

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

DEC 10 1976

Northern States Power Company
ATTN: Mr. Leo Wachter
Vice President
Power Production and
System Operation
414 Nicollet Mall
Minneapolis, Minnesota 55401

Docket No. 50-263

Gentlemen:

This refers to the inspection conducted by Messrs. N. C. Choules and J. C. Pulsipher of this office on November 16-19, 1976, of activities at Monticello Nuclear Generating Plant, authorized by NRC Provisional Operating License No. DPR-22, and to the discussion of our findings with Mr. Eliason and others of your staff at the conclusion of the inspection.

The enclosed copy of our inspection report identifies areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel.

During this inspection, certain of your activities appeared to be in noncompliance with NRC requirements, as described under Enforcement Items in the Summary of Findings section of the enclosed inspection report. The inspection showed that action had been taken to correct the identified noncompliance and to prevent recurrence. Consequently, no reply to this noncompliance is required and we have no further questions regarding this matter at this time.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room, except as follows. If this report contains information that you or your contractors believe to be proprietary, you must apply in writing to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. The application must include a full statement of the reasons for



9

Northern States Power
Company

- 2 -

DEC 10 1976

which the information is considered proprietary, and should be prepared so that proprietary information identified in the application is contained in an enclosure to the application.

We will gladly discuss any questions you have concerning this inspection.

Sincerely yours,

Gaston Fiorelli, Chief
Reactor Operations and
Nuclear Support Branch

Enclosure:
IE Inspection Report
No. 050-263/76-18

cc w/encl:
L. R. Eliason
Plant Manager
Central Files
Reproduction Unit NRC 20b
PDR
Local PDR
NSIC
TIC
Anthony Roisman, Esq.,
Attorney

UNITED STATES NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-263/76-18

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: November 16-19, 1976

Principal Inspector: *N. C. Choules*
N. C. Choules

12/10/76
(Date)

Accompanying Inspector: *J. C. Pulsipher*
J. C. Pulsipher

12/10/76
(Date)

Other Accompanying Personnel: None

Reviewed By: *D. C. Boyd* for
D. C. Boyd, Acting Chief
Reactor Projects Section 2

12/10/76
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on November 16-19, (76-18): Review of plant operations, nonroutine event reports, calibrations, semiannual reports, and surveillance testing. One item of noncompliance was identified related to reporting of a missed surveillance test.

Enforcement Items

Contrary to Technical Specifications 6.7.B.2 and 6.7.B.2.c, the licensee failed to report the failure to perform Surveillance Test 0015, Main Steam Radiation Detector Functional Test, the week of September 12, 1976, as required by Technical Specifications Table 4.1.1. (Paragraph 2.e, Report Details)

Licensee Action on Previously Identified Enforcement Items

Not reviewed.

Other Significant Items

A. Systems and Components

None.

B. Facility Items (Plans and Procedures)

None.

C. Managerial Items

None.

D. Deviations

None.

E. Status of Previously Reported Unresolved Items

None.

Management Interview

A management interview was conducted with Messrs. Eliason, Clarity, Anderson, Antony and Shamla at the conclusion of the inspection on November 19, 1976. The following was discussed.

A. Plant Operations

The inspector stated that he had reviewed general plant operations which included review of operating logs, night orders, significant operating events (SOEs), jumper and tag out logs, discussions with operators, reactor coolant chemistry records, and a tour of the plant. (Paragraph 2, Report Details)

The following items were discussed:

1. The inspector stated that the housekeeping in the plant looked good. The inspector also stated that during the plant tour a small steam leak and water leak were noted in the HPCI room. The licensee stated that a Work Request had been prepared to correct these leaks.
2. The inspector stated that in the review of SOEs, an item of noncompliance was identified in that a missed surveillance test was not reported. The inspector stated that this had been reviewed with licensee's personnel and corrective action had been taken, and a written response to the non-compliance would not be required.
3. The inspector stated that no other items of concern were identified in the review of plant operations.

