



Monticello Nuclear Generating Plant  
2807 West County Road 75  
Monticello, MN 55362-9637

Operated by Nuclear Management  
Company LLC

February 9, 2001

US Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

**MONTICELLO NUCLEAR GENERATING PLANT**  
Docket No. 50-263 License No. DPR-22

**LER 2001- 001**

**Deficient Procedures Fail to Require Independent Verification Following  
Return to Service of Individual Channels During Instrument Surveillance**

The Licensee Event Report for this occurrence is attached. This report contains no new NRC commitments.

Please contact David Musolf at (763) 295-1201 if you require further information.

Byron Day  
Plant Manager  
Monticello Nuclear Generating Plant

c: Regional Administrator - III NRC  
NRR Project Manager, NRC

Sr Resident Inspector, NRC  
Minnesota Department of Commerce

Attachment

IE22

|  |        |                                    |   |   |                    |   |        |                                     |  |                       |
|--|--------|------------------------------------|---|---|--------------------|---|--------|-------------------------------------|--|-----------------------|
| NRC FORM 366<br>(6-1998)   |        | U.S. NUCLEAR REGULATORY COMMISSION |   | <b>APPROVED BY OMB NO. 3150-0104    EXPIRES 06/30/2001</b><br><small>Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to the industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If 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.</small> |                    |   |        |                                     |  |                       |
| <b>LICENSEE EVENT REPORT (LER)</b><br><small>(See reverse for required number of digits/characters for each block)</small>                                       |        |                                    |   |   |                    |   |        |                                     |  |                       |
| FACILITY NAME (1)<br><b>MONTICELLO NUCLEAR GENERATING PLANT</b>  |        |                                    |   | DOCKET NUMBER (2)<br><b>05000263</b>  |                    | PAGE (3)<br><b>1 OF 4</b>                                   |        |                                     |  |                       |
| TITLE (4) <b>Deficient Procedures Fail to Require Independent Verification Following Return to Service of Individual Channels During Instrument Surveillance</b> |        |                                    |   |   |                    |   |        |                                     |  |                       |
| EVENT DATE (5)   |        |                                    | LER NUMBER (6)  |   |                    | REPORT DATE (7)   |        |                                     | OTHER FACILITIES INVOLVED (8)                    |                       |
| MONTH  | DAY    | YEAR                               | YEAR  | SEQUENTI<br>AL<br>NUMBER  | REVISION<br>NUMBER | MONTH   | DAY    | YEAR                                | FACILITY NAME                                    | DOCKET NUMBER         |
| 01   | 10     | 2001                               | 2001  | 001   | 00                 | 02  | 09     | 2001                                |  | 05000                 |
|  |        |                                    |   |   |                    |   |        |                                     | FACILITY NAME                                    | DOCKET NUMBER         |
|  |        |                                    |   |   |                    |   |        |                                     |  | 05000                 |
| OPERATING<br>MODE (9)  |        | N                                  | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11) |   |                    |   |        |                                     |  |                       |
|  |        |                                    | 20.2201(b)  |   |                    | 20.2203(a)(2)(v)  |        | <input checked="" type="checkbox"/> | 50.73(a)(2)(i)                                   |                       |
| POWER<br>LEVEL (10)  |        | 100                                | 20.2203(a)(1)   |   |                    | 20.2203(a)(3)(I)  |        |                                     | 50.73(a)(2)(ii)                                  |                       |
|  |        |                                    | 20.2203(a)(2)(i)  |   |                    | 20.2203(a)(3)(ii)   |        |                                     | 50.73(a)(2)(iii)                                 |                       |
|  |        |                                    | 20.2203(a)(2)(ii)   |   |                    | 20.2203(a)(4)   |        |                                     | 50.73(a)(2)(iv)                                  |                       |
|  |        |                                    | 20.2203(a)(2)(iii)  |   |                    | 50.36(c)(1)   |        |                                     | 50.73(a)(2)(v)                                   |                       |
|  |        |                                    | 20.2203(a)(2)(iv)   |   |                    | 50.36(c)(2)   |        |                                     | 50.73(a)(2)(vii)                                 |                       |
|  |        |                                    |   |   |                    |   |        |                                     | OTHER  |                       |
|  |        |                                    |   |   |                    |   |        |                                     | Specify in Abstract below<br>or in NRC Form 366A |                       |
| LICENSEE CONTACT FOR THIS LER (12)   |        |                                    |   |   |                    |   |        |                                     |  |                       |
| NAME<br><b>David Musolf</b>  |        |                                    |   |   |                    | TELEPHONE NUMBER (Include Area Code)<br><b>763-295-1201</b> |        |                                     |  |                       |
| COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)   |        |                                    |   |   |                    |   |        |                                     |  |                       |
| CAUSE  | SYSTEM | COMPONENT                          | MANUFACTURER  | REPORTABLE<br>TO EPIX   |                    | CAUSE   | SYSTEM | COMPONENT                           | MANUFACTURER                                     | REPORTABLE<br>TO EPIX |
|  |        |                                    |   |   |                    |   |        |                                     |  |                       |
|  |        |                                    |   |   |                    |   |        |                                     |  |                       |
| SUPPLEMENTAL REPORT EXPECTED (14)  |        |                                    |   |   |                    | EXPECTED<br>SUBMISSION<br>DATE (15)                         |        | MONTH                               | DAY  | YEAR                  |
| YES<br>(If yes, complete EXPECTED SUBMISSION DATE.)  |        |                                    |   |   |                    | <input checked="" type="checkbox"/> NO                      |        |                                     |  |                       |

