U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-263/87015(DRP)

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: October 8 through December 7, 1987

Inspectors: P. L. Hartmann

C. L. Vanderniet

Approved By: I. N. Jackiw, Chief
Reactor Projects Section 2C

12-29-87
Date

Inspection Summary

Inspection on October 8 through December 7, 1987 (Report No. 50-263/87015(DRP))
Areas Inspected: A routine, unannounced inspection by the resident inspectors of previous inspection findings; operational safety verification; maintenance; surveillance; material conditions of instrument isolation valves; work request authorization review; and refueling activities.
Results: Of the seven areas inspected, three violations were identified.

DETAILS

1. Persons Contacted

*W. A. Shamla, Plant Manager
M. H. Clarity, Assistant to the Plant Manager
*D. E. Nevinski, General Superintendent, Engineering & Radiation Prot.
H. M. Kendall, Plant Office Manager
*D. D. Antony, General Superintendent, Operations
R. L. Scheinost, Superintendent, Quality Engineering
*J. R. Pasch, Superintendent, Security and Services
*J. H. Swailes, Superintendent, Radiation Protection
*W. J. Hill, Superintendent, Technical Engineering
W. W. Albold, General Superintendent, Maintenance
B. D. Day, Superintendent, Operating Engineering
L. L. Nolan, Superintendent, Nuclear Technical Services
*D. A. Scott, Lead Quality Engineer, Quality Engineering
*S. A. Engelke, Lead Production Engineer, Operating Engineering

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

*Denotes the licensee representatives attending the management exit interviews.

2. Licensee Action on Previous Inspection Findings

a. (Closed) Open Item (263/82-16-02): Modifications to the Operational Quality Assurance Program. This open item tracked the changes to the operational quality assurance program as constituted in Revision 4 to that program. These changes appeared to modify the licensee's commitments to Regulatory Guide 1.88 and ANSI N45.2.9-1974, Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants.

   The inspector reviewed the current status of the operational quality assurance program, Revision 10, as outlined in Chapter 13.A of the licensee's Updated Safety Analysis Report. The current program, Section 1.0, Policy Statement, Subsection 1.3, states the following:

   > "The Operational Quality Assurance Program shall incorporate: (1) the requirements of ANSI N18.7-1976 as modified by Table 1-1 and (2) the requirements of the following standards to the extent specified by ANSI N18.7-1976, as modified by the regulatory position of the Regulatory or Safety Guides referenced below.
   >
   > 9. ANSI N45.2.9-1974, Requirements for Collection, Storage, and Maintenance of Quality Assurance Records for Nuclear Power Plants (Regulatory Guide 1.88, Revision 2)."

Section 19.0, Quality Assurance Records, Subsection 19.12, Records Management states the following:

> "Records management systems shall be established which assure that the required records are collected, stored, and maintained in accordance with ANSI N45.2.9-1974."

These statements in the USAR appear to indicate that the licensee is currently committed to the requirements of ANSI N45.2.9-1974 and Reg. Guide 1.88, Revision 2. The above stated open item is considered to be closed.

b. (Closed) Open Item (263/84007-06): Inadequate Control of QA Program Deviations & Procedure Changes. This open item stated that two of the quality programs implementing documents (Corporate Nuclear Administrative Directives NIACD 1.2 and 2.2) did not provide adequate controls.

NIACD 1.2 was identified as being deficient due to poor control over deviations from the quality program. This procedure has been revised clarifying the use of deviations from the approved quality program. These revisions appear to correct all the deficiencies identified in this open item for this procedure.

NIACD 2.2 was identified as being deficient in the method of approving temporary procedure changes in that only two knowledgeable individuals were required to approve a temporary change. This procedure has been revised incorporating the recommendation of the inspector to ensure one of the approving individuals be the responsible supervisor.