B. Reportable Occurrences

The inspector stated he had reviewed ROs 76-11, 76-13, 76-15, 76-18 and 76-20, and it appeared that the licensee's corrective actions for these occurrences were adequate. (Paragraph 3, Report Details)

C. Surveillance Testing

1. The inspector stated he had witnessed the performance of Surveillance Test 0045/0046, RPM Downscale and Flow Variable Block Calibration, and no discrepancies were noted with the exception that the test procedure did not require recording the instrument number of the digital voltmeter used during the test. The licensee stated they would revise the test

procedure to require recording the digital voltmeter instrument number. (Paragraph 4.a, Report Details)

2. The inspector stated he had reviewed the licensee's surveillance program related to local power range monitor (LPRM) calibrations, average power range monitor (APRM's) calibrations and core thermal power calibrations. The inspector stated one discrepancy was noted in that a written calibration procedure for the calibration of LPRMs does not exist. The inspector suggested that such a procedure be prepared. The licensee stated they would prepare such a procedure. (Paragraphs 4.b, c and d, Report Details)

D. Calibration

The inspector stated he had reviewed the licensee's program of calibration of equipment associated with safety related systems, but are not identified in the Technical Specifications as requiring specific calibration requirements. The inspector stated that the licensee's program appears to be well organized and no discrepancies were identified. The inspector stated he had witnessed the calibration of some pressure switches and no discrepancies were identified. (Paragraph 5, Report Details)

E. Outstanding and Miscellaneous Items

The status of several subject items were reviewed and discussed. (Paragraph 6, Report Details)

REPORT DETAILS

1. Persons Contacted

L. R. Eliason, Plant Manager
M. H. Clarity, Superintendent, Plant Engineering and Radiation Protection
W. E. Anderson, Superintendent, Plant Operations and Maintenance
D. D. Antony, Plant Engineer, Operations
W. H. Shamla, Plant Engineer, Technical
W. H. Sparrow, Operations Supervisor
F. L. Fey, Radiation Protection Supervisor
W. J. Hill, Engineer, Instruments
B. D. Day, Engineer
J. D. McVay, Engineer
G. R. Smith, Engineer
D. G. Wegener, Engineer
R. A. Mielke, Shift Supervisor
R. Seibel, Shift Supervisor
G. L. Gault, Plant Equipment and Reactor Operator
M. W. Onnen, Plant Equipment and Reactor Operator
W. J. Dheim, Plant Equipment and Reactor Operator
P. A. Yurczyk, Radiation Protection Specialist
E. M. Reilly, Instrument and Control Specialist
D. H. Alcott, Instrument and Control Specialist

2. Plant Operations

a. Plant Tours

- (1) The inspector performed a plant tour accompanied by a licensee representative. A small steam leak and small water leak were noted in the HPCI room and was brought to the licensee's attention. The housekeeping of the plant was good and no other discrepancies were noted.
- (2) During the tour, selected "Hold" and "Secure" cards were reviewed for proper approval and the status log was reviewed to determine if the tags were properly accounted for. No discrepancies were noted.
- (3) Selected valves for the control rod drive system were checked for proper alignment and no discrepancies were noted.

(4) The inspector reviewed the status of various annunciators which were lit in the control room with a control room operator. Adequate explanations were given as to why these annunciators were lit.

b. The jumper-bypass log was reviewed and no discrepancies were noted.

c. Logbooks

The inspector reviewed the control room and reactor log, the shift supervisor log and the radwaste building log for selected days during the period September 24, to November 16, 1976, and confirmed that entries were filled out and initialed, that entries give sufficient details to identify the action, and the Operations Supervisor is reviewing and initialing the log sheets indicating his review.

d. Night Order Book

The subject orders were reviewed for the period October 1, to November 16, 1976, and no discrepancies were noted.

e. Significant Operating Events

The inspector reviewed the following events and had one comment regarding M-SOE-76-10.

- (1) M-SOE-76-08 Feedwater Heater Leaks
- (2) M-SOE-76-09 Inadvertent Reactor Recirc Pump Trip
- (3) M-SOE-76-10 Failure to Complete Surveillance Test 0015

M-SOE-76-10 indicated that Surveillance Test 0015, Main Steam Radiation Detector Functional Test, was not performed the week of September 12, 1976, as required by Technical Specifications Table 4.1.1. Technical Specifications 6.7.B.2 and 6.7.B.2.c require that "observed inadequacies in the implementation of administrative or procedural control which threaten to cause reduction of degree of redundancy provided in reactor protection system or engineered safety feature system" be reported by 30-day written reports. The licensee had reviewed this item and concluded it was not reportable to the NRC under Technical Specification 6.7.B.2.c and

documented this in the minutes of the Operations Committee meeting on September 28, 1976.

