



December 19, 2005

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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 2005-006, "Unrecognized Plant Configuration Change"

A Licensee Event Report for this occurrence is attached.

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

John T. Conway
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

IE22

NRC FORM 366 (6-2004)	U.S. NUCLEAR REGULATORY COMMISSION	APPROVED BY OMB NO. 3150-0104 Estimated burden per response to comply with this mandatory information collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@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 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.	EXPIRES 6-30-2007
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)			

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TITLE (4) Unrecognized Plant Configuration Change

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
10	18	2005	2005	- 006	- 00	12	19	2005	FACILITY NAME	DOCKET NUMBER
										05000
										05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) (11)								
		20.2201(b)	20.2203(a)(3)(ii)	50.73(a)(2)(ii)(B)	50.73(a)(2)(ix)(A)					
POWER LEVEL (10)	100	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)	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)	X 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 Ron Baumer	TELEPHONE NUMBER (Include Area Code) 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)		
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO		MONTH	DAY	YEAR

ABSTRACT

On October 17, 2005, during a review of a planned Emergency Filtration Train (EFT) maintenance work order, a shift manager recognized that the isolation used for this activity affected the Emergency Core Cooling Systems (ECCS) due to impacts on the associated Emergency Service Water (ESW) pump start logic. This maintenance work had already been approved for implementation; however, the compensatory measures planned for the EFT maintenance were determined to be inadequate and the work was put on hold prior to implementation. On October 18, 2005 during the extent of condition review for the issue, it was determined that a similar condition had previously existed. The impact on ECCS during the previous isolation was not recognized or evaluated in advance and resulted in a plant configuration control error.

The root cause evaluation for the event determined that management and supervision did not provide the necessary direction and oversight of isolation activities to ensure expectations were clear, appropriate resources were applied, and roles and responsibilities in the isolation preparation/approval, work order impact, and work order approval processes were clear.

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

Description

In April of 2004, a non-compliance with 10 CFR 50 Appendix R cable [EIS Component Code CBL] separation requirements was identified as an operable but non-conforming condition. A subsequent July 2004 evaluation resulted in the initiation of a modification to correct the condition. Engineering performed an installation impact assessment and determined that only the Emergency Filtration Train (EFT) [EIS System Code BH] and Control Room Ventilation (CRV) [EIS System Code VI] system Technical Specifications (TS) would be impacted during installation of the modification. During a February 2005 management challenge board meeting, a decision was made to implement part of this modification during the 2005 Refueling Outage (RFO) and the remainder online. The decision to complete part of this work online was based on 2005 RFO resource availability and the premise that the installation only impacted the EFT and CRV systems. Isolation, installation, and preoperational testing procedures were prepared by design engineering and approved by operations/system engineering in September of 2005. The modification was installed, pre-operational testing completed, and the systems restored in October 2005.

On October 17, 2005, during a review of an unassociated planned EFT maintenance work order, a shift manager recognized that the isolation used for this activity affected the Emergency Core Cooling Systems (ECCS) [EIS System Code BO] due to impacts on the associated Emergency Service Water (ESW) [EIS System Code BI] pump [EIS Component Code P] starting logic. This work had already been approved for implementation; however, the compensatory measures planned for the EFT maintenance were determined to be inadequate and the work was put on hold prior to implementation.

On October 18, 2005 during the extent of condition review for this issue, it was determined that a similar condition had previously existed. The impact on ECCS during the previous isolation to support modification work was not recognized or evaluated in advance and resulted in a plant configuration control error. The opening of the breaker [EIS Component Code BKR] for support of the modification work resulted in a loss of the auto-start feature of the #13 ESW pump. The ESW pump was required to support the operability of the ECCS room cooler and required for the operability of the division 1 Core Spray (CS) [EIS System Code BM] and Residual Heat Removal (RHR) [EIS System Code BO] pumps. Although the automatic start function was unavailable, the pump could have been manually started from the control room with the isolation in place. Having both the division 1 CS and RHR pumps inoperable at the same time placed the plant in a 24 hour shutdown action statement. A review of the event determined that the breaker was open for 32 hours on October 3 and for 28 hours on October 10, 2005, resulting in exceeding a Technical Specification action statement.