The revisions to procedures NIACD 1.2 and 2.2 appear to adequately correct the identified discrepancies of this open item and it is, therefore, considered closed.

c. (Closed) Open Item (263/82-16-01): A Review is to be Conducted of the Attention to Detail the Licensee Devotes to WRA and Tag Out Writing. This open item stated that errors resulting in two automatic initiations of facility diesel generators were due to improper review of Work Request Authorization (WRA).

The licensee has revised Administrative Control Documents 4ACD-15.5, WRA Preparation and Content, and 4ACD-15.4, WRA Processing to include reviews by the WRA Coordinator, System Engineer, Quality, Responsible Supervisor, Job Supervisor, Radiation Protection Coordinator, and Shift Supervisor.

This amount of review appears to be sufficient to address the concerns of this open item regarding the adequate review of WRAs and associated tag outs. This item is, therefore, considered to be closed.

d. (Closed) Open Item (263/87012-01(DRP)): Instrument Line Isolation Valves. This item was upgraded to Unresolved Item (263/87015-05). See Paragraph 6 of this report.

3. Operational Safety Verification

a. Routine Inspection

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the inspection period. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of the drywell, torus interior, 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. A system walkdown was performed on the High Pressure Coolant Injection (HPCI) system. The inspector, by observation and direct interview verified that portions of the physical security plan were being implemented in accordance with the station security plan.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. 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.

b. Fire Doors

On November 12, 1987, the plant manager discovered Fire Door No. 18 (entry to the condenser room) to be inoperable. The inoperability resulted when the latch was taped so that the door could not latch closed as required. The latch mechanism was defeated by radiation protection personnel in order to provide free access to the condenser room during shutdown. This access could have been alternately provided by unlocking the door.

On December 1, 1987, the inspector discovered Fire Door No. 42 inoperable. This inoperability also resulted from taping the latch mechanism rendering the fire door inoperable. Details of this event will be followed by the Licensee Event Report.

Technical Specification 3.13.G states in part:

"1) All penetration fire barriers in fire area boundaries protecting safe shutdown equipment shall be operable.

2) If Specification 3.13.G.1 cannot be met, a continuous fire watch shall be established on at least one side of the affected penetration(s) within one hour."

Contrary to the above, on November 12, 1987, Fire Door No. 18 was inoperable for greater than one hour without a continuous fire watch. Also on December 1, 1987, Fire Door No. 42 was inoperable for greater than one hour without a continuous fire watch. These two events are a violation of NRC requirements. (263/87015-01(DRP))

c. High Radiation Door

On October 26, 1987, the inspector discovered the high radiation door to the reactor water cleanup pump room blocked open and unattended. The survey map near the entrance showed radiation levels up to seven rem per hour on contact within the room. The inspector notified the radiation protection coordinator who dispatched a health physics (HP) technician to the area. The HP technician confirmed that no personnel were within the room, then closed and locked the door. An investigation identified the personnel responsible for leaving the door unlocked. The door had been open and unattended about 30 minutes.

Technical Specification 6.5.B.1, Plant Operating Procedures (Radiological) states in part:

"1) A Radiation Protection Procedures, consistent with the requirements of 10 CFR 20, shall be developed and followed. . .

2) Paragraph 20.203 "Caution signs, labels, signals and controls." In lieu of the "Control device" or alarm signal required by Paragraph 20.203(c) (2), each high radiation area in which the intensity of radiation is 1000 rem/hr or less shall be barricaded and conspicuously posted as a high radiation area and entrance thereto shall be controlled by requiring issuance of a Radiation Work Permit and any individual or group of individuals permitted to enter such areas shall be provided with a radiation monitoring device which continuously indicates the radiation dose rate in the area.

3) The above procedure shall also apply to each high radiation area in which the intensity of radiation is greater than 1000 mrem/hr [1 rem/hr], except that doors shall be locked or attended to prevent unauthorized entry into these areas and the keys or key devices for locked doors shall be maintained under the administrative control of the Plant Manager."

