

*Reactor Facilities  
Branch*

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

OCT 1 1975

Northern States Power Company  
ATTN: Mr. Leo Wachter, Vice President  
Power Production and System  
Operation

Docket No. 50-263

414 Nicollet Mall  
Minneapolis, Minnesota 55401

Gentlemen:

This refers to the inspection conducted by Mr. Kohler of this office on September 17-19, 1975, of activities at the Monticello Nuclear Generating plant authorized by NRC Operating License No. DFR-22 and to the discussion of our findings with Mr. Larson and others of your staff at the conclusion of the inspection.

A copy of our report of this inspection is enclosed and identifies the areas examined during the inspection. Within these areas, the inspection consisted of a selective examination of procedures and representative records, interviews with plant personnel, and observations by the inspector.

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. If this report contains any information that you or your contractors believe to be proprietary, it is necessary that you make a written application to this office, within twenty days of your receipt of this letter, to withhold such information from public disclosure. Any such application must include a full statement of the reasons for which it is claimed that the information is proprietary, and should be prepared so the proprietary information identified in the application is contained in a separate part of the document. Unless we receive an application to withhold information or are otherwise contacted within the specified time period, the written material identified in this paragraph will be placed in the Public Document Room.

*RC*

Northern States Power  
Company

OCT 1 1975

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No reply to this letter is necessary; however, should you have any questions concerning this inspection, we will be glad to discuss them with you.

Sincerely yours,

Gaston Fiorelli, Chief  
Reactor Operations Branch

Enclosure:  
IE Inspection Report  
No. 050-263/75-14

bcc w/encl:  
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. 050-263/75-14

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) 575 MWe  
Type of Inspection: Routine, Announced  
Dates of Inspection: September 17-19, 1975

Principal Inspector: *J. E. Kohler*  
J. E. Kohler

9/29/75  
(Date)

Accompanying Inspector: W. S. Little

Other Accompanying Personnel: None

Reviewed By: *W. S. Little*  
W. S. Little  
Senior Inspector  
Nuclear Support Section  
Reactor Operations Branch

9/29/75  
(Date)

SUMMARY OF FINDINGS

Inspection Summary

The inspection on September 17-19, (75-14) consisted of review of the following items: (a) pre-refueling activities, (b) refueling activities, (c) maintenance, (d) review of plant operations, (e) local leak rate test and integrated leak test data from previous containment leak tests.

Enforcement Items

None.

Licensee Action on Previously Identified Enforcement Items

Not inspected.

Other Significant Items

A. Systems and Components

None.

B. Facility Items

The licensee commenced a planned 35 day outage on September 11, 1975, in order to replace the 268 7x7 fuel bundles with 8x8 fuel, making Monticello the lead 8x8 fuel BWR. At the conclusion of the present outage, the Monticello core will consist of 464 8x8 assemblies, and 20 7x7 improved assemblies.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by Licensee

None.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

No unresolved items reported.

### Management Interview

A management interview was conducted by Mr. Kohler and Mr. Little with Mr. Larson, Plant Superintendent and other members of his staff at the conclusion of the inspection. The following items were discussed.

- A. The inspector stated that refueling procedures 9007 and 9009 should specify an acceptable time interval prior to refueling for checkout of the fuel prep machine, fuel handling jib crane, and the channel handling boom. The licensee agreed that the comment was valid and stated that appropriate changes will be made. (Paragraph 2, Report Details)
  
- B. The inspector discussed the licensee's emergency plans for a dropped fuel element. The licensee agreed to consider adding some additional precautionary words in the daily refueling check sheet advising against emergency evacuation of the refueling floor with a fuel element suspended over the refueling pool. (Paragraph 2, Report Details)

## REPORT DETAILS

### 1. Persons Contacted

C. Larson, Plant Manager  
D. Nevinski, Nuclear Engineer  
J. Heneage, Engineer  
B. Jenness, Engineer  
M. Hammer, Engineer  
M. Clarity, Superintendent, Plant Engineering and Radiation Protection  
W. Anderson, Superintendent, Operation and Maintenance  
H. Seibel, Shift Supervisor  
W. Sparrow, Operations Supervisor

