

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-263/83-16(DPRP)

Docket No. 50-263

License No. DPR-22

Licensee: Northern States Power Company  
414 Nicollet Mall  
Minneapolis, MN 55401

Facility Name: Monticello Nuclear Generating Station

Inspection At: Monticello Site, Monticello, MN

Inspection Conducted: August 2 through September 1, 1983

Inspector: *J. H. Brown*  
C. H. Brown

9-21-83  
Date

Approved By: *R. D. Walker*  
R. D. Walker, Chief  
Reactor Projects Section 2C

9-21-83  
Date

Inspection Summary

Inspection on August 2 through September 1, 1983 (Report No. 50-263/83-16(DPRP))

Areas Inspected: A routine, unannounced inspection by the resident inspector of operational safety verification; onsite review committee; degraded voltage relay; TIP system squib valve firing; and Part 21 report. The inspection involved a total of 71 inspector-hours onsite by one NRC inspector including eight inspector-hours onsite during off-shifts.

Results: No items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

\*W. A. Shamla, Plant Manager  
M. H. Clarity, Assistant to the Plant Manager  
D. E. Nevinski, Plant Superintendent, Engineering and Radiation Protection  
H. M. Kendall, Plant Office Manager  
D. D. Antony, Superintendent, Operations  
W. E. Anderson, Plant Superintendent, Operations and Maintenance  
R. L. Scheinost, Superintendent, Quality Engineering  
J. R. Pasch, Superintendent, Security and Services  
F. L. Fey, Superintendent, Radiation Protection  
W. J. Hill, Superintendent, Technical Engineering  
W. W. Albold, Superintendent, Maintenance  
B. D. Day, Superintendent, Operating Engineering

The inspector also contacted other licensee employees including members of the technical and engineering staffs and reactor and auxiliary operators.

\*Denotes those licensee representatives attending the management exit interviews.

### 2. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the month of August. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the Monticello reactor building and turbine building were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the month of August, the inspector walked down the accessible portions of the Standby Liquid Control System to verify operability. The inspector also witnessed portions of the radioactive waste system controls associated with radwaste shipments and barreling.

These reviews and observations were conducted to verify that facility operations were in conformance with the requirements established under technical specifications, 10 CFR, and administrative procedures.

No items of noncompliance or deviations were identified.

3. Onsite Review Committee

The inspector attended two of the onsite review committee meetings held during the month of August to verify conformance with technical specifications and other requirements. This review included: approval of procedure changes for plant operations and administrative controls, proposed design changes and test results requiring approval of the committee.

No items of noncompliance or deviations were identified.

4. Degraded Voltage Relay

On August 1, 1983, the plant experienced a loss of the No. 16 bus (a vital bus) due to the tripping of the crossconnect breaker from No. 14 bus while energizing an RHR Service Water Pump. Investigation revealed no problem with the pump or motor that was being started at the time. Further review of the breaker control circuits indicated that the trip had been produced by the degraded voltage sensing circuit. The set point of the degraded voltage relay was 3885 volts, within the Technical Specifications requirements. The time delay was 10 seconds as specified. The bus voltage was not high enough to reset the relay and prevent the breaker from being tripped after the relay timed out. The relay completed its timing out, tripped the breaker and started the diesels with the No. 12 diesel closing in and carrying the No. 16 bus. There were no emergency signals so that none of the ECCS equipment started and the diesel generator remained lightly loaded. The information was placed on NOTEPAD by the licensee. The vital No. 16 bus being momentarily deenergized resulted in the uninterruptible motor generator (UMG) switching to DC drive; the scoop tubes (speed control of recirculation motor generators) to lock in place, a transfer of the Y-30 instrument bus to the backup (the UMG), and "train 2" of the Reactor Protection System to momentarily lose voltage causing a half scram. The UMG speed control failed causing several instrument problems and one of the feed regulator valves (FRV) to close and lock up. The other FRV went to the full open position and operators opened the low power bypass to maintain vessel level. The reactor remained at 100% power with vessel level slowly decreasing to 21 inches. The vessel level was returned to normal by operator action. The degraded voltage event remains an unresolved item and will be addressed in a future report. (263/83-16-01)

5. Traversing Incore Probe System Squib Valve Firing

On August 5, 1983, the squib valve for the No. 1 Traversing Incore Probe (TIP) machine was inadvertently fired during routine surveillance on the ball valves. The operator was utilizing a test procedure to perform a surveillance test on the ball valves and apparently did not think through what he was doing; he obtained the key and fired the squib valve. The licensee discussed the event with the operator and used it as a training item for the other operators on the importance of thinking through the

task being performed. As this was the operator's first error in performing a task the licensee formally cautioned the operator on the importance of accomplishing tasks as described in procedures.

No items of noncompliance or deviations were identified.

6. 10 CFR Part 21 Report

A 10 CFR Part 21 report was made by Unistrut on their Part No. P2073A, a base plate for their support system. The vendor had shipped approximately 75 pieces that did not conform to their specifications. The licensee has verified receipt of 48 of the nonconforming pieces. An analysis was performed by a consultant for the licensee which shows that if a base plate contained only a single support made from the unacceptable material, the system would not fail as sufficient over-design exists. It also shows that if two of the nonconforming supports were together, a failure of the system at that point could result. The licensee has identified 11 base plates installed, but all of them are single installations. This is an Unresolved Item (263/83-16-02).

7. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. An open item disclosed during the inspection is discussed in Paragraph 6.

8. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. An unresolved item disclosed during the inspection is discussed in Paragraph 4.

9. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on September 1, 1983, and summarized the scope and findings of the inspection activities. The licensee acknowledged the continuing evaluation of the degraded voltage.