

Detroit  
Edison

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Nuclear  
Operations

10CFR50.73

May 14, 1991  
NRC-91-0057

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

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

Subject: Licensee Event Report (LER) No. 91-007

Please find enclosed LER No. 91-007, dated May 14, 1991, for a reportable event that occurred on April 14, 1991. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Patricia Anthony, Compliance Engineer, at (313) 586-1617.

Sincerely,

Enclosure: NRC Forms 366, 366A

cc: A. B. Davis  
J. R. Eckert  
R. W. DeFayette  
W. C. Rogers  
J. F. Stang

Wayne County Emergency  
Management Division

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## LICENSEE EVENT REPORT (LER)

|   |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|---|--------|-----------|--|-------------------|-----------------|------------------|-----|------|---|---|--------|--|--------------|-------------------|------|--|--|--|--|----------------------|--|--|--|--|--|--|--|--|--|
| FACILITY NAME (1)<br>Femi 2   |        |           |  |                   |                 |                  |     |      |   | DOCKET NUMBER (2)<br>0 5 1 0 0 0 3 4 1    |        |  |              |                   |      |  |  |  |  | PAGE (3)<br>1 OF 0 4 |  |  |  |  |  |  |  |  |  |
| TITLE (4)<br>Error During Performance of Radiation Monitor Calibration Results in Actuation of Engineered Safety Features |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| EVENT DATE (5)  |        |           | LER NUMBER (6)   |                   |                 | REPORT DATE (7)  |     |      | OTHER FACILITIES INVOLVED (8)                       |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| MONTH   | DAY    | YEAR      | YEAR   | SEQUENTIAL NUMBER | REVISION NUMBER | MONTH            | DAY | YEAR | FACILITY NAMES                                      |   |        |  |              | DOCKET NUMBER(S)  |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| 0 4   | 1 4    | 9 1       | 9 1  | 0 0 7             | 0 0             | 0 5              | 1 4 | 9 1  |   |   |        |  |              | 0 5 1 0 0 0       |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| OPERATING MODE (9)<br>5   |        |           | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following: (11)) |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| POWER LEVEL (10)<br>0 2 0   |        |           | 20.402(b)  |                   |                 | 20.405(c)        |     |      | <input checked="" type="checkbox"/> 50.73(a)(2)(iv) |   |        | 73.71(b)   |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           | 20.405(a)(1)(i)  |                   |                 | 50.38(c)(1)      |     |      | 50.73(a)(2)(v)                                      |   |        | 73.71(c)   |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           | 20.405(a)(1)(ii)   |                   |                 | 50.38(c)(2)      |     |      | 50.73(a)(2)(vi)                                     |   |        | OTHER (Specify in Abstract below and in Text, NRC Form 366A) |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           | 20.405(a)(1)(iii)  |                   |                 | 50.73(a)(2)(i)   |     |      | 50.73(a)(2)(viii)(A)                                |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           | 20.405(a)(1)(iv)   |                   |                 | 50.73(a)(2)(ii)  |     |      | 50.73(a)(2)(viii)(B)                                |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           | 20.405(a)(1)(v)  |                   |                 | 50.73(a)(2)(iii) |     |      | 50.73(a)(2)(ix)                                     |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| LICENSEE CONTACT FOR THIS LER (12)  |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| NAME<br>Patricia Anthony, Compliance Engineer   |        |           |  |                   |                 |                  |     |      |   | TELEPHONE NUMBER<br>3 1 3 5 8 6 - 1 6 1 7 |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)  |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| CAUSE   | SYSTEM | COMPONENT | MANUFACTURER   | REPORTABLE TO NRC |                 |                  |     |      |   | CAUSE                                     | SYSTEM | COMPONENT  | MANUFACTURER | REPORTABLE TO NRC |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
|   |        |           |  |                   |                 |                  |     |      |   |   |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| SUPPLEMENTAL REPORT EXPECTED (14)   |        |           |  |                   |                 |                  |     |      |   | EXPECTED SUBMISSION DATE (15)             |        |  | MONTH        | DAY               | YEAR |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |
| YES (If yes, complete EXPECTED SUBMISSION DATE)   |        |           |  |                   |                 |                  |     |      |   | <input checked="" type="checkbox"/> NO    |        |  |              |                   |      |  |  |  |  |                      |  |  |  |  |  |  |  |  |  |

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On April 14, 1991, a Radiation Protection (RP) technician was performing a calibration procedure for the Reactor Building Ventilation Exhaust Radiation Monitor. After successfully completing the calibration, the technician reset the Trip 1 and Failure indicators at the module. One of the indicators, Trip 2, had a burned out light bulb. Therefore, because it was not lighted, it was not reset.

