U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-263/77-13

Docket No. 50-263 License No. DPR-22

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

Facility Name: Monticello Nuclear Generating Plant

Inspection At: Monticello Site, Monticello, MN

Inspection Conducted: August 23-26, 1977

Inspector: N. C. Choules — 9/9/77

Approved By: R. F. Warnick, Chief — 9-12-77
Reactor Projects Section 2

Inspection Summary

Inspection on August 23-26, 1977 (Report No. 50-263/77-13)
Areas Inspected: Routine, unannounced inspection of reactor building crane modifications, review and audits, nonroutine event reports, IE Circular followup, noncompliance followup, and independent inspection. The inspection included 31 inspector-hours onsite by one NRC inspector.
Results: Of the six areas inspected, no items of noncompliance were identified in five areas; one apparent item of noncompliance (Infraction - failure of Operations Committee to review and document reported violations of Technical Specifications - Paragraph 2) was identified.

DETAILS

1. Persons Contacted

Plant

*L. R. Eliason, Plant Manager
*M. H. Clarity, Superintendent, Plant Engineering and Radiation Protection
*D. D. Antony, Plant Engineer, Operations
P. A. Pochop, Quality Assurance Engineer
*R. L. Scheinost, Quality Assurance Engineer
R. A. Knitch, Shift Supervisor
F. L. Fey, Radiation Protection Engineer

The inspector also talked with and interviewed several other licensee employees, including members of the Operations, Engineering and Radiation Protection sections.

Corporate Office

T. McFadden, General Superintendent, Quality Assurance
R. S. Leddick, Manager, Nuclear Plant Projects
M. Voth, Engineer, Nuclear Plant Services
D. Vincent, Project Engineer, Nuclear Plant Projects
W. V. Jokela, Manager, Quality Assurance, Nuclear Plant Projects
J. Meyer, Quality Assurance Engineer, Nuclear Plant Projects

*denotes those present at the exit interview.

2. Review and Audits

a. Review of the minutes of the licensee's onsite (Operations Committee) and offsite (Safety Audit Committee) review committees from July 1976 through July 1977 verified that both committees are meeting the licensee's Technical Specifications requirements for the following:

(1) Meeting frequency for onsite and offsite review committees.

(2) Meeting membership and quorum requirements for both committees.

(3) Committee review of proposed tests and experiments are in accordance with 10 CFR 50.59.

(4) Technical Specifications changes are reviewed as required.

Review of the Operations Committee records indicated that the licensee is not formally reviewing and documenting Technical Specifications violations as required by Sections VI.B.4.e and VI.B.6 of the Technical Specifications. Specifically, noncompliance items in IE Inspection Report Nos. 50-263/76-11, 77-01, 77-05, 77-06, 77-07 and 77-10 apparently were not reviewed and documented by the Operations Committee.

b. The inspector reviewed the audit programs conducted by the Safety Audit Committee, the corporate Quality Assurance group, and the plant Quality Assurance group, and determined that audits are being conducted as required by Technical Specifications and the licensee's administrative instructions. Review of audits performed by the plant during the past year identified four items requiring corrective actions which have been accomplished or are in the process of being accomplished.

3. Reactor Building Crane Modifications

The licensee has completed the installation of a new trolley on the reactor building crane. The new trolley provides redundant hoist lifting cables. The Division of Operating Reactors approved modifications to the reactor building crane in a letter to the licensee dated May 19, 1977.

The inspector reviewed the licensee's procurement specifications, licensee audits of the crane trolley vendor, licensee audits of the installation contractor, installation procedures, preoperational test procedures, vendor functional test results, and the design change package associated with the reactor building crane modifications. Review of the preoperational testing indicated that certain testing that the licensee intended to perform as stated in their submittal to the NRC (NSP Licensing Report, NSC-LS&R-NOR-0151-17, dated November 11, 1976 and submitted November 22, 1976) had not been completed as follows:

a. No Load Test

Check for proper engagement of bridge and trolley with the stops at the end of the girders.

b. 100% Load Test

(1) Only the upper hoist limit switch was checked. The lower hoist limit, trolley and bridge travel limit switches were not checked because it was physically impossible to move the load high enough or low enough to clear obstructions due to the size of the load.

(2) The hoist, trolley and bridge were not traversed over the entire travel envelope due to the size of the load.

(3) Pendant controls were not checked.

The inspector reviewed items a and b with Licensing and it was indicated that testing was probably adequate if the 125% load test was accomplished and these items were checked during the partial load test. Review of preoperational test records indicated these tests had been performed. In a telephone conversation on August 30, 1977, with the licensee, the inspector stated that for any testing which cannot be completed the licensee should perform a safety evaluation per 10 CFR 50.59 to assure there are no safety concerns, and this should be completed and documented prior to using the crane for heavy lifts. The licensee stated they were in the process of doing this and it would be completed prior to any heavy lifts.