**ABSTRACT** (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On January 10, 2001, while following up on questions from the Monticello Senior NRC Resident Inspector, it was discovered the Technical Specification requirements for minimum number of operable channels per trip system were violated due to deficiencies in instrument test and calibration procedures. Independent verification of the return to service of instrument channels following test and calibration was in some cases not performed until the last step in the procedure. Following calibration, each instrument channel should be independently verified to have been properly restored to operability prior to removing the next channel from service. Instrument test and calibration procedures that are potentially affected have been placed on hold. They will be revised prior to their next use to require independent verification of operability following return to service of each individual channel.

(6-1998)

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

| FACILITY NAME(1)                       | DOCKET   | LER NUMBER (6) |                      |                    | PAGE (3) |
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| MONTICELLO NUCLEAR<br>GENERATING PLANT | 05000263 | YEAR           | SEQUENTIAL<br>NUMBER | REVISION<br>NUMBER | 2 of 4   |
|  |          | 01             | -- 001 --            | 00                 |          |

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

## Description

On January 10, 2001, while following up on questions from the Monticello Senior NRC Resident Inspector, it was discovered that several instrument and control procedures did not specify the proper way to perform independent verification following the return to service of instrument channels being tested.

Reactor and plant protection system<sup>1</sup> instrument channels<sup>2</sup> are tested and calibrated individually. Following confirmation of trip settings and proper operation of associated relays and annunciators, each channel is returned to service. An independent verification that the instrument channel was properly returned to operable status should be made prior to removing the next channel from service.

It was determined that several instrument and control procedures are deficient in the way in which the independent verification is performed. In several cases independent verification was not specified until the last step in the procedure following testing of all channels. If errors are made in returning a channel to service, one or more trip systems would be disabled until independent verification was performed at the last step in the procedure. This condition would represent a degraded condition and a violation of the requirements of the Monticello Technical Specifications. Specifically, a violation of the requirements of Table 3.1.1 and/or Tables 3.2.1 through 3.2.9 could occur.

## Event Analysis

### Analysis of Reportability

This Licensee Event Report is being submitted pursuant to the pre-January 23, 2001, version of 10 CFR 50.73(a)(2)(i). The deficient procedures did not require independent verification of each instrument channel prior to removing the next channel from service. Therefore more than the allowed number of instrument channels or trip systems were inoperable and the condition violated the Monticello Technical Specifications.

<sup>1</sup>EIIS System Code: JE

<sup>2</sup>Component Function Identifier: CHA

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

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

## **Safety Significance**

It is believed that no instance of an error being made in returning a Technical Specification required instrument channel to service has ever occurred. For this reason the safety significance of these procedural deficiencies was small and the health and safety of the public was not affected.

The discovered procedural deficiencies represent, however, a significant failure to comply with plant directives which state, "all safety related components shall be independently verified when alignment changes have been made in a plant condition where operability of the system is required."

## **Cause**

The apparent cause of this event is an initial lack of understanding of the role of independent verification in demonstrating operability. Monticello is committed to perform independent verification of activities in accordance with Item I.C.6 of NUREG-0737, "NUREG-0737, "Clarification of TMI Action Plan Requirements," October 31, 1980. When Monticello initiated the requirements for independent verification, actions were taken to upgrade all plant procedures, including instrument and control test and calibration procedures, to implement independent verification practices where required. A determination was made at the time that completion of the independent verification steps was not required prior to considering a component operable. This determination has now been found to be incorrect.

On June 26, 1984, the NRC issued IE Information Notice 84-51, "Independent Verification." At this time all plant work groups were instructed to review their procedures and processes to ensure that independent verification activities were implemented where necessary. Also, at this time, plant administrative directives were revised to emphasize the importance of independent verification to ensure equipment operability. Due to the ambiguity of guidance contained in the plant administrative directives, instrument test and calibration procedures were considered at the time to be acceptable. The emphasis on concise and efficient work practices is believed to have influenced the interpretation taken of the directives.

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

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|  |          | 01             | -- 001 --            | 00                 |          |

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

The root causes of this event are being pursued under the Monticello corrective action program.

## Corrective Action

Following discovery of this deficiency, a hold was placed on affected Monticello Instrument and Control Group Technical Specification procedures. Procedures found to deficient will be revised prior to their next use.

Plant administrative directives will be clarified to emphasize the requirements of independent verification completion prior to considering the affected component operable.

Training will be provided to appropriate members of the plant staff following clarification of the administrative directives to assure full and complete understanding of the purpose and correct implementation of independent verification.

Other plant work groups have been informed of this deficiency in the independent verification process in instrument and control procedures and of plant management's expectation that independent verification will be properly conducted on return to service of safety related components.

## Failed Component Identification

Not applicable.

## Similar Events

LER 2001-002