Event Analysis

Since the above event was a condition prohibited by the plant's technical specification, it is reportable under 10 CFR 50.73(a)(2)(i)(B), "Operation or Condition Prohibited by Technical Specifications." There was no corresponding 10 CFR 50.72 notification required for this event.

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

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Safety Significance

The ESW system supports component cooling requirements for two basic functions. First, each train of the ESW system provides cooling to the corresponding train of the CRV system. Second, the ESW system supports various ECCS pumps by providing room cooling for the High Pressure Coolant Injection (HPCI) [EIS System Code BJ], CS and RHR system pumps, as well as motor bearing cooling to both CS pumps and two of the four RHR pumps. The risk analysis model does not consider the ECCS room and motor cooling dependencies on ESW to be necessary for the CS, HPCI, and RHR systems to be successful in performing their safety functions. Since the ECCS pumps are assumed to be capable of performing their safety functions without the need for either motor or room cooling, the risk significance of failure to automatically start the ESW pump is negligible. Failure of the CRV cooling function has no impact on the likelihood of core damage.

The Probabilistic Risk Assessment (PRA) group performed an evaluation for significance. The risk impact incurred by defeating the automatic start circuitry for #13 ESW pump was of low significance (< 1.0 E-06/yr difference in Core Damage Frequency).

In addition to the above PRA analysis, the second division of ESW/ECCS was fully operable in accordance with technical specifications.

Cause

The root causes for the event were:

1. Management and supervision did not provide the necessary direction and oversight of complex activities and work management processes to ensure expectations were clear and that appropriate resources were applied.
2. Roles and responsibilities in the isolation preparation/approval, work order impact, and work order approval processes are unclear.

Corrective Action

The following interim actions were taken by the station after the event:

1. Operations issued a memorandum to communicate management expectations for development of isolations by operations personnel.
2. A senior experienced Senior Reactor Operator has been assigned as the Work Control Manager, specifically to enhance the isolation development and approval process.
3. Only Operations Department personnel are authorized to prepare isolations.
4. The station added a requirement in the tagging program to review the isolation during preparation for the need to conduct a technical review.

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The following corrective actions will be completed and tracked in the station corrective action program:

1. The station will revise the isolation, work impact, and work approval processes to consolidate requirements, clarify expectations, and eliminate redundancy.
2. The station will strengthen the training/qualification of isolation preparers and approvers.
3. The station will improve management oversight and tracking of isolation related issues.
4. The station will revise the roles and responsibilities of individuals involved with isolations, including interactions when technical reviewers are necessary.

Failed Component Identification

N/A

Previous Similar Events

A review found previous events related to isolation errors:

1. Condition Report 02009465 – Adverse trend with respect to identifying proper technical specification limiting conditions of operation entry and exit requirements for work activities. One of the causal factors for CR 02009465 was behavioral in nature. The causal factor in the root cause report states, "Management and staff are demonstrating inappropriate behaviors by reviewing and approving work activities without fully understanding the technical aspects of the situation and not sufficiently challenging the information."
2. LER 2005-03 – Loss of shutdown cooling. The LER identified one of the contributing causes as Operations instructions not requiring impact statements on all work packages. The implication is that reviews of certain work packages were not rigorous enough to correctly identify all of the plant impacts for a given activity. One of the corrective actions for this root cause was to strengthen procedural requirements for the use of impact statements for work orders.
3. LER 2005-05 – Unexpected trip of # 16 Bus. The root cause was determined to be site directives which do not contain detailed responsibilities and actions that must be performed to accomplish the task of preparing and reviewing a Post Maintenance Test. Part of the corrective actions resulted in strengthening administrative processes to deal with these types of complex evolutions.

In the three previous Monticello events, the common outcome was strengthening requirements. For example, in the case of LER 2005-03, a corrective action strengthened the requirements for impact statements for work orders.