### 2. Preparation for Refueling

The licensee's pre-refueling activities were inspected to determine whether technical specifications and approved refueling procedures were being followed. The inspector reviewed procedures relating to movement of fuel into and out of the pool and the core, as well as daily and weekly refueling check sheets, and ascertained that surveillance of the following items had been included in approved procedures:

- Refueling Machine Operation
- Ventilation Requirements in Fuel Storage Areas
- Refueling Interlocks
- Crane Testing
- Radiation Monitors on the Refueling Floor
- Communication Systems Between the Refueling Deck and the Control Room
- Fuel Pool Cooling Capability for Stored Fuel
- Fuel Transfer and Core Verification

The licensee plans to sip all the original core 7x7 fuel prior to discharge to General Electric Company. Additionally, the licensee was in the process of determining how many of the 8x8 fuel bundles from cycles three and four were going to be sipped. As of September 12, 1975, the lead 8x8 fuel assemblies have accumulated about 8000 MWd/MTu.

Refueling procedures 9007 and 9009 specify checkouts of the fuel handling jib crane, the fuel prep machine, the channel handling boom, and the channel handling tool. However, there was no time interval

specified prior to refueling for completion of these checkouts. Several checkouts for the September outage were completed in July, 1975. The licensee will modify the refueling procedures to include an acceptable time interval, prior to refueling, in which these checkouts can be completed.

The inspector discussed the licensee's emergency recovery plans with respect to an emergency on the refueling floor. Present plans call for immediate personnel evacuation when the radiation alarm sounds. The licensee agreed to consider adding additional precautionary words to the daily refueling check sheets advising against emergency evacuation of the refueling deck with a fuel element suspended from the grapple over the refueling pool. The inspector has no further questions regarding this item at this time.

### 3. Refueling Activities

The inspector observed activities on the refueling deck and in the control room, and verified that the following items were being conducted according to approved procedures:

- a. Source range instrumentation had a minimum of 3CPS.
- b. Secondary containment integrity existed, consisting of routine supply and exhaust systems operating, and the stand-by gas treatment systems operable.
- c. Fuel bundle movement on the refueling deck was in accordance with fuel movement procedures approved by the station nuclear engineer.
- d. Core internals were protected with polyurethane, and house-keeping was acceptable. Precautions were taken to limit the number of loose objects that could fall into the reactor pool.
- e. Refueling crew was under the direct supervision of a shift supervisor holding a valid senior reactor operation's license.
- f. Pool water level was at 33 feet and fuel pool cooling was being monitored in the control room.
- g. The reactor mode switch was in the refueling mode.
- h. During the refueling activities observed in the control room, a licensed operator was present in direct communication with a member of the fuel handling crew.

- i. Fuel accountability measures were being taken, core maps, status boards, and checks were maintained in accordance with established procedures.
- j. Control rod movement during refueling was in accordance with technical specification.

4. Maintenance

The master outage plan was obtained from the licensee and three maintenance activities were selected for review. The inspector determined that approved procedures existed for the following:

Main Steam Line Isolation Valve Leak Testing.

Leak Rate Testing of Feedwater Check Valves.

Inspection of Four-Inch Recirculation Piping.

5. Review of Plant Operations

The master checkout sheet for plant startup was obtained and it was determined that procedures existed for returning systems disturbed or tested during refueling to operating status prior to start up. The following system checkout sheets were reviewed:

- a. Main Steam
- b. Reactor Protection
- c. Condensate Feedwater
- d. High Pressure Core Injection
- c. Control Rod Drive

6. Containment Local Leak Rate Tests

The inspector reviewed the results of two previous containment leak rate tests (1973, 1974) in preparation for the containment leak test scheduled for the September, 1975 outage and noted that feedwater check valves, which had been found to be leaking excessively, had been repaired. The repair consisted of bending the disc hinge arm .08 inches (allowing the disc to meet with the seat uniformly), and regrinding and lapping the disc seating surfaces. The repaired feedwater check valves have subsequently been found to be leak tight. Modifications are planned for valves in two other lines that have been found to leak excessively in previous tests. These lines are the Reactor Core Isolation Cooling and the High Pressure Injection Cooling lines.