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

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-263/75-21

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

Monticello Nuclear Generating Plant
Monticello, Minnesota

License No. DPR-22
Category: C

Type of Licensee: BWR (GE) 1670 MWt

Type of Inspection: Routine, Unannounced

Dates of Inspection: December 15-19, 1975

Principal Inspector: for C. H. Brown — 1/14/76 (Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: W. S. Little, Section Leader
Nuclear Support — 1/14/76 (Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on December 15-19, (75-21): Plant operating logs, startup testing, nonroutine event review and evaluation and routine plant operations were examined.

Enforcement Action

None.

Licensee Action on Previously Identified Enforcement Items

None reviewed.

Other Significant Findings

A. Systems and Components

None.

B. Facility Items (Plans and Procedures)

None.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by Licensee

None.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

Not applicable.

Management Interview

At the conclusion of the inspection a meeting was held on December 19, 1975 with Mr. Larson and other members of his staff. The following items were included in the discussion.

A. The inspector stated that "Volume F" memos (temporary Operating Manual changes) appeared to be kept in the log for excessive lengths of time. The licensee acknowledged the comment and stated the volume would be evaluated for updating. (Paragraph 3, Report Details)

B. Operator entries in the logs were discussed and the licensee stated that this area would be reviewed and further guidance would be provided to the operators as necessary. (Paragraph 3, Report Details)

C. A discussion was held on minor discrepancies noted in various forms used for routine operations (mostly of the record retrieval type of discrepancy). The licensee stated that closer attention would be given to the filling out of forms.

D. The inspector stated that he had noted no deficiencies in the procedures for evaluation of nonnormal events. The followup systems for corrective actions and commitments made to the Commission appeared to be functioning satisfactorily. (Paragraph 5, Report Det[illegible]

E. The inspector stated that he did not agree with the apparent operating philosophy of acknowledging recurring alarms but not clearing them. The licensee stated that this matter would be evaluated and a better method found for handling this situation. (Paragraph 2, Report Details)

REPORT DETAILS

1. Persons Contacted

C. E. Larson, Plant Manager
M. H. Clarity, Superintendent, Plant Engineering and Radiation Protection
D. D. Antony, Plant Engineer, Operations
W. E. Anderson, Superintendent, Operations and Maintenance
W. A. Sparrow, Operations Supervisor
H. E. Nimmo, Maintenance Supervisor
L. B. Eliason, Radiation Protection Engineer
D. E. Nevinski, Plant Nuclear Engineer
F. J. Schober, Shift Supervisor
R. A. Mielke, Shift Supervisor
W. F. Boehme, Lead Plant Equipment Operational Reactor Operator
E. V. Peterson, Auxiliary Plant Equipment Operator
B. D. Day, Engineer

2. Plant Tour

The inspector was accompanied by a licensee's representative for a tour of the plant. The equipment SECURE tags that were in force at the time of the inspection were noted to be in place. Housekeeping in the plant was generally acceptable with the exception of rags used to soak up oil next to the "B" feedwater pumps. The rags were removed.

The inspector discussed the various annunicators that were lit or flashing with the operators on duty. Adequate explanations were given for the annunicators lit, but the philosophy of acknowledging alarms without clearing was discussed with the licensee. This leaves the alarm with a rapidly blinking light and the audible alarm does not sound when the alarm is again tripped-the alarm indicator changes to a slow blinking light. This method was being used on eight annunicators at the time of the inspection, two of which were "APRM Hi" and "Withdrawal Block" (the plant was operating at 99.9%). This item was discussed with the licensee with the conclusion that action taken in response to alarms would be reviewed. The licensee also stated that their program to have a "dark" board during normal plant operation would continue.