Contrary to the above, on October 26, 1987, the high radiation door to the recirc pump room was blocked open and unattended. This area contained dose rates in excess of 1 rem per hour. This is a violation of NRC requirements. (263/85017-02(DRP))

d. Personnel Errors

During the inspection period several reportable events occurred which were caused by personnel error. The inspectors will review the LERs associated with the event and review the identified root cause of the events. The events are:

- October 29, 1987 - Inadvertent Actuation of Standby Gas Treatment (SBGT)

- November 11, 1987 - Two Inadvertent Initiations of SBGT

- November 24, 1987 - Inadvertent Actuation of SBGT

In addition, a Significant Operating Event (SOE) occurred November 19, 1987, when a Group II isolation signal was generated, will be reviewed. The review of these events is an Unresolved Item (263/87015-03(DRP)).

e. Log Keeping

During the inspection period the inspector observed several instances of inadequate log keeping which were previously identified in an inspection report as a violation (263/86006-02(DRP)). The corrective action identified for the violation included a procedure change to clarify requirements concerning log entries during periods when the plant is shut down and numerous activities are taking place. When the plant was shut down for refueling, the inspector identified the following lack of log entries:

(1) On November 5, 1987, the No. 11 Emergency Diesel Generator (EDG) was tagged out of service rendering it inoperable. This was not logged.

(2) On November 27, 1987, the No. 12 EDG was tagged out of service rendering it inoperable. There was no entry on November 28 returning the No. 12 EDG to service.

(3) On November 30, 1987, the No. 11 EDG was placed in pull-to-lock (PTL) rendering it inoperable. There was no entry on November 30 returning the No. 11 EDG to service.

In the above examples a late entry was made to correct the log, and the shift turnover checklist correctly documented the status of the EDG.

Monticello's Administrative Control Document (ACD) No. 4 ACD 4.7, Revision 11, specifies that the reactor and control room log have log entries made for all significant operating actions or occurrences that may affect operations of the reactor and major plant equipment.

The Violation 263/86006-02, Inadequate Log Keeping, involved surveillance testing fuse replacement and loss of plant equipment. The corrective action included several discussions and several memorandums written to shift supervisors and licensed operators. The Revision 11 to 4 ACD 4.7 attempted to clarify what surveillances, testing and procedures needed to be logged during a scheduled outage. This corrective action has not resulted in adequate log keeping.

10 CFR 50, Appendix B, Criterion XVII, requires that operating logs shall be maintained to furnish evidence of activities affecting quality. This requirement is implemented by Administrative Control Document No. 4 ACD 4.7 which requires the maintenance of a Shift Supervisor's Log and Control Room Log. 4 ACD 4.7 specifies that all significant operating actions or occurrences such as all operations of the reactor and major plant equipment shall be recorded in such logs. 10 CFR 50, Appendix B, Criterion V, requires that activities affecting quality be prescribed by documented instructions and be accomplished in accordance with those instructions.

The deficiencies noted in the maintenance of the log is a violation of the licensee ACD No. 4 ACD 4.7 and of 10 CFR 50, Appendix B, Criteria V and XVII. (263/87015-04(DRP))

4. Monthly Maintenance Observation

Station maintenance activities of safety-related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and fire prevention controls were implemented. Work requests were reviewed to determine status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

Portions of the following maintenance activities were observed/reviewed:

- Scram Pilot Valve Rebuilding
- No. 11 Diesel Generator Preventive Maintenance
- Motor Operated Valve No. 2078 Replacement

5. <u>Monthly Surveillance Observation</u>

The inspector observed surveillance testing and verified that testing was performed in accordance with adequate procedures, that limiting conditions for operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector observed/reviewed the following test activities:

- Control Rod Scram Time Testing
- Reactor Coolant Pressure Boundary Test, Parts I and II
- No. 11 Diesel Generator Operability Test

6. <u>Material Conditions of Instrument Isolation Valves</u>

In the previous inspection report (263/87012), the inspectors noted that the high point vent valve on instrument line to PT-14-38B in the core spray system had both packing gland nuts and one packing gland stud missing. This material condition and other discrepancies related to the control of instrumentation valves resulted in Open Item 263/87012-01 and a verbal commitment from the licensee to correct the problem.

