June 1, 2005

L-MT-05-036
10 CFR Part 50.73

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Monticello Nuclear Generating Plant
Docket No. 50-263
License No. DPR-22

LER 2005-005, "Inadvertent Engineered Safety Function Actuations during Testing"

A Licensee Event Report for this occurrence is attached.

This letter makes no new commitments or changes any existing commitments.

John T. Conway for TJP

Thomas J. Palmisano
Site Vice President, Monticello Nuclear Generating Plant
Nuclear Management Company, LLC

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Monticello, USNRC
Resident Inspector, Monticello, USNRC

NRC FORM 366 (6-2004) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

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

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TITLE (4) Inadvertent Engineered Safety Function Actuations during Testing

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER 05000
04	02	2005	2005	– 005	– 00	06	01	2005	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N	**THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)**											
POWER LEVEL (10)	0		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)				
			20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)				
			20.2203(a)(1)		50.36(c)(1)(i)(A)	X	50.73(a)(2)(iv)(A)		73.71(a)(4)				
			20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)				
			20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A				
			20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)						
			20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)						
			20.2203(a)(2)(v)		50.73(a)(2)(i)(B)		50.73(a)(2)(vii)						
			20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)						
			20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)						

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Ron Baumer	763-295-1357

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX		CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX

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

ABSTRACT

On April 2, 2005 at 1648, Operations was performing a Post Maintenance Test (PMT) in accordance with a procedure, following replacement of a relay. During the performance of the procedure, the #16 4KV Safety Related Bus was de-energized. Operations entered the appropriate procedures for the loss of Bus 16, and power was restored at 2140. A review of the event determined that the PMT procedure did not contain the correct steps to permit the test to be successfully completed. This resulted in a knife switch being left in the open position that caused a relay to sense a loss of bus voltage, even though the voltage was actually available. This caused the bus transfer logic to seek a new source of power that resulted in Bus 16 de-energizing.

The Root Cause Evaluation determined that the procedures for preparation, review and approval of complex PMTs lack sufficient detail with respect to responsibilities and actions required. Corrective actions planned or completed include: restoration of the bus, and planned revision of station procedures regarding the development and review process for PMTs.

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

Description

On April 2, 2005, with the reactor shutdown during a refueling outage and Residual Heat Removal (RHR) [BO] providing shutdown cooling, Operations personnel were performing a Post Maintenance Test (PMT) in accordance with a procedure, following replacement of a relay [RLY]. At 1648, during the performance of the procedure, the number 16 4KV [EA] Safety Related Bus [BU] was unexpectedly de-energized. The de-energizing of Bus 16 resulted in a loss of the loads off the bus including Load Center [SSBU] 104, Motor Control Center [SSBU] 141, and Reactor Protection System (RPS) [JD] bus B (and associated loads). Due to the event the following safety systems were actuated: the reactor building ventilation [VA] isolated, "A" Standby Gas Treatment System (SBGTS) [JE] initiated, the "A" Control Room Emergency Filtration Train (EFT) [VI] initiated, and the Reactor Water Cleanup System (RWCU) [CE] tripped. In addition the "B" RPS logic initiated a half scram.

Operations entered the appropriate procedures for the loss of Bus 16, and power was restored at 2140. A review of the event determined that the PMT procedure did not contain the correct steps to permit the test to be successfully completed. This resulted in a knife switch being left in the open position that caused a relay to sense a loss of bus voltage, even though the voltage was actually available. This caused the bus transfer logic to seek a new source of power that resulted in bus 16 de-energizing. The procedure was revised and the PMT was re-performed; subsequent testing proved successful.

Event Analysis

The knife switch being left in the open position caused the relay to sense a loss of bus voltage, even though the voltage was actually available. Therefore, the ESF actuations were the result of an invalid actuation signal and in accordance with NUREG-1022, no notification under 10 CFR 50.72 was required. Per 10 CFR 50.73 (a)(2)(iv), a Licensee Event report is required for this event since the system was not properly removed from service.

The event is not classified as a safety system functional failure.

Safety Significance

The de-energizing of bus 16 resulted in a loss of the loads off the bus and loss of Load Center 104, Motor Control Center 141, and RPS bus B (and associated loads). The impact on the plant was minor since shutdown cooling (SDC) was not lost and reactor temperature did not increase.

Operators were notified of the loss by annunciator 8-C-19, No. 14 4160V Bus to No. 16 Bus Breaker Trip. The Annunciator Response Procedure for this alarm directs the Operators to perform the procedure for Loss of Bus 15 or Bus 16. Bus 16 was restored following completion of the procedure, and the cause understood and corrected. All safety related equipment performed as expected.

The Probabilistic Risk Assessment (PRA) group performed an evaluation for significance. The change in Core Damage Frequency (CDF) after crediting the available recovery methods was 6.56 x 10-9. In addition, SDC was not lost so decay heat removal was not affected. This event had low significance.

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

Cause

The Root Cause Evaluation determined that the procedures for preparation, review and approval of complex PMTs lack sufficient detail with respect to responsibilities and actions required.

Corrective Action

Operations restored Bus 16 using the appropriate operating procedures.

As an interim action, the site increased the review expectations for PMTs. All PMTs that used portions of approved surveillance procedures were required to have a technical review and Senior Reactor Operator review prior to implementation.

Site procedures will be revised to provide more formal control of the PMT development process. The revised process will incorporate a graded approach for development of PMTs and apply the necessary level of reviews in an effort to prevent further events.

Failed Component Identification

N/A

Previous Similar Events

No station Licensee Event Reports were found that were similar to the events in this LER. However, one station corrective action report (CAP), CAP035444, identified that inadequate reviews were performed for a specific PMT. This was attributed to inattention to detail by reviewers and was closed by correcting the PMT.