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10 CFR 50.73

November 24, 2015
NRC-15-0097

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

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

Subject: Licensee Event Report (LER) No. 2015-007

Pursuant to 10 CFR 50.73 (a)(2)(v)(C) and (a)(2)(i)(B) DTE Electric Company (DTE) is submitting LER No. 2015-007, Operation with the Potential to Drain the Reactor Vessel with Secondary Containment Inoperable.

If you have any questions or require additional information, please contact Mr. Christopher R. Robinson of my staff at (734) 586-5076.

Sincerely,

Vito A. Kaminskas
Site Vice President

Enclosure

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 to
NRC-15-0097**

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

**LER 2015-007, Operation with the Potential to Drain the Reactor Vessel
with Secondary Containment Inoperable**



LICENSEE EVENT REPORT (LER)
(See Page 2 for required number of digits/characters for each block)

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, Privacy and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

1. FACILITY NAME

Fermi 2

2. DOCKET NUMBER

05000 05000341

3. PAGE

1 OF 3

4. TITLE

Operation with the Potential to Drain the Reactor Vessel with Secondary Containment Inoperable

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
10	04	2015	2015	007	0	11	24	2015	N/A	05000 N/A
									N/A	05000 N/A

9. OPERATING MODE	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
5	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
10. POWER LEVEL	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input checked="" type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> OTHER	Specify in Abstract below or in NRC Form 366A	

12. LICENSEE CONTACT FOR THIS LER

LICENSEE CONTACT: Christopher R. Robinson - Manager Nuclear Licensing
TELEPHONE NUMBER (Include Area Code): (734) 586-5076

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

YES (If yes, complete 15. EXPECTED SUBMISSION DATE) NO

15. EXPECTED SUBMISSION DATE

MONTH: DAY: YEAR:

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On October 4, 2015 at approximately 0956 EDT, an Operation with the Potential to Drain the Reactor Vessel (OPDRV) was unintentionally initiated without secondary containment operable. Plant personnel were starting work to isolate the Reactor Recirculation (RR) pump seal flow switch and rotameter for replacement. The RR pump seal cavity drain valves were opened in accordance with the Safety Tagging Record (STR). Shortly after the valves were opened, the Control Room staff identified a lowering Fuel Pool Skimmer Surge Tank level and an increase in Drywell Floor drain sump level and initiated actions to isolate the RR pump seal cavity. At approximately 1120 EDT, the RR pump seal drain valves were successfully closed and the OPDRV was terminated. The RR pump seal drain flow was approximately 12 gallons per minute and lasted for approximately 84 minutes. Reactor cavity water level and spent fuel pool level remained constant throughout the OPDRV. Personnel who developed the STR failed to recognize that the activity would result in an OPDRV and; therefore, did not require that Secondary Containment be Operable in accordance with Technical Specifications. The event was entered into the corrective action program. This Licensee Event Report is written in accordance with 10CFR50.73(a)(2)(v)(C) and 50.73(a)(2)(i)(B).

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
Fermi 2	05000- <div style="border: 1px solid black; width: 100px; height: 20px; margin: 0 auto; text-align: center;">341</div>	YEAR	SEQUENTIAL NUMBER	REV NO.
		2015	07	0

Initial Plant Conditions:

Mode: 5
Reactor Power: 0 percent

Description of the Event

On October 4, 2015 at approximately 0956 EDT, an Operation with the Potential to Drain the Reactor Vessel (OPDRV) was unintentionally initiated without secondary containment [NH] operable. Plant personnel were starting work to isolate the Reactor Recirculation (RR) [AD] pump seal flow switch and rotameter for replacement. The RR pump seal cavity drain [DRN] valves were opened in accordance with the Safety Tagging Record (STR). Shortly after the valves were opened, the Control Room staff identified a lowering Fuel Pool Skimmer Surge Tank [TK] level and an increase in Drywell Floor drain sump level and initiated actions to isolate the RR pump seal cavity. At approximately 1120 EDT, the RR pump seal drain valves [V] were successfully closed and the OPDRV was terminated. The RR pump seal drain flow was approximately 12 gallons per minute and lasted for approximately 84 minutes. The Reactor Pressure Vessel (RPV) level was maintained by Control Rod Drive (CRD) [AA] flow. This event occurred during the 17th refueling outage (RF17) with the reactor cavity flooded up and fuel pool gates removed. Reactor cavity water level and spent fuel pool level remained constant throughout the OPDRV evolution without Secondary Containment being operable.

This event (No. 51449) was reported in accordance with 10CFR50.72(b)(3)(v)(C) as an eight hour non-emergency report to the NRC Operations Center. The criterion used for the report was any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to control the release of radioactive material. This Licensee Event Report is written in accordance with 10CFR50.73(a)(2)(v)(C).

The NRC issued Enforcement Guidance Memorandum (EGM) 11-003 to provide guidance on how to disposition boiling water reactor licensee noncompliance with Technical Specifications (TS) containment requirements during OPDRV operations; however, at the time of this event, the EGM was not invoked and the OPDRV was not recognized until the Control Room staff identified a lowering Fuel Pool Skimmer Surge Tank level and increase in Drywell Floor drain sump level. This LER is also written in accordance with 10CFR50.73(a)(2)(i)(B), as an operation or condition which was prohibited by plant TS. Secondary Containment was required in Mode 5, Refueling, during OPDRV.

Significant Safety Consequences and Implications

There were no safety consequences during this OPDRV activity. Evaluation of the OPDRV activity determined that the time to drain down the RPV to the top of the RPV flange was greater than 72 hours with no make-up.

At the time of the event, the mitigating measures of EGM 11-003 were met by the practices and processes in place for the Refueling Outage defense in depth measures.

LICENSEE EVENT REPORT (LER) CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER			
Fermi 2	05000-	341	YEAR 2015	- SEQUENTIAL NUMBER 07 -	REV NO. 0

All Control Rods were inserted with one Rod interlock operable. Division I of the Residual Heat Removal system was operating in Shutdown Cooling for decay heat removal. Division I Core Spray and Condensate Make-up to the Fuel Pool Skimmer Surge Tank were available to add inventory. On site and off site electrical systems were also operable.

Cause of the Event

Investigation determined that the tag out (STR) configuration established for the maintenance activity did not include closing the RR pump suction or discharge valves which resulted in the RR loop being in direct communication with the reactor coolant system.

The Apparent Cause of the event was that lack of self-checking resulted in OPDRVs, or the potential for OPDRVs, for systems that interface with the RPV coolant system, not being identified during the preparation and review of the STR.

Corrective Actions

The event was entered into the Corrective Action Program and an Operations Department standdown was performed.

The list of valves that have the potential to create an OPDRV condition was enhanced to include boundary isolation valves. The list will be utilized to ensure appropriate controls are established for STR development and review.

The remaining RF17 STRs for systems that interface with the RPV coolant system were reviewed to ensure appropriate configuration control. There were no OPDRV vulnerabilities identified.

A Shift Manager review and authorization of all RF17 manipulations associated with systems interfacing with the RPV coolant system was added to existing processes. This review will validate that isolation boundaries will be established prior to opening of vent and drain valves. Operations Department Expectations documents, Conduct Manual and Operator Training will be revised to incorporate those requirements.

Additional Information

- A. Failed Components: None
B. Previous LERs for Similar Events: None.