While performing steps to restore the radiation monitor configuration to normal, the Trip 2 actuation logic was completed. As a result, the reactor building and control center ventilation systems were challenged and properly functioned.

This event was due to personnel error since the technician did not reset all the activated trips. Contributing causes were a lack of clarity in the procedure step and the failure of the indicator bulb.

An evaluation of this event was performed using the Human Performance Evaluation System. The procedure being used has been revised to clearly state what indications should be received and to verify that the trips are properly reset.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-530) U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

DOCKET NUMBER (2)

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Initial Plant Conditions:

Operational Condition: Core off loaded  
Reactor Power: 0 percent  
Reactor Pressure: 0 psig  
Reactor Temperature: 97° Fahrenheit

Description of Event :

On April 14, 1991, at approximately 2200 hours, a Radiation Protection (RP) technician was performing surveillance procedure 64.080.437, "Reactor Building Ventilation Exhaust Monitor, Division I Calibration". This procedure verifies the calibration of radiation monitor D11-N408 [(IL)(MON)] every 18 months as required by Technical Specification 4.7.2.e.2.

After successfully completing the calibration, the RP technician was performing section 6.8 of the procedure for returning the system to normal. Step 6.8.1 directed the technician to "Reset all lights and trips on RP-30 module." At the RP-30 module (IMOD) there is a Trip 1 (RI), a Trip 2 and a Failure indication (XI) with separate reset push buttons. When the RP technician reached this step, he found only the Trip 1 and Failure indicators actuated and reset only those. The Trip 2 indicator had a burned out light bulb. The technician did not recognize that successful completion of the calibration meant that both trips would have been activated. As a result, the RP technician did not investigate the cause for the Trip 2 not having an indication.

The technician then proceeded to remove a test jumper which had been installed to prevent completion of the actuation system logic. At 2234 hours, the Division I Control Center Heating, Ventilation and Air Conditioning system [(CCHVAC)(VI)] shifted from its normal mode to its recirculation mode. Also, the Division I Reactor Building Heating Ventilating, and Air Conditioning system [(RBHVAC)(VA)] tripped. Neither division of the Standby Gas Treatment System [(SCTS)(BH)] automatically started since the controls had been placed in "off/Reset" for outage work.

Operations personnel restored CCHVAC to its normal mode at 2237 hours. RBHVAC was started at 2340 hours.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F-630), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

DOCKET NUMBER (2)

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

Cause of Event:

This challenge to safety systems/actuation logic was due to an RP technician failing to reset all the appropriate trip logic on the RP-30 module. In addition, one of the trip indicator lights was burnt out; therefore, no positive indication that the trip was in effect was available.

A contributing factor to this event was that more detail would have been appropriate in the procedure step. Step 6.8.1 describing reset of RP-30 module did not clearly state what the technician should initially find or what specific actions were required in order to successfully complete the step.

Analysis of Event:

The available safety systems/logic challenged during this event fulfilled their safety function. Had an event occurred during this time frame which challenged the safe operation of the systems involved, these systems would have already been fulfilling their design basis safety function. The SGTS is not required when shutdown excluding when irradiated fuel is being handled, during core alterations and when potential for draining the vessel exists. This system not being available during this event did not adversely impact safety. Therefore, during this event, the health and safety of the public as well as plant personnel was not challenged.

Corrective Actions:

After the event occurred, the personnel involved met with RP and were counseled regarding the circumstances surrounding this event. This information was also presented to appropriate RP personnel. An evaluation of this event was performed using the Human Performance Evaluation System (HPES). This results of this evaluation have been reviewed with plant management.

In order to clarify the actions required in the future when performing this type of calibration, the subject procedure and the comparable Division II procedure were revised. The procedures 64.080.437 and 64.080.438 now require that trip lights be checked for proper operation and that trip logic be verified to have been reset prior to removing logic bypass jumpers.

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 600 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (F530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

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TEXT: If more space is required, use additional NRC Form 366A's (17)

Previous Similar Events:

This is the only reportable event at Fermi 2 due to an RP technician performing a calibration procedure.