During review of this SOE, the inspector reviewed Regulatory Guide 116 with the licensee and one of the examples listed under the same criteria as Technical Specification 6.7.B.2.c as requiring a 30-day written report was the failure to perform surveillance tests at the required frequency. The licensee acknowledged his mistake and a report was prepared before the inspector left the plant. The licensee had previously taken action as a result of this event to keep closer track of surveillance tests. The inspector verified by review of completed surveillance tests that 0015 had been completed weekly since the week of September 12, 1976.

f. Reactor Coolant Chemistry

Subject surveillance test (ST) records reviewed for the period September 13, to October 28, 1976, are as follows:

- | | |
|-------------------|-------------------------------------------------------|
| (1) ST 0122 | Reactor Coolant Iodine-131 Dose Equivalent Activity |
| (2) ST 0124, 0125 | Reactor Coolant Chloride/Conductivity |
| (3) ST 0228 | Reactor Coolant I-133; Cleanup Flow Rate; Power Level |

Review of these records indicated:

- (1) No evidence of fuel failure; and
- (2) Conductivity and chloride concentrations were maintained far below the Technical Specifications limit.

3. Reportable Occurrences

The following reportable occurrences were reviewed by examination of investigation reports, logs, records, observation of equipment, and through discussion with plant personnel. Occurrences were reviewed for completion of reporting requirements, investigation and determination of cause, proposed corrective measures, and completion of corrective action; and unless noted, no concerns were identified.

- a. RO 76-11, RCIC Turbine Trip^{1/}
- b. RO 76-13, Turbine Stop Reactor Protection System Switch Failure^{2/}

1/ RO 050-263/76-11, NSP to Region III, dtd 10/22/76.

2/ RO 050-263/76-13, NSP to Region III, dtd 9/10/76.

- c. RO 76-15, Inoperability of RHR Loop "A" LPCI Suction Isolation Valve MO-2030^{3/}

The valve was inoperable because the undervoltage relay coil failed causing loss of power to the valve. The same type relay coil failed on two previous occasions (ROs 75-08 and 75-16). The licensee has issued a design change, DC-76-M-039, which when implemented will change the undervoltage relay function from loss of voltage to an alarm function on all DC motor control centers with undervoltage relays. This will alert the operator in the control room that a problem exists, but will not cause loss of power when a relay coil fails.

- d. RO 76-18, Torus Water Volume Below Limit^{4/}

The licensee lowered the torus water level on September 7, 1976. On September 9, 1976, the licensee realized that the displacement of the water from the downcomer vents caused by the differential pressure between the drywell and the torus had not been accounted for. When this was taken into account, the licensee determined that the volume of water in the torus was less than that required by Technical Specification 3.7.A.1(c). The licensee increased water volume on September 9, 1976, to be in compliance with the Technical Specifications. The inspector reviewed and checked the licensee's revised volume calculations and found no discrepancies.

- e. RO 76-20, Cracked Feedpump Cooler Line^{5/}

- f. The following reportable occurrences were reviewed in the office and are considered closed.

- (1) RO 76-14,^{6/} Failure to Meet Containment Inerting Requirements.
- (2) RO 76-16,^{7/} Turbine Steam Drain Line Leaks.
- (3) RO 76-19,^{8/} Failure MSIV Scram Relay to De-energize.

4. Surveillance Testing

- a. Review and witnessing of Test 0045/0046.

Surveillance Test 0045/0046, Rod Block Monitor (RPM) Downscale and Flow Variable Rod Block Calibration, was reviewed and

- 3/ RO 050-263/76-15, NSP to Region III, dtd 9/24/76.
- 4/ RO 050-263/76-18, NSP to Region III, dtd 9/22/76.
- 5/ RO 050-263/76-20, NSP to Region III, dtd 10/29/76.
- 6/ RO 050-263/76-14, NSP to Region III, dtd 9/10/76.
- 7/ RO 050-263/76-16, NSP to Region III, dtd 9/27/76.
- 8/ RO 050-263/76-19, NSP to Region III, dtd 10/ /76.

verified to be in conformance with Technical Specifications requirements for setpoints and approval.

The test was witnessed and the following was observed:

- (1) The test was performed by qualified technicians.
- (2) Test prerequisites were completed.
- (3) The digital voltmeter used in the test was calibrated; however, the instrument number was not required to be recorded in the test procedure.
- (4) Test data was recorded and evaluated as required by the test procedure.
- (5) The test was performed using an approved test procedure.
- (6) The test results indicated that no as found setpoints exceeded Technical Specifications limits.

b. The licensee's surveillance program regarding the calibration of local power range monitors (LPRM) was reviewed. The review established that:

- (1) LPRMs are calibrated in accordance with an established program. The licensee, however, does not have a detailed written procedure or instruction covering the calibration of LPRMs.
- (2) The licensee's program appears to be adequate to assure proper calibration of LPRMs and that no limiting conditions for operation are exceeded during the calibration.
- (3) The licensee performed LPRM calibrations on a monthly basis. The Technical Specifications do not specify the frequency of LPRM calibrations.

