J. Todd Conner Site Vice President

DTE Energy Company 6400 N. Dixie Highway, Newport, MI 48166 Tel: 734.586.4849 Fax: 734.586.5295 Email: connerj@dteenergy.com

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10 CFR 50.73

March 18, 2013 NRC-13-0007

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. 2013-001

Pursuant to 10 CFR 50.73(a)(2)(v)(C), DTE Electric is submitting LER No. 2013-001, Loss of Secondary Containment function.

No commitments are being made in this LER.

Should you have any questions or require additional information, please contact Mr. Zachary W. Rad of my staff at (734) 586-5076.

Sincerely,

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Enclosure

cc: NRC Project Manager NRC Resident Office Reactor Projects Chief, Branch 5, Region III Regional Administrator, Region III Supervisor, Electric Operators, Michigan Public Service Commission

NRC FO	RM 36	6	U.S. NU	CLEAR	REGUL	ATOR	Y COMMIS	SSION	APPRC	VED BY ON	IB: No.	3150-0104		Expires 1	0/31/2013	
(10-2010) LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)								Estimar requesi licensir estimat commi infocoll and Re Budget collecti not co informa	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 Service 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.							
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NRC FORM 366 (10-2010)

NRC FORM 366A (10-2010) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

CONTINUATION SHEET

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NARRATIVE

Initial Plant Conditions:

Mode1Reactor Power68 percent

Description of the Event

On January 22, 2013, at approximately 0113 hours EST, with the Standby Gas Treatment System (SGTS) [BH] operating to maintain Secondary Containment [NH] pressure less than -0.125 inches water column (WC) and while starting up the Reactor Building Heating Ventilation and Air Conditioning (RBHVAC) [VA] system, Secondary Containment pressure exceeded the Technical Specification Surveillance Requirement pressure of -0.125 inches WC for approximately 27 seconds, reaching approximately +0.15 inches WC.

Technical Specification Limiting Condition for Operation 3.6.4.1, Condition B, Secondary Containment inoperable was entered (four hour action to restore Secondary Containment), and exited when Secondary Containment pressure was restored to less than -0.125 inches WC. The Emergency Operating Procedures (EOPs) were entered based on high Secondary Containment pressure. EOPs were exited at 0120 hours EST.

The RBHVAC system consists of three parallel, fifty-percent capacity supply fans [FAN], and three parallel, fifty-percent capacity exhaust fans [FAN], each with associated discharge dampers [DMP]. The RBHVAC system maintains the Secondary Containment at a slight negative pressure, approximately -0.25 inches WC, with respect to outside atmospheric pressure to prevent exfiltration of potentially contaminated air to the environment.

The normal operation of the RBHVAC system is for two of the three supply and exhaust fan pairs to be running. The supply and exhaust fans are manually controlled from the control room. The supply and exhaust discharge dampers automatically open following a 20 second delay after the associated fan is started. The exhaust fan in each pair is started first to maintain a negative pressure in Secondary Containment during system startup followed by the supply fan two seconds later. Modulating dampers [DMP] on the exhaust fan inlets maintain approximately -0.25 inches WC in the Secondary Containment during system operation.

The System was returned to normal with two RBHVAC trains operating. Reactor building pressure stabilized at less than -0.125 inches WC and the SGTS was shutdown. In this event, the RBHVAC center exhaust fan discharge damper likely opened after the supply fan discharge damper, causing the Secondary Containment pressure increase as evidenced by observed delayed operation of the discharge damper post event testing.

The loss of Secondary Containment function is reportable under 10 CFR 50.73(a)(2)(v)(C) as an event or condition that could have prevented the fulfillment of a safety function needed to control the release of radioactive material. An 8 hour NRC event notification (No. 48689) was previously made to the NRC based on meeting the reporting criteria of 10 CFR 50.72(b)(3)(v)(C).

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Significant Safety Consequences and Implications

Secondary containment, in conjunction with the SGTS, is designed to minimize any ground level release of radioactive material which may result from an accident. There are two principal accidents for which Secondary Containment Integrity is assumed, a loss of coolant accident (LOCA) and a fuel handling accident. With the plant operating in Mode 1, only the LOCA was applicable at the time of the event.

The standby RBHVAC fans were immediately available. On a LOCA signal (high drywell pressure or low reactor vessel water level) the RBHVAC system would have automatically tripped and would have been isolated from the Secondary Containment. The accident scenario assumes a loss of offsite power which delays the subsequent start of the SGTS for 33 seconds. Manual Secondary Containment isolation capability from the Main Control Room [NA] could also be used. The SGTS is designed to maintain the reactor building at a negative pressure relative to the outside atmosphere during transient and accident conditions. It would have automatically started on the same conditions that trip the RBHVAC system. Therefore, this event did not pose an actual threat to the public health or safety.

Cause of the Event

The causes of this event appear to be delayed operation of the center RBHVAC exhaust fan discharge damper and relay timing out of tolerance for the RBHVAC Center Supply and Exhaust Fan. The delayed operation of the exhaust fan discharge damper likely prevented it from opening first in order to maintain a negative pressure in the Secondary Containment. The relay timing associated with the supply and exhaust fan discharge damper opening has also been identified as an apparent cause. A contributing cause is the RBHVAC fan start logic being less than adequate.

Corrective Actions

The System was returned to normal with two RBHVAC trains operating. Reactor building pressure stabilized less than -0.125 inches WC and the SGTS was shutdown.

Testing was performed that identified the center RBHVAC exhaust fan discharge damper operation was delayed. Work Management procedures are being followed to troubleshoot the actuator for the discharge damper and the supply and exhaust fan relay timing.

This event has been entered into the Fermi 2 Corrective Action Program. Investigation continues and could result in additional corrective actions.

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Additional Information

A. Failed Component: None Component: Function: Manufacturer: Model Number: Failure Cause:

B. Previous Licensee Event Reports (LERs) on Similar Problems:

None within the previous five years.