U.S NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-263/82-12(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 29-October 30, 1982

Inspectors: R. D. Walker for C. H. Brown 12-22-82

R. D. Walker for A. L. Madison 12-22-82

Approved By: R. D. Walker R. D. Walker, Chief 12-22-82
Reactor Projects Section 2C

Inspection Summary

Inspection Conducted August 29-October 30, 1982 (Report No. 50-263/82-12(DPRP))
Areas Inspected: Routine safety inspection by resident inspectors in the areas of Followup on Regional Requests, Preparation for Refueling; Refueling Activities; On Site Review Committee, Maintenance - Refueling; Inspection During Long Term Shutdown; Jet Pump Hold Beams; Fire Protection/Prevention; and Followup on Headquarters Requests. The inspection involved a total of 223 inspector-hours onsite by two NRC inspectors including 48 inspector-hours onsite during offshifts.
Results: No items of noncompliance or deviations were identified.

DETAILS

1. Persons Contacted

*W. A. Shamla, Plant Manager
M. H. Clarity, Plant Superintendent, Engineering and Radiation Protection
H. M. Kendall, Plant Office Manager
D. D. Antony, Superintendent, Operating Engineering
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 of Maintenance

The inspectors also talked with and interviewed other licensee employees including members of the technical and engineering staffs and reactor and auxiliary operators.

*Denotes those licensee representatives attending the management interviews.

2. Followup on Regional Requests

a. Training to Mitigate Core Damage TMI Action Plan Followup

The inspector was requested by his Regional Management to review the licensee's actions and commitments in this area. The inspector found that the licensee has completed the initial training and committed to provide procedures and training to meet the guidelines submitted by the BWR Owners' Group before startup from the first outage after the guidelines are approved. Meanwhile the operators have been trained to use the abnormal procedures presently in place.

b. CRD Scram Piping

The inspector was asked by his Regional Management to review the modifications to the CRD scram piping to ascertain if the inspector found that stress points had been identified by the licensee's consultant. The request by the Region was due to allegations that originated at a similar plant with the same consultant in Region I. The CRD scram piping from the scram valves to scram discharge volume was reviewed by the licensee and his consultant. The result of the review was that this particular piece of piping did not have points of overstress because of the added flexability produced by a horizontal 24-inch run of pipe from the vertical pipe that is connected to the scram valves. This is a typical connection to the scram discharge header.

No items of noncompliance or deviations were identified.

3. Preparation for Refueling

The inspector verified that technically adequate procedures were approved for "Fuel Movement Preparations" and "Fuel Movements Within The Core and Between the Core and Spent Fuel Pool". The inspector verified that the licensee had submitted a proposed core reload technical specification change to NRR (or that the licensee's 10 CFR 50.59 safety evaluation of the reload core showed that prior NRR review is not required). The inspector also reviewed the licensee's program for overall outage control.

No items of noncompliance or deviations were identified.

4. Refueling Activities

The inspector verified that prior to the handling of fuel in the core, all surveillance testing required by the technical specifications and licensee's procedures had been completed; verified that during the outage the periodic testing of refueling related equipment was performed as required by technical specifications; observed one shift of the fuel handling operations (removal, inspection and insertion) and verified the activities were performed in accordance with the technical specifications and approved procedures; verified that containment integrity was maintained as required by technical specifications; verified that good housekeeping was maintained on the refueling area; and, verified that staffing during refueling was in accordance with technical specifications and approved procedures.

No items of noncompliance or deviations were identified.

5. Onsite Review Committee

The inspector examined the onsite review functions conducted during the months of September and October 1982 to verify conformance with technical specifications and other regulatory requirements. This review included: changes since the previous inspection in the charter and/or administrative procedure governing review group activities; review group membership and qualifications; review group meeting frequency and quorum; and, activities reviewed including proposed technical specification changes, noncompliance items and corrective action, proposed facility and procedure changes and proposed tests and experiments conducted per 10 CFR 50.59, and others required by technical specifications.

No items of noncompliance or deviations were identified.

6. Maintenance - Refueling

The inspector verified maintenance procedures include administrative approvals for removing and returning of systems to service; hold points for inspection/audit and signoff by QA or other licensee personnel; provisions for operational testing following maintenance; provisions for special authorization and fire watch responsibilities for activities

involving welding, open flame, and other ignition sources; reviews of material certifications; provisions for assuring LCO requirements were met during repair; provisions for housekeeping during and following maintenance; and responsibilities for reporting defects to management.

The inspector observed the maintenance activities listed below and verified work was accomplished in accordance with approved procedures and by qualified personnel:

a. Maintenance on selected pieces of fire protection equipment.
b. Installation of replacement steam separator guides.
c. Preparation and repair of cracks in recirculation piping.

No items of noncompliance or deviations were identified.

7. Inspection During Long Term Shutdown

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the months of September and October. The inspector verified surveillance tests required during the shutdown were accomplished, reviewed tagout records, and verified applicability of containment integrity. Tours of all accessible areas, including exterior areas were made to make independent assessments of equipment conditions, plant conditions, radiological controls, safety, and adherence to regulatory requirements and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector observed plant housekeeping/cleanliness conditions, including potential fire hazards, and verified implementation of radiation protection controls. 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 reviewed the licensee's jumper/bypass controls to verify there were no conflicts with technical specifications and verified the implementation of radioactive waste system controls. The inspector witnessed portions of the radioactive waste systems controls associated with radwaste shipments and barreling.