c. The licensee's surveillance program regarding the calibration of average power range monitors (APRMs) was reviewed. The review established that:

- (1) APRMs are calibrated in accordance with an established procedure, Surveillance Test 0017, APRM Scram Instrument Calibration.
- (2) APRMs are calibrated against core thermal power.
- (3) APRMs are calibrated every three days as prescribed by the Technical Specifications. The previous month's calibration tests (0017) were reviewed to verify this as being accomplished.
- (4) The licensee's program appears to be adequate to assure proper calibration of APRMs and that no limiting conditions for operation are exceeded.

d. The licensee's surveillance program regarding core thermal power evaluation was reviewed. The review established that:

- (1) Core thermal power measurements are made in accordance with as approved procedure which is part of APRM Surveillance Test 0017.
- (2) The licensee's equation for the calculation of core thermal power is apparently correct based on a sample calculation made by the inspector using the licensee's equations.

5. Calibration

The inspector reviewed the licensee's program for the calibration of equipment associated with reactor safety, but are not identified in the Technical Specifications as requiring specific calibration requirements. The licensee stated that all such equipment has been placed on a calibration schedule and is accomplished by a specific calibration procedure or a Work Request Authorization is written to cover the calibration. The inspector reviewed the calibration cards and procedures for following systems and equipment.

a. Torus Level

- (1) Level Indicator 2996
- (2) Level Transmitter 2996

B. Standby Liquid Control System

Pressure Indicator 1165

c. Standby Gas Treatment

Flow Indicator Controller 2943

d. Diesel Fuel Storage

Level Indicator 1522

e. RHR Service Water

Flow Indicator 10-32A

f. Low Pressure Coolant Injection

Flow Indicator 10-139B

g. Core Spray

- (1) Flow Indicator 14-40B
- (2) Flow Indicator 1450A

h. High Pressure Coolant Injection

Flow Indicator Controller 23-108

i. Reactor Core Isolation Cooling

Flow Transmitter 13-58

j. Condensate Storage Tank

Level Indicator 1360

Eight of twelve instruments above were calibrated using approved calibration procedures. The other four were calibrated using Work Request Authorizations. The licensee's representative indicated that they intend to prepare calibration procedures for most of the instrument now covered by Work Request Authorizations. The records indicated that all the above instruments had been calibrated at the intervals specified by the licensee.

The inspector witnessed the calibration of two main steam line pressure switches, PS-1234A and PS-2134B. The calibration was accomplished using Surveillance Test 0055, Main Steam Line Low Pressure Group I Isolation Instrument and Calibration Procedure. No discrepancies were noted during the performance of the calibration.

6. Outstanding and Miscellaneous Items

a. Undervoltage Relays, AO 75-08, AO 76-16^{9/}

As discussed in Paragraph 3.c, the licensee will make modifications to eliminate the loss of voltage if the relay coils fail.

b. Procedure for Starting Diesel Generator Following Governor Maintenance^{10/}

The licensee has not yet prepared the subject procedure. The licensee indicated that no maintenance on governors had been performed since RO 75-23 occurred. The inspector urged the licensee to get the procedure prepared such that it will be available when needed.

^{9/} IE Inspection Rpt No. 050-263/75-18.

^{10/} IE Inspection Rpt No. 050-263/76-03.

c. Safety Audit Committee (SAC) Audit Follow-up

In a previous inspection,^{11/} the inspector identified a weakness in audit follow-up of the SAC audit program. Subsequent to this inspection, the inspector had determined that SAC audit follow-up is conducted in accordance with Administrative Work Instruction No. 2AWI 7.1.4. The area of concern is resolved.

d. Standby Liquid Control (SBLC) Surveillance

In a previous inspection,^{12/} the licensee indicated they would review their method of obtaining boron concentration in the SBLC. The licensee plans to perform periodic quantitative boron analysis. The licensee has had their corporate testing lab perform boron analysis using a procedure prepared by the licensee to verify the licensee analysis using the procedure. At the time of inspection, all checks had been successfully completed and the procedure was ready for final Operations Committee review.

7. Semiannual Report

The subject report for the period of July 1, 1975, to December 31, 1975, was reviewed. Review of this report indicated that the information required by the Technical Specifications had been reported. Review of reactor logbooks indicated that the forced shutdown on August 31, 1975, was as reported in the semiannual report.

11/ IE Inspection Rpt No. 050-263/76-11.

12/ IE Inspection Rpt No. 050-263/76-03.