

*Reactor Facilities
Bm.*

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

APR 1 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. D. R. Hunter, N. C. Choules and E. L. Jordan of this office on March 15-17, 1976, of activities at Monticello Nuclear Generating Plant authorized by NRC Reactor Operating License No. DPR-22 and to the discussion of our findings with Mr. C. E. Larson and others 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.

No items of noncompliance with NRC requirements were identified within the scope of this inspection.

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 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.

Northern States Power
Company

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APR 1 1976

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. 050-263/76-04

cc w/encl:
C. E. Larson Plant
Manager

bcc w/encl:
PDR
Local PDR
NSIC
TIC
Anthony Roisman, Esq.,
Attorney

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

REGION III

IE Inspection Report No. 050-263/76-04

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

Monticello Generating Station
Monticello, Minnesota

License No. DPR-22
Category: C

Type of Licensee: BWR (GE) 1670 Mwt

Type of Inspection: Routine, Unannounced

Dates of Inspection: March 15-17, 1976

Principal Inspector: *D. R. Hunter*
D. R. Hunter

4/1/76
(Date)

Accompanying Inspector: *N. C. Choules*
N. C. Choules
(March 15, only)

3/15/76
(Date)

Other Accompanying Personnel: E. L. Jordan
(March 15, only)

Reviewed By: *E. L. Jordan*
E. L. Jordan, Chief
Reactor Projects
Section No. 2

4/1/76
(Date)

SUMMARY OF FINDINGS

Inspection Summary

Inspection on March 15 through 17, (76-04): Plant operations, plant cleanliness and outstanding items were reviewed.

Enforcement Items

None.

Licensee Action on Previously Identified Items

None.

Other Significant Items

A. Systems and Components

1. Modifications were in progress on torus supports.
2. The torus-nitrogen pumpback system was nearing completion and being prepared for testing.

B. Facility Items (Plans and Procedures)

1. The plant was operating at full power and the torus engineering and modifications were continuing.
2. The feedwater spargers, replaced during the last refueling outage, remained in the fueling cavity area. The shipment of the spargers offsite was being planned.
3. The drywell to torus differential pressure was being successfully maintained at slightly above 1.0 psi.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by Licensee

None.

E. Deviations

None.

F. Status of Previous Reported Unresolved Items

None.

Management Interview

The management interview was conducted March 17, 1976, by Mr. Hunter with the following persons present:

C. E. Larson, Plant Manager
M. H. Clarity, Superintendent, Plant Engineering and
Radiation Protection
W. E. Anderson, Superintendent, Operations and Maintenance
D. D. Antony, Plant Engineer, Operations
W. A. Sparrow, Operations Supervisor

- A. The inspector stated that a review of the "Volume-F" memos revealed that a number of older memos have not been cleared. The licensee stated that the memos will be reviewed and appropriate actions completed. (Paragraph 6.d, Report Details)
- B. The inspector stated that a review of the plant Startup Checklist-2156 (LPRM section) revealed that certain recorded data was outside the acceptance criteria and that an administrative oversight had apparently occurred since part of the data was not noted by operations and subsequently reviewed by the Plant Operations Committee.

The licensee acknowledged the statement and stated that the two areas will be reviewed and appropriate corrective actions taken. (Paragraph 2.h.(2), Report Details)

- C. The inspector stated that a review of the plant Startup Checklist-2160, Results and Surveillance, indicated a lack of formality.

The licensee acknowledged the statement and stated that the checklist would be reviewed to evaluate and determine the changes required to provide a formal checklist. (Paragraph 2.h.(3), Report Details)

- D. The inspector stated that during the review of selected Significant Operating Events (SOE) it was noted that the damage of an 8x8 fuel assembly in the fuel storage area indicated a possible fuel handling generic safety related problem. The inspector stated that this item would be further reviewed by the NRC. (Paragraph 3.b, Report Details)
- E. The inspector stated that during the review of certain management memos it was noted that special procedure precautions by the operators were required during the operation of the neutron monitoring bypass switches due to past switch malfunctions. The inspector stated that this item would be reviewed by the NRC. (Paragraph 2.g, Report Details)
- F. The inspector noted that a number of other outstanding inspection items were reviewed. (Paragraph 6, Report Details)
- G. The inspector stated that the review of planned and unplanned maintenance revealed that emergency maintenance did not appear to receive the same level of review as the planned maintenance to insure identification of reportable occurrences. The licensee indicated that the intent was to provide subsequent review of emergency maintenance similar to that provided for planned maintenance and stated that the administrative procedure would be reviewed. (Paragraph 5, Report Details)

REPORT DETAILS

1. Persons Contacted

C. E. Larson, Plant Manager
M. H. Clarity, Superintendent, Plant Engineering and Radiation Protection
W. E. Anderson, Superintendent, Operations and Maintenance
W. A. Shamlu, Plant Engineer, Technical
D. D. Antony, Plant Engineer, Operations
W. A. Sparrow, Operations Supervisor
D. E. Nevinski, Engineer, Nuclear
W. J. Hill, Engineer, Instrument
L. W. Severson, Shift Supervisor
R. K. Rogers, Lead Plant Equipment and Reactor Operator
D. O. Roisum, Lead Plant Equipment and Reactor Operator
J. M. Casters, Lead Plant Equipment and Reactor Operator
M. W. Onnen, Plant Equipment and Reactor Operator

2. Review of Operations

The inspector reviewed the following selected records of routine operations to verify the activities to be in accordance with the Technical Specifications and Administrative Procedures.

