U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-263/87002(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, Minnesota

Inspection Conducted: November 4, 1986 through February 4, 1987

Inspector: for P. L. Hartmann 2-17-87
Date

Approved By: I. N. Jackiw, Chief
Reactor Projects 2C 2-17-87
Date

Inspection Summary

Inspection on November 4, 1986 through February 4, 1987 (Report No. 50-263/87002(DRP))
Areas Inspected: A routine, unannounced inspection by the resident inspector of licensee action on previous inspection findings; operational safety verification; maintenance; surveillance; security; radiation protection; spent fuel shipment; bulletin; regional requests; TMI item; and Licensee Event reports.
Results: Of the 11 areas inspected, no violations or safety concerns 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 Protection
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
L. H. Waldinger, 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

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

(Closed) Open Item 263/85005-01(DRP): Documentation, Verification, Procedures for Waste Classification Computer Programs. Region III informed the licensee that its corrective action was adequate by letter dated April 23, 1986, from W. Shafer, Chief, Emergency Preparedness and Radiological Protection Branch to Northern States Power.

3. Operational Safety Verification

a. Routine Inspection

The unit operated at full power the majority of the inspection period. A short maintenance outage was performed January 8-12, 1987. A reactor scram occurred on January 19, 1987, from 100 percent power.

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 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, plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls.

The inspector performed a complete walkdown of the accessible portions of the core spray system. Observations included confirmation of selected portions of the licensee's procedures, checklists, plant drawings, verification of correct valve and power supply breaker positions to ensure that plant equipment and instrumentation are properly aligned, and review of control room and local system indication to ensure proper operation within prescribed limits.

b. A reactor scram occurred on January 19, 1987, while operating at 100 percent power. The cause of the scram was turbine control valve fast closure, which occurred from high reactor water level. The reactor high level resulted from a transient initiated by loss of the No. 11 reactor feed pump (RFP), which occurred after a painter bumped a lube oil pressure switch. After loss of the No. 11 RFP, power was lowered by reducing recirc flow and the No. 11 RFP was attempted to be restarted several times. About the time the No. 11 RFD was restarted, reactor level reached the high level set point. The licensee in response to this event clarified its operating procedure to require stabilizing the plant before attempts are made to restart a tripped RFP. The licensee is also reviewing criteria to control restart of equipment which has tripped. The inspector will follow the licensee corrective action.

4. Maintenance

Station maintenance activities on 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.

Portions of the following maintenance activities were observed/reviewed during the inspection period:

- Repair of Scram Pilot Valve Solenoid No. 117
- Scram Accumulator Nitrogen Charging
- Squib Valve Primer Replacement
- Painting Equipment and Walls Turbine Building on Elevator No. 911

5. Surveillance

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:

- Reactor Building Ventilation Noble Gas Grab Sample
- HPCI High Steam Flow and Group 4 Sensor Tests
- APRM Heat Balance Calibration

6. Security

Access control of vehicles was reviewed. The inspector interviewed two guards and observed three vehicle searches. The inspector verified: the licensee has adequate control of vehicle access; controlled vehicle access portals include control of self-propelled and towed vehicles as required; vehicles are searched for firearms, explosives and incendiary devices in the cab, engine compartment, undercarriage and cargo areas before it enters the protected area.

Access control of packages was reviewed. The inspector interviewed three guards and observed the processing of five packages prior to their access. The inspector verified access control personnel could distinguish authorized and unauthorized packages. All hand-carried packages and material were searched prior to entry to the protected area as required.

Access control of personnel was reviewed. The inspector observed processing of five people and interviewed two guards. The inspector verified: the licensee has positive and active control of all points of personnel access; the licensee controls personnel access to vital, material and controlled access areas; all persons are properly identified prior to issuing a badge; access lists promptly reflect removal of authorization for terminated employees; the licensee has screened personnel prior to authorizing unescorted access; reliability of contractor, non-employee and non-contractor personnel are verified prior to providing unescorted access; and precautions are made to ensure that an unauthorized name cannot be added to the access list.

7. Radiation Protection

a. External Occupational Exposure Control and Personal Dosimetry

(1) Planning and Preparation for Outages

The inspector reviewed representative records, discussed outage planning with the licensee representatives and observed activities which included a four-day maintenance outage to verify necessary planning preparation.