3. Plant Operations

The operating logs and records were reviewed for the time periods as follows:

a. Shift Supervisor Log, October 8 - December 16

b. Reactor and Control Room Log, September 9 - December 8

c. Auxiliary Log Data Sheets, December 1 - 16

d. "Volume F" memos, (temporary Operating Manual changes) Thru December 18

e. Jumper - Bypass Log, Thru December 16

f. Hold - Secure Log, Thru December 16

It was noted that infrequent entries were made as to the status of the refueling operations in the routine operating logs - exact status appears to have been maintained in refueling log (special log) and procedure. The same was true for the feedwater sparger replacement, and the grinding performed on vessel feedwater nozzles

The "Volume F" log contained memos dating back to Februar 1971 with approximately 2/3 of the volume being older than one year In the discussions with the licensee it was indicated that memos were due to be reviewed for the biennial evaluations (Review of Vol. F not covered in procedure) and an effort would be made to reduce the number of memos contained in the volume. A reevaluation would be made as to what material was to be placed in the volume, as these are temporary changes to the Operating Manual. Otherwise the control of the volume appeared satisfactory

The review of the operating logs and the audit procedure for the "Jumper, Bypass, Secure, Hold" log, indicated control was satisfactory. There were no jumpers or bypasses in use at the time of the inspection. The jumper/bypass that had been used in the present quarter were as part of an approved procedure.

On December 6 an entry in the Reactor and Control Room Log stated that the new conversion factor was 1.1. This reduced the recorded μCi/sec discharge for stack release from 1058 to 415 μCi/sec. The factor was recalcuated due to the change in energy distribution affected by the increased holdup time (300 hours) of the recombiner system. The release from the system presently amounts to approximately 30 μCi/sec with the remainder coming from the gland seal exhauster.

4. Startup Testing[1/]

The inspector reviewed selected tests performed following the refueling outage of September, November 1975. The following tests were reviewed:

1/ IE Inspection Rpt No. 050-263/75-18, Report Details, Paragraph 5.

a. The control rod drive friction tests, scram time tests, (Technical Specification 3.3.C) and the coupling integrity verification were performed in November 1975. All drives functioned within the acceptance criteria of the tests.

b. The shutdown margin test was performed in November and revealed a greater than required 0.5% Δ K margin. [-(0.25% Δ K uncertainties)] per Technical Specification 3.3.A.1 & 4.4.A.1. The computer code used by NSI indicated a - 0.52% Δ K margin and GE's code a - 0.62% Δ K margin. The codes were verified by the licensee with the two rod quadrant critical tests.

c. Core power distribution verification test showed a maximum peak ratio of 2.72, (maximum allowable is 3.04 for 8 x 8 bundles) at 100% power.

d. Core performance evaluation at rated temperature and pressure revealed the rod notches remaining in core were within the required band of 1% of the expected number. The core reactivity is not expected to show any reactivity increase for this fuel cycle per the vendor supplied core performance curve.

e. Control rod sequences were found to have been approved and entered in "Volume F" maintained in the Control Room. The minor changes to the sequences requested by the Nuclear Engineer for flux shaping reasons are maintained in the Control Room Log and are noted in the computer printout. The sequence as supplied by the vendor to maintain ≤1.3% Δ K supercritical during a rod drop accident was followed to greater than 10% power as required per Technical Specifications paragraph 3.3.B.3(b).

f. Reactor protection time responses was verified to be less than 0.10 sec required by Technical Specifications 3.1.A.

5. Nonroutine Event

The procedure pertaining to review and evaluation of nonroutine events was found to conform with the Technical Specifications. The responsibilities are outlined for prompt review, and evaluation for identification of safety related events. Responsibilities have been assigned, and the procedure addressing the reporting of an event has been placed in use at the site. These procedures cover internal reporting and reports made to the NRC.

The responsibility for completion of corrective actions has been delegated. A log is maintained with the person responsible for each item and the completion due date. Another log is maintained

with the above information for commitments made to the Commission. These logs are periodically reviewed and status ascertained on items with due dates. In discussions held with the licensee representatives, the responsibilities concerning nonroutine operating events appeared to be understood.

Three nonroutine events noted in the operating logs pertaining to safety related equipment were reviewed and found to have been reported as Abnormal Occurrences as per the Technical Specification requirements.