- a. Shift Supervisor Log, January 2, 1976, through March 13, 1976.
- b. Reactor and Control Room Log, January 1, 1976, through March 14, 1976.
- c. Auxiliary Log Data Sheets, March 1, 1976, through March 14, 1976, as follows:
 - (1) Turbine Building Log Sheets
 - (2) Transformer Checks
 - (3) Reactor Building and Reactor Building Check Sheets
 - (4) Compressed Gas Log Sheet
 - (5) Recombiner System Log Sheet
- d. Jumper - Bypass Log, through March 14, 1976.

- e. Hold Secure Log, through March 14, 1976.
- f. Daily Orders, through March 15, 1976.
- g. Management Memos
 - (1) 75-20, issued August 29, 1975, concerning 250 V DC undervoltage relays, referencing System Engineering, Memo No. 22 issued on August 28, 1975.
 - (2) 75-21, issued October 30, 1975, concerning the "joystick" bypass switches, referencing Technical Engineering Memo issued on October 29, 1975. The inspector reviewed the problems with the bypass switches with the licensee representative. The licensee evaluation of the problems associated with the "joystick" bypass switches was continuing. During the discussion, the licensee indicated that two General Electric Service Letters had been issued, SIL-111 and SIL-111, Revision 1. The licensee representative indicated that switch replacement due to the lack of positive positioning and double contact operation was under review. The switch operation appears satisfactory with the added operator attention directed toward the bypass light indications.
 - (3) 75-22, issued November 13, 1975, concerning the LPRM seal leakage, referencing Technical Engineering Memo No. 20. The inspector verified through discussions with the licensee representative that seal leakage is not a current problem at the plant.
 - (4) 75-23, issued on December 30, 1975, concerning recirculation pump valves position clarification.
 - (5) 76-01, issued on February 22, 1976, concerning the IRM heat balance curves.
 - (6) 76-02, issued on February 26, 1976, concerning the establishment of an administrative heatup and cooldown limit on the reactor system of 50 degrees F per hour.
- h. Selected plant startup checklists for startup number 93 on November 16, 1975, as follows, were reviewed by the inspector:
 - (1) Master Checklist - 2150

- (2) Startup Checklist - 2156, LPRM. The inspector noted that a number of LPRM "High" and "Low" alarm setpoints were logged as being outside the acceptance criteria on the checklist. Due to an apparent administrative oversight, certain data on page 7 of 21 of the checklist was not circled and reviewed by the Operations Committee. The inspector verified that other similar data had been reviewed by the Operations Committee and that the "High" and "Low" alarms had functioned near the specified values.
- (3) Startup Checklist - 2160, Results and Surveillance. The inspector noted that the checklist included a list of required "results and surveillance" to be completed before, during and following plant startup. The inspector noted that the method of filling in the blanks prior to a startup appeared to be very informal and there were no requirements for signoff upon completion of each required "results and surveillance." The inspector verified that the surveillance requirements had been signed off by the Operations Supervisor prior to startup, even though six of the required tests were not checked off as being completed on the 2160 startup checklist. A time lag exists between the completion of the surveillance and review of completion by the Surveillance Coordinator, which provides a possible potential for the results or surveillance to be overlooked during a startup.

i. Facility Tour

The inspectors toured the facility to observe specific plant areas, systems and activities.

(1) Standby Liquid Control System

- (a) The inspectors noted a seal on the instrument root valve for PI-11-53 was not intact. The inspector verified the valve to be in the open position and the Instrument Engineer was notified.
- (b) The positions of selected valves in the system were reviewed. No discrepancies were noted.

- (c) The Standby Liquid Poison Tank Level and temperature were noted to be with specified limits.
- (2) Two Control Rod Drive accumulator pressure gauges, 46-23 and 30-39, were noted to have cracked glasses. The items were brought to the attention of the licensee.
- (3) Selected valve positions and equipment concerning the service water system were reviewed by the inspector. No discrepancies were noted.
- (4) Selected valve positions on the No. 11 emergency diesel fuel oil and air systems were reviewed by the inspector. No discrepancies were noted.
- (5) The plant housekeeping conditions were reviewed. No discrepancies were noted.
- (6) The illuminated control room annunciators were reviewed with the operators to verify plant status. No discrepancies were noted.
- (7) The inspector verified the control room manning in accordance with established requirements and Technical Specifications.