Major activities conducted during the long-term shutdown were as follows:

a. Insulation Replacement

The primary piping and component insulation changeover from damaged asbestos to glass wool blankets and mirror insulation was completed. The modification was performed to rid the containment of possible airborne asbestos which could be a personnel hazard and renew the insulation that had been damaged over the years.

b. Scram Volume Modification

As a result of IE Bulletin 80-17 commitments, the Scram Instrument Volume and piping were modified to provide better hydraulic coupling. The modification was completed during this outage with the NRR-approved design.

c. Nondestructive Examination (NDE) of Welds in Recirculation System

The welds in the recirculation system (and the connecting systems out to the first isolation valves) were nondestructively examined during September. The examination revealed indications on recirculation Loop A manifold end cap. The proposed repair of the cracks is a weld overlay forming a belt over the original cap weld. This method of repair was presented to Region III and NRR personnel on October 14. The review of the proposed repair method was still under review at the close of this inspection period.

The NDE was approximately 50 percent complete when the indications in the manifold cap were identified. As the examination progressed, indications were identified in risers C, D, E and F. The indications in C, E and F were in the safe-end side of the safe-end-to-pipe weld heat-affected zone. The indication in D was in the elbow side of the lower elbow-to-pipe weld heat-affected zone. The weld overlay was again proposed as the method of repair.

During preparation of the pipe and weld area on C, E and F for the use of automatic welding machines, through-wall cracks were uncovered. A procedure was developed to dry out the crack and perform a repair so that the overlay welding could be performed.

On the D riser no cracks were found during the preparation of the weld area, but during the third overlay layer a repair was found to be necessary due to porosity in the overlay weld. The porosity was ground out and a crack was uncovered. The crack was repaired and the overlay was continued. The weld overlay has been placed over the indications and a hydrostatic test is planned in the near future to verify piping integrity before plant startup.

The cracks were reported in Licensee Event Report (LER) 82-13, Rev. 4. The acceptability of the repair procedure is being evaluated and is an Unresolved Item (263/82-12-01).

No items of noncompliance or deviations were identified.

8. Jet Pump Hold-Down Beams

The jet pump hold-down beams were replaced with a modified design which would eliminate the beam problems addressed in IE Bulletin 80-07. The beams were replaced in the September - December 1982 refueling outage.

Subsequent to the new beams being installed the "jet pump plugs" were installed to allow the recirculation loop to be drained so that radiographs could be taken of various pipe welds. The loop could not be drained satisfactorily due to leakage past the jet pump subassembly and through the jet pump plugs. A TV camera examination of the riser-to-jet pump connections was performed. This examination showed that one of the jet pump subassemblies was not mating correctly with the riser section. Further examination showed that the subassembly had been forced up from

its seated position by reverse shutdown coolant flow from the opposite (operating) recirculation loop. The jet pump subassembly had risen to the point where a wedge in the upper assembly had jammed the subassembly into an unseated condition. The subassembly manufacturer concluded that no damage had occurred as a result of this action and that the condition has no safety significance. The manufacturer is developing procedures to recommend to utilities, performing future hold-down beam modifications, to prevent recurrence of this problem. The licensee has rechecked all 20 of the subassembly seating surfaces while preloaded and with the wedges held in the up position. Only the one wedge was found to have held the subassembly in the slightly up position. Particles of debris were found on the mating surfaces of several of the jet pumps. The thickness of the particles was estimated to be less than the 10 mils which the vendor said would provide a leakage path.

No items of noncompliance or deviations were identified.

9. Fire Protection/Prevention

Fire protection systems and equipment installed for the protection of safety-related areas were determined to be functional. The maintenance and testing were verified to be as required. The fire brigade equipment was found to be properly maintained and stored. The fire brigade training and drills were verified to have been performed within specified intervals. Combustible liquids were noted to be in proper containers and in small amounts when used in safety-related areas. Fire retardant-treated wood is the only wood allowed inside the plant. Wiping cloths are brought into the reactor building in controlled amounts. The amount of anticontamination clothing in any area is normally maintained at only the level necessary for the shift. The use of ignition source controls was noted to be properly implemented and effective during the outage. Housekeeping has been maintained at a satisfactory level during the inspection period.

No items of noncompliance or deviations were identified.

10. Followup on Headquarters/Regional Request

Region III requested information in followup to a Browns Ferry Licensee Event Report (LER 50-260/82-23), where the High Pressure Coolant Injection (HPCI) high steam flow differential pressure (dp) switches were both rendered inoperable by an equalizing valve on a switch leaking past its seat.

The configuration of the high steam flow sensing piping and instrumentation for the HPCI and Reactor Core Isolation Cooling (RCIC) was reviewed. The four HPCI high steam flow D/P instruments have common high and low pressure sensing lines and individual high isolation, low isolation and equalizing valves. The RCIC has a similar arrangement for its high steam flow D/P instruments. The valves are ball seat type and have had a good history of nonleakage. The valve line-ups are independently verified correct after a surveillance test has been performed.

No items of noncompliance or deviations were identified.

11. 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 7.

12. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) throughout the month and at the conclusion of the inspection on October 6, 1982 and summarized the scope and findings of the inspection activities.