- Initiated development of a permanent corrective action to restore full operating margin and support future operation at 100 percent power during a forced outage.
- Initiated a root cause evaluation.

Actions to address procedural and/or human performance gaps will be addressed in the Corrective Action Program.

PREVIOUS OCCURRENCES

Fermi has not experienced a plant trip caused by a fire, or faults in the isophase bus prior to this incident. An examination of Condition Reports from the past five years yielded the following:

CR-2026-55056 "Flex Links Braze Condition Not Adequate"
 CR-2026-54775 "Generator Project – New Flex Links Require Modification"
 CR-2026-54462 "Grounding of Line side CT Enclosure"
 CR-2025-49607 "Revise PM Strategy for Isolated Phase Bus Duct Testing"
 CARD 22-26102 "Increasing Vibration Trend on the West Isophase Bus Duct Fan"