3. Significant Operating Events

The inspector reviewed selected Significant Operating Events (SOE) identified and reviewed by the licensee.

- a. SOE 75-06, Rod interchange developments.
- b. SOE 75-07, Damage to 8x8 fuel assembly 5SL J2274 on October 22, 1975.
 - (1) A new fuel assembly was damaged while being raised from its storage position in the fuel pit. The operator erroneously commenced lateral movement prior to the fuel assembly clearing the storage rack. The fuel assembly was slightly deformed before the operator realized his mistake and stopped the lateral movement of the refueling bridge. The assembly was returned to the vendor for replacement.
 - (2) The inspector verified that the engineering review at the plant was continuing. The licensee had not completed the evaluation and determination of the corrective

actions required to prevent a recurrence of this type event. This item will be followed at a subsequent inspection.

- (3) The inspector's review of the refueling bridge operation (hoist, bridge and trolley) revealed that the hoist is not interlocked with the bridge or trolley to prevent normal lateral movement of the fuel handling bridge when the fuel assembly and grapple are outside a predetermined position envelope. The licensee utilizes procedural controls to prevent a fuel assembly from being damaged when being withdrawn from the core or from the storage positions.

- c. SOE 75-08, Loss of a piece of metal from the jet pump plug.
- d. SOE 75-10, Contamination of the circulation water condenser inlet pipe.

4. Plant Cleanliness

The inspector verified the plant cleanliness controls were established.

Plant cleanliness and housekeeping is controlled through general cleaning assignments, special cleaning during maintenance activities, and specific cleaning station assignments made to plant operating and relief shifts.

5. Review of Planned and Unplanned Maintenance

The inspector reviewed Administrative Procedure 4 ACD 3.6, Revision 3, to verify review of normal and emergency maintenance activities by management to insure identification of reportable occurrences.

- a. The review of normal maintenance activities on critical work is provided by the Plant Engineer, Technical, or the Plant Engineer, Operations, and the Operating Supervisor. This review is controlled and documented by the Work Request Authorization (WRA) form.
- b. The review of the emergency maintenance activities on critical work was not provided formally. The work is normally authorized by the Shift Supervisor with concurrence of the Superintendent, Operation and Maintenance;

but the Administrative Control Procedure does not provide control and documentation of a review of the emergency maintenance specifically.

- c. The inspector discussed the apparent weakness in the procedures with the licensee and determined that the licensee intended to provide the control and documentation of the review of emergency maintenance. This item will be followed in a subsequent inspection.

6. Outstanding and Miscellaneous Items

The following items were reviewed:

a. Recirculation Pump Leakage Annunciators

On a previous inspection the licensee indicated that the subject annunciators were going to be disconnected because this system of leakage detection was unreliable.^{1/} The inspector noted during a tour of the control room that these annunciators were identified as being disconnected. The licensee representative also indicated that the annunciators had been disconnected.

b. Modifications for the Detection of Interior Flooding

In December 1975, the licensee submitted^{2/} a letter to L on the status of the subject modification. The inspector reviewed the status of the modifications with the licensee representative who indicated that the status was still the same as reported. In his letter, the licensee indicated that level alarms were installed in the condenser hot well area and in the water pump bay, and will annunciate in the control room in the event of flooding. The licensee representative stated that the flooding alarm actually annunciates at a local panel which in turn actuates an annunciator in the control room indicating a problem at the local panel.

c. Vane Type Flow Switches

The licensee previously indicated that improved switches for the residual heat removal system and the reactor water cleanup system in place of the original flow paddle switches

^{1/} IE Inspection Rpt. No. 050-263/75-05.
^{2/} NSP to DRL, dtd 12/10/75; Subject: Status of Modifications Being Made to Mitigate the Consequences of Interior Flooding at the Monticello Nuclear Generating Plant.

with paddles removed were being reviewed.^{3/} During this inspection, the licensee representative stated that the original flow paddle switches with the paddle removed had operated reliably and did not intend to replace them. The licensee representative stated that apparently there was still enough surface area left when the flow paddle was attached to the switch arm for the switch to operate properly.

d. "Volume-F" Memos

The "Volume-F" log contained approximately 23 memos dating from April^{4/}, 1971, through 1976. In a previous inspection^{4/} the licensee indicated that the volume would be evaluated for updating. In the discussion with the licensee representative concerning the remaining outstanding memos, the representative indicated that the review and evaluation was continuing. This item will be followed in a subsequent inspection.

e. Station Fire Hose Nozzles

Selected station fire hose nozzles were inspected to insure the center deflectors were tightly installed. The licensee had indicated in a previous inspection that the nozzles would be checked for positioning and tightness.^{5/} One nozzle inspected could be backed off with little effort. The licensee indicated that the condition would be investigated and corrected. No other discrepancies were noted.

- ^{3/} RO Inspection Rpt No. 050-263/74-10.
- ^{4/} IE Inspection Rpt No. 050-263/75-21.
- ^{5/} IE Inspection Rpt No. 050-263/75-19.