The inspector also noted that the crane had been inspected by the U.S. Crane Certification Bureau, Inc., on August 1, 1977, and some minor discrepancies were identified which the licensee is correcting.

No items of noncompliance were identified.

4. Reportable Occurrences

The following reportable occurrences were reviewed by examination of logs, records and through discussions with plant personnel. Occurrences were reviewed for completion of reporting requirements, investigation and determination of cause, proposed corrective measures, and completion of corrective actions.

a. RO 50-263/77-09[1/] - Failure of RCIC Outboard Isolation Valve MO-2076 to Close.

1/ LER 50-263/77-09, NSP to RIII, dtd 6/29/77.

b. RO 50-263/77-10[2/] - Improper Procedure for Setting Torque Switch on MO-2076.

The licensee identified that the processing and completion of the work request and attached instructions were not executed in accordance with their Administrative Control Directives and resulted in a low torque setting. The valve was still operable even with the low torque setting.

c. RO 50-263/77-11[3/] - Moisture Separation Drain Line Leak.

d. RO 50-263/77-13[4/] - Standby Gas Treatment "A" Train Low Flow.

e. RO 50-263/77-14[5/] - Air Ejector Radiation Monitors Found Inoperable Following a Startup After an Outage.

The air ejector radiation monitors were inoperable for about 7 hours. They were inoperable because an improperly tagged valve caused the operator to open the wrong valve when completing a startup valve lineup which caused excessive air in leakage to the monitors.

f. RO 50-263/77-16[6/] - Failure of "A" Recombiner Train Offgas Flow Control Valve (FCU-7489A) to Stay Closed After Receiving a Trip Signal.

g. RO 50-263/77-17[7/] - Inoperable Accumulator on CRD HCU 26-23.

h. RO 50-263/77-15[8/] and RO 50-263/77-18[9/] were reviewed in the office and are considered closed.

5. Previous Noncompliance Followup

The inspector reviewed the licensee's corrective actions resulting from events associated with a reactor period of less than 5 seconds. The event was reviewed and discussed in IE Inspection Report No. 50-263/77-03, and the licensee reported the event in LER 50-263/77-04 dated March 9, 1977. The inspector determined from review of items discussed in the licensee's response to the noncompliance items[10/] that the licensee had completed his corrective actions and they appear to be adequate.

2/ LER 50-263/77-10, NSP to RIII, dtd 7/15/77.
3/ LER 50-263/77-11, NSP to RIII, dtd 7/15/77.
4/ LER 50-263/77-13, NSP to RIII, dtd 7/22/77.
5/ LER 50-263/77-14, NSP to RIII, dtd 7/11/77.
6/ LER 50-263/77-16, NSP to RIII, dtd 7/22/77.
7/ LER 50-263/77-17, NSP to RIII, dtd 8/10/77.
8/ LER 50-263/77-15, NSP to RIII, dtd 8/5/77.
9/ LER 50-263/77-18, NSP to RIII, dtd 8/18/77.
10/ Ltr, NSP to Division of Reactor Operations Inspection, dtd 7/7/77.

6. IE Circular 77-10

The inspector verified by discussion with the licensee that they had received and reviewed the subject circular and concluded that no action is required on their part.

7. Significant Operating Event

On the morning of August 24, 1977, the licensee noted that the steam dilution valve which provides dilution steam to the offgas recombiner system had closed. Closure of this valve also trips the recombiner unit. The licensee reduced power to avoid loss of vacuum in the main condenser and connect a temporary air supply to the steam dilution valve to get the valve open. It was later determined that a filter in the air line supplying the steam dilution valve was clogged.

After the steam dilution valve was opened and recombiner system started up, power was increased. The licensee noted during the power increase that the offgas recombiner flow was very low. At the same time, the activity as recorded on the air ejector monitor increased. The licensee performed several checks including sampling and analysis of primary coolant water, sampling and analysis of the air ejector offgas, a pop test on a gas sample drawn from the offgas piping downstream from the air ejectors, and temperature and pressure measurements in the offgas system. Results of these checks showed the following abnormal conditions:

a. The air ejector sample showed long-lived activity instead of the normal short-lived activity.

b. For the pop test, the gas would not ignite.

From all indications, it appeared that recombination was taking place at or near the air ejector. After many checks and switching from train "A" to train "B" recombiner, the recombiner flow still remained very low. The licensee then secured the air ejectors and restarted them and everything returned to normal. It appears the recombination was taking place at the air ejectors. How the recombination at the air ejector started is not known. The licensee speculated that when the steam dilution valve closed some how a

flame front traveled from the recombiner through the piping to the air ejectors and kept burning at the air ejectors where the hydrogen concentration is high. The licensee plans further investigation of this event.

No items of noncompliance were identified.

8. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on August 26, 1977. The inspector summarized the scope and findings of the inspection. The noncompliance item in Paragraph 2 and reactor building crane testing, Paragraph 3, were discussed in detail.