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10CFR50.73



Nuclear  
Operations

April 5, 1993  
NRC-93-0028

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. 93-006

Please find enclosed LER No. 93-006, dated April 5, 1993, for a reportable event that occurred on March 4, 1993. A copy of this LER is also being sent to the Regional Administrator, USNRC Region III.

If you have any questions, please contact Paul G. Jahn, Compliance Engineer, at (313) 586-1617.

Sincerely,

Enclosure: NRC Forms 366, 366A

cc: T. G. Colburn  
A. B. Davis  
W. J. Kropp  
M. P. Phillips  
P. L. Torpey

Wayne County Emergency  
Management Division

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## LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNNB 7714; U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3180-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
03	04	93	93	-- 006	--	04	05	93	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	98%	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)				
POWER LEVEL (10)		20.402(b)		20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)		50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)		50.36(c)(2)	50.73(a)(2)(vii)	OTHER
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	Specify in Abstract below and in Text, NRC Form 356A
		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)(x)		

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)		X NO					

On March 4, 1993, it was determined that test procedures used to perform channel functional tests of Reactor Protection System (RPS), Electrical Protection Assemblies (EPAs) were incorrect. The procedure failed to trip the EPA breakers as required by Technical Specification surveillance requirements. Because the EPAs had not been properly tested as required by Technical Specification 4.8.4.4 all eight EPAs (A,B,C,D,E,F,G,H) were declared inoperable.

Technical Specification 4.0.3 permits 24 hours to complete the surveillance requirements of section 4.8.4.4 before implementing the action requirements of section 3.0.3. The EPAs were successfully tested and declared operable within 6 hours.

Investigation showed that channel functional tests and channel calibrations of the undervoltage, overvoltage and underfrequency EPA trip functions did not actually trip the EPA breaker. The defective procedures were 42.610.02 and 42.610.04, Division I and II RPS, EPA Calibration/Functional Testing, respectively.

The cause of this event was attributed to a defective procedure. A review of other electrical surveillances was conducted and verified that no other similar problems existed. The affected procedures will be revised to include steps necessary to satisfy channel functional test requirements per Technical Specification requirements.

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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			93	006		

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

Initial Plant Conditions:

Operational Condition: 1 (Power Operation)  
Reactor Power: 98 Percent  
Reactor Pressure: 1030 psig  
Reactor Temperature: 540 degrees Fahrenheit

Description of Event:

On March 4, 1993 at 0930 hours, it was determined that test procedures used to perform channel functional tests and the channel calibration of Reactor Protection System [(RPS)(JC)] and Electrical Protection Assemblies (EPA) were incorrect. This was discovered by the system engineer during an informal review of procedures which was initiated due to a concern raised by the Senior Resident Inspector. The procedures failed to trip the EPA breakers (BKR) as required by Technical Specification definition of channel functional test, Technical Specification 1.6 and Technical Specification 4.8.4.4. The procedures, as written, verified the undervoltage, overvoltage and underfrequency EPA channel trip functions by installed test equipment rather than by observing an actual circuit breaker trip. All eight RPS EPA breakers were declared inoperable at 0930 hours on March 4, 1993, due to failure to meet the surveillance requirements in the required interval. In accordance with Technical Specification 4.0.3, 24 hours was allowed to complete the surveillance requirements. Testing using the correct methodology that meets the surveillance requirements was performed under work request 000Z931270 and the EPAs were declared operable at 1455 hours on March 4, 1993.

Cause of Event:

Investigation of this event showed that procedure revisions to the EPA calibration procedures, 42.610.02 (Division I) and 42.610.04 (Division II) made on March 16, 1991 and March 20, 1991 respectively, had deleted the required EPA trips. These calibration procedures were revised to accommodate design changes installed under EDP 9922, which included a redesigned logic card and added a test switch to prevent excessive breaker trips during calibration of the EPAs. The original functional test procedures 42.610.01 and 42.610.03 were then incorporated into these procedures and the channel functional procedures were cancelled.

# LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MMRB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

The deficient procedures were first used following installation of EDP 9922 in March 1991. The EPAs were not completely tested, and thus, were inoperable when returned to service. This occurred as follows.

<u>EPA</u>	<u>Date Returned to Service</u>
E,G	3/10/91
F,H	3/21/91
B,D	3/26/91
A,C	3/27/91

The cause of this event was a defective procedure. A contributing cause was that the electrical maintenance technicians (utility, non-licensed) lacked training on Technical Specification test requirements. When making procedure changes to eliminate unnecessary EPA trips, by using the test switch installed per EDP 9922, the technician did not recognize that the Technical Specifications still required verification of each automatic EPA trip. Emphasis during the procedure revision was on correctly incorporating checks on the new logic cards and the use of the new test switch to avoid EPA trips. This may have contributed to a mindset which led to eliminating the EPAs trips as required by the channel functional test.

## Analysis of Event:

The purpose of the EPA channel functional test is to periodically verify that the EPA will trip when any of three monitored RPS power parameters exceed their setpoint. These setpoints are selected to ensure electrical power supply limits such that RPS components are not damaged or degraded.

Following the discovery of this condition, the EPAs were tested successfully and demonstrated that all eight RPS EPAs would have performed their intended function. There was no impact on the safe operation of the plant or the health and safety of the plant workers and the general public was not affected.

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 80.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

Corrective Actions:

The EPA breakers were immediately tested under work request 000Z931270 using the correct methodology that meets the channel functional test surveillance requirements. These tests were successfully completed and all EPAs were declared operable at 1455 hours on March 4, 1993.

A review of other electrical surveillances was conducted and verified that no other similar problem existed. Additionally it was verified that personnel preparing instrumentation and control (I&C) surveillances had received training in Technical Specification requirements. Responsibility for electrical surveillance procedure preparation was transferred from electrical maintenance to system engineering in December 1992. System engineers have been trained for the performance of procedure revisions with respect to meeting Technical Specification requirements.

Procedures 42.610.02 and 42.610.04 will be revised by July 30, 1993, to include steps necessary to satisfy channel functional test requirements per Technical Specifications.

This event and applicable lessons learned will be discussed in Technical Staff and Managers continued training and in the maintenance personnel continued training for I&C personnel. This will be completed during the 1993 training cycle.

A sample of I&C channel functional test procedures will be reviewed by 07/30/93, to provide further assurance that a similar problem does not exist with procedures under I&C control.

An accountability meeting was held to review the sequence of events.

Previous Similar Events:

LER 91-018 - A surveillance requirement was inadvertently changed from weekly to quarterly during implementation of Technical Specification Amendment 75. The cause was attributed to a deficiency in the process utilized during implementation of Technical Specification changes.

Failed Component Data:

There were no failed components involved in this event.