(2) Personal Dosimetry

The inspector by direct observation, discussion and review of records determined that personal dosimetry is used effectively

and was in accordance with requirements for monitoring external exposure. Aspects of personal dosimetry that were examined were: proper wearing of dosimetry; exposure records and reports; use of pocket dosimetry and comparison of their measurement with TLD results; quality assurance procedures for personal dosimetry offsite measurement; gamma, beta and neutron exposures are measured; procedures for measurement of extremity exposure are implemented; timely dissemination of current dose status; and review of workers' dose status by superintendents.

By direct examination, discussion and record review, the inspector determined that personal dosimetry to be used for emergency operations was adequate, properly stored and maintained. The inspector observed equipment in the emergency kits located in the control room, access control and technical support center.

(3) Administrative Controls

By direct observation, discussion and review of records and procedures the inspector determined that administrative controls were adequate. The review included: planning of work for exposure concerns; use of current survey and personal dosimeter data for dose control; use of control/action levels; radiation work permit program; control of adequate high exposure areas; good radiation work practices; and management review of exposure trends. The inspector observed that posting and labeling of radiation areas in the plant were adequate.

b. Control of Radioactive Materials and Contamination Surveys, and Monitoring Audits and Appraisals

The inspector reviewed audit reports, including radiation protection, in 1986. The auditors appear to be adequately qualified and the audits are of a sufficient depth. The deficiencies appear to be resolved in a timely and technically acceptable manner.

By observation and discussion, the inspector determined that any changes to the facility have not adversely affected the radiation protection program.

8. Spent Fuel Shipment

During the inspection period, the licensee made four spent fuel shipments to the General Electric Company Morris Operation in Morris, Illinois. A shipment consisted of 36 BWR fuel assemblies in 2 IF-300 casks mounted on rail cars, one cask per car.

On three of the shipments, before the rail cars with the IF-300 cask were shipped from the Monticello site, the inspector verified that shipping forms were completed, that the rail cars were properly placarded, and that the casks were correctly labeled. The radiation and contamination surveys were noted to have been completed and to have been within

departure limits requirements. The inspector also performed independent direct radiation and removable contamination surveys of the casks using NRC portable survey equipment and noted these readings and indications agreed with the licensee's survey records and information presented in the radioactive materials shipment records. The training and number of health physics technicians and security escorts were verified to be in conformance with procedure. Communications ability and procedure were verified as adequate.

9. I.E. Bulletin

(Closed) I.E. Compliance Bulletin No. 86-03: Potential Failure of Multiple ECCS Pumps Due to Single Failure of Air-Operated Valve in Minimum Flow Recirculation Line. The inspector reviewed the licensee response to be accurate and provided in a timely manner. Concerns surrounding Residual Heat Removal (RHR) pump minimum flow were addressed in IEB 86-01 which was closed by Inspection Report No. 263/86007(DRP). Core spray pump minimum flow is provided by an orificed line. Monticello does not have the single failure vulnerability as described in the bulletin.

10. Regional Requests

The inspector discussed a Foxboro inspection report with the licensee as requested by Region III, to determine if the licensee was affected by its findings (Inspection Report No. 99900225/85-01). The problem identified in the report was conductor insulation degradation of coil cord cable. The licensee in response to Information Notice 86-52 had determined no Foxboro (or other vendor) controllers used at the site use coil cord sets.

11. TMI Item I.D.2.3, SPDS Implementation

An order issued by NRR on June 12, 1984, required the licensee to have the Safety Parameter Display System (SPDS) fully operational and the operators trained before startup of Cycle 12. This requirement was later relaxed to require that SPDS be operational by January 12, 1987. On January 13, 1987, the inspector reviewed with the licensee the status of SPDS. Following are some highlights of that review.

a. SPDS was fully operational on January 11 as required.

b. Operators had been trained in the use of SPDS.

c. The system is basically as described in the licensee's SPDS Safety Analysis Report which was submitted to NRR on December 26, 1984. Some minor differences in detail between the SAR and the actual installation appear to be acceptable.

Closeout of this item is to be performed during the ERF appraisal.

12. Licensee Event Reports

Through direct observations, discussions with licensee personnel and review of records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished, and corrective action to prevent recurrence had been accomplished in accordance with technical specifications.
LER 86026 - ESF Actuation From Relay Failure in PCIS

13. Exit Interview

The inspector met with the licensee representative denoted in Section 1 at the conclusion of the inspection on February 5, 1987. The inspector discussed the purpose of the inspection and the findings.

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