September 30, 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 2014-009-00 “Both Emergency Filtration Trains Inoperable”

Enclosed is the Monticello Licensee Event Report (LER) 2014-009-00 concerning the inoperability of both trains of the Emergency Filtration system. This condition is reportable to the NRC in accordance with 10 CFR 50.73(a)(2)(v)(D), *Event or Condition that Could Have Prevented Fulfillment of a Safety Function*.

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
Both Emergency Filtration Trains Inoperable

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9. OPERATING MODE

- 20.2201(b)
- 20.2201(d)
- 20.2203(a)(1)
- 20.2203(a)(2)(ii)

10. POWER LEVEL

- 20.2203(a)(2)(ii)
- 20.2203(a)(2)(ii)(i)(A)
- 20.2203(a)(2)(ii)(ii)(A)

On August 5, 2014, the 'A' emergency filtration train (EFT) was out of service for charcoal filter replacement work; during that time 'B' EFT was placed in service to supply fresh filtered air to the Control Room. After the 'B' EFT had run for 12 minutes, a low flow alarm occurred and the 'B' EFT fan tripped. This resulted in both trains of emergency filtration being inoperable. Technical Specification Limiting Condition for Operation (LCO) 3.7.4 was not met and as a result, LCO 3.0.3 was entered at 16:01 hours which required the plant to be in Mode 4 within 37 hours.

The 'B' EFT fan tripped because the damper actuator failed due to poor quality of vendor refurbishment. The 'B' EFT trip caused the plant to enter LCO 3.0.3 due to the legacy operating procedure that permitted Operators to start the 'B' EFT while 'A' EFT was inoperable for maintenance.

The failed actuator was subsequently replaced and post maintenance testing was satisfactorily completed. The EFT procedures will also be revised to restrict operation of the standby train while in protected status.

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Licensee: Monticello Nuclear Generating Plant
Licensee Event: Both Emergency Filtration Trains Inoperable
Licensee Contact: Carrie Fosaaen, Licensing Engineer
Phone: 763-295-1357

Licensee Event Report (LER) Form 366

On August 5, 2014, the 'A' emergency filtration train (EFT) was out of service for charcoal filter replacement work; during that time 'B' EFT was placed in service to supply fresh filtered air to the Control Room. After the 'B' EFT had run for 12 minutes, a low flow alarm occurred and the 'B' EFT fan tripped. This resulted in both trains of emergency filtration being inoperable. Technical Specification Limiting Condition for Operation (LCO) 3.7.4 was not met and as a result, LCO 3.0.3 was entered at 16:01 hours which required the plant to be in Mode 4 within 37 hours.

The 'B' EFT fan tripped because the damper actuator failed due to poor quality of vendor refurbishment. The 'B' EFT trip caused the plant to enter LCO 3.0.3 due to the legacy operating procedure that permitted Operators to start the 'B' EFT while 'A' EFT was inoperable for maintenance.

The failed actuator was subsequently replaced and post maintenance testing was satisfactorily completed. The EFT procedures will also be revised to restrict operation of the standby train while in protected status.
At the time of event, the plant was operating in Mode 1 at approximately 88% rated thermal power.

On August 5, 2014, the 'A' train of emergency filtration (EFT) was out of service for charcoal filter [FLT] replacement work. The 'B' EFT was placed in service at 14:34 hours to supply fresh filtered air to the Control Room.

At 14:46 hours the Control Room received a low flow alarm for 'B' EFT which initiated an automatic 'B' EFT fan [FAN] trip and damper [DMP] to close which isolated the filter train. This isolation resulted in both trains of EFT being inoperable. As a result, Technical Specification 3.7.4 was not met and Limiting Condition for Operation (LCO) 3.0.3 was entered at 16:01 hours.

LCO 3.0.3 was exited following successful completion of post maintenance testing on the 'A' train of EFT at 17:07 hours. There was no addition of negative reactivity to the reactor during the time the plant was in LCO 3.0.3.

**EVENT ANALYSIS**

This condition is being submitted in accordance with 10 CFR 50.73(a)(2)(v)(D) "Event or Condition that Could Have Prevented Fulfillment of a Safety Function." With both emergency filter trains inoperable, Control Room habitability would not have been assured should a radiological release have occurred. The emergency filtration safety trains mitigate the consequences of an accident by assuring Control Room habitability.

As a result of both trains of EFT being inoperable concurrently, this event is considered a safety system functional failure.

**SAFETY SIGNIFICANCE**

The EFT system has two functions. The first function is to allow manual isolation of outside air from the Control Room and first and second floors of the EFT Building which places the system in full recirculation. The second function is to automatically isolate outside air and provide filtered/pressurizing air to the Control Room and first and second floors of the EFT Building. With both filter trains inoperable, Control Room habitability may not have been maintained during an unfiltered radioactive release. During this events’ time frame, Control Room breathing air supply system was available to provide three hours of air for up to eight personnel, but was not required to be used.
The 'B' EFT fan tripped because the damper actuator failed due to poor quality of vendor refurbishment. The damper actuator was in service (operating train) for approximately 250 hours prior to failure. Normal life expectancy for rebuilt actuators is greater than five years.

The 'B' EFT trip caused the plant to enter LCO 3.0.3 due to the legacy operating procedure that permitted Operators to start the 'B' EFT while 'A' EFT was inoperable for maintenance.

CORRECTIVE ACTION

The failed actuator was subsequently replaced and post maintenance testing was satisfactorily completed. The damper actuator has been returned to the vendor for failure analysis. Additional corrective actions may be required based on the results of those analyses.

The EFT procedures will also be revised to restrict operation of the standby train while in protected status.

PREVIOUS SIMILAR EVENTS

There were no previously similar Licensee Event Reports in the past three years.