During a walkdown of the High Pressure Core Injection (HPCI) system in this reporting period, the inspectors found the upstream root isolation valve on Flow Element FE-80 missing a packing gland nut and stud. This upstream root isolation valve was also immediately repaired by the licensee, however, during another plant tour by the inspectors a third instrument isolation valve was found to be missing a packing gland nut. The third valve was an isolation valve on the Reactor Core Isolation Cooling (RCIC) system Flow Transmitter FT-13-58. All three valves were lock wired in accordance with licensee procedure used to verify proper configuration of instrument isolation valves.

These additional examples of poor material condition of instrument isolation valves under the licensee's current control program have increased the concern of the inspectors. It appears that positive program changes need to be made to ensure the deficiencies cited in this report and in the previous report are properly corrected and prevented from reoccurring. Because the licensee has committed to improve the current program and in light of the new findings in this area the inspectors are closing Open Item 263/87012-01 and will track the correction of this program as a new Unresolved Item (263/87015-05(DRP)).

7. <u>Work Request Authorization (WRA) Review</u>

The inspectors reviewed approximately 100 WRAs to determine if they were receiving an adequate review. During the course of the review the inspectors noted that the WRAs had received the required reviews; however, many discrepancies were identified which indicated that a lack of attention to detail was evident during the preparation of the WRAs. The following items are examples of this lack of detail:

a. 4ACD-15.5, Step 6.2.4.a, requires that a priority be assigned to each WRA. Eighteen WRAs did not have priorities identified.

b. 4ACD-15.5, Step 6.2.5, requires that the appropriate organization responsible for the WRA be identified by circling the appropriate code on the WRA. Four WRAs had no organization identified and 39 had the code for "other" circled with no specific organization identified on the space provided.

c. 4ACD-15.5, Step 6.4.3.a, requires that the Radiation Work Permit (RWP) block shall be checked "yes" if a RWP is involved. Two WRAs did not have this block checked and 33 WRAs that had the block checked "yes" did not have the RWP number entered in the space provided. Listing the RWP number on the WRA is required by 4ACD-3.22, Work Supervision.

d. 4ACD-15.5, Step 6.4.4.a, requires that the Safety Related block, when checked "yes", shall require independent verification. Three WRAs with this block checked "yes" did not have this verification.

e. 4ACD-15.5, Step 6.4.6.a, requires that the appropriate Technical Specification shall be identified if this block is checked "yes". Several WRAs listed a Technical Specification that appeared to be less restrictive than other Technical Specifications relating to the component or system. One WRA on the RCIC Steam Isolation listed no Technical Specification which appeared to be contrary to other WRAs on the RCIC system and the directions given in 4ACD-15.5.

From the review it appeared that the section of the WRAs concerning Testing, References/Equip./Precautions, Prerequisites, Instructions, and Attachments were not completed in a consistent manner. Discussions with licensee management and personnel indicated that this was a true observation and that a consistent policy needed to be established.

The above discrepancies, when viewed by themselves all appear to be of minor significance; however, the total number of discrepancies shows a breakdown in the process of WRA preparation and needs corrective action to prevent more significant problems from occurring. This corrective action will be tracked as an Unresolved Item pending further review and licensee action (Unresolved Item 263/87015-06(DRP)).

8. <u>Refueling Activities</u>

The inspector observed several shifts of fuel movement during the refueling outage from the control room and the refueling floor. Core monitoring was in accordance with technical specifications; reactor mode switch was in the required position; fuel accountability was conducted by approved procedure; required containment integrity was maintained during fuel movement; adequate provisions were maintained to protect against the falling of foreign objects into the open reactor vessel; and refueling interlocks were tested as required.

9. Exit Interview

The inspectors met with the licensee representatives denoted in Section 1 at the conclusion of the inspection on December 7, 1987. The inspectors discussed the purpose of the inspection and the findings.

The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any documents/processes as proprietary.