May 23, 2014

U.S. Nuclear Regulatory Commission
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Washington, DC 20555-0001

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

LER 2014-006 "Secondary Containment Doors Opened Simultaneously"

A Licensee Event Report (LER) for this occurrence is enclosed.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

Karen D. Fili
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company-Minnesota

Enclosure

cc: Regional Administrator, Region III, USNRC
    Project Manager, Monticello Nuclear Generating Plant, USNRC
    Resident Inspector, Monticello Nuclear Generating Plant, USNRC
On March 28, 2014, two secondary containment doors in the main access airlock were opened at the same time. With both doors open, Technical Specification Surveillance Requirement 3.6.4.1.3 was not met and secondary containment was declared inoperable. Interviews with individuals involved indicate the doors were open for approximately two seconds.

The cause was determined to be plant employees do not have secondary containment airlock training, and the airlock interlock did not have posted operating instructions.

Corrective actions include affixing permanent labels next to the interlock push button which provide instructions on how to appropriately open the doors. As an additional measure, plans are in place to replace the doors with doors that have windows. The need for training on proper airlock operation will also be evaluated for inclusion in general access training.
NARRATIVE

EVENT DESCRIPTION

On March 28, 2014, the Monticello Nuclear Generating Plant (MNGP) was in Mode 1 at approximately 88.5% power. At approximately 1358 hours, plant personnel were passing through the main access secondary containment airlock [AL]. Personnel on opposite sides of the airlock entered the airlock simultaneously; both DOOR-62 [DR] and DOOR-63 [DR] opened. Personnel promptly closed the doors, restoring the secondary containment boundary, and notified the control room. Interviews with individuals involved indicate the doors were open for approximately two seconds.

To prevent a breach of secondary containment, each pair of doors is electrically interlocked so only one door may be open at a time. Permissive pushbuttons must be used to open airlock doors. The airlock also has a battery powered alarm system which will sound an alarm if both doors are open at the same time.

The two individuals inappropriately applied an opening force to the two secondary containment airlock doors prior to and while depressing the doors' interlock push buttons, defeating the interlock. The airlock interlock should be operated by first depressing the interlock push button, then applying opening force to the door. The interlock function was verified to be working properly via the Secondary Containment Door Interlock Check procedure following the event; there was no design deficiency or equipment issue.

Technical Specification (TS) Surveillance (SR) 3.6.4.1.3 was declared not met at 1358 due to both airlock doors being open, and the TS Action 3.6.4.1.A was entered. The TS Action was exited at approximately 1359 hours upon verification that at least one door was closed.

There were no other structures, systems, or components inoperable at the start of the event that contributed to the event.

EVENT ANALYSIS

The event is reportable to the NRC under 10 CFR 50.73(a)(2)(v)(C) and (D) as an event or condition that could have prevented the fulfillment of a safety function. The plant reported the event to the NRC in Event Notification 49970 on March 28, 2014.

An engineering analysis determined that a safety system functional failure did not occur as defined in Nuclear Energy Institute (NEI) 99-02 Revision 7. The post-accident dose calculation does not credit secondary containment integrity for mitigation of off-site and control room doses for the first five minutes of the event. Therefore, this event is bounded by the existing post-accident dose calculation.

SAFETY SIGNIFICANCE

Secondary containment was inoperable as a result of SR 3.6.4.1.3 not met with both doors simultaneously open. However, secondary containment’s safety function of minimizing off-site dose was maintained because the positive pressure period utilized in the dose calculations was not exceeded or compromised by the short-duration, simultaneous opening of the main access airlock doors.
NARRATIVE

CAUSE

The cause was determined to be plant employees do not have secondary containment airlock training, and the airlock interlock did not have posted operating instructions.

CORRECTIVE ACTION

Corrective actions include affixing permanent labels next to the interlock push button which provide instructions on how to appropriately open the doors. As an additional measure, plans are in place to replace the doors with doors that have windows. The need for training on proper airlock operation will also be evaluated for inclusion in general access training.

PREVIOUS SIMILAR EVENTS

A Licensee Event Report (LER 2010-04) was submitted for the MNGP on December 22, 2010, for a similar occurrence with the same main access airlock doors. The cause of the occurrence was determined to be an intermittent failure of the magnetic bond sensor due to a lack of periodic maintenance. Corrective actions included replacement of the magnets on a periodic basis.

Other previous similar events with secondary containment doors open simultaneously have been reported to the NRC for the MNGP but involved airlocks of different designs (LER 2013-08-01, LER 2010-03-01, and LER 2010-02-02).