

UNITED STATES NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report of Operations Inspection

IE Inspection Report No. 050-263/75-17

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: Special, Announced

Dates of Inspection: November 11-15, 1975

Principal Inspector: *Joel E. Kohler*  
Joel E. Kohler

*12/1/75*  
(Date)

Accompanying Inspectors: None

Other Accompanying Personnel: None

Reviewed By: *W. S. Little*  
W. S. Little, Section Leader  
Nuclear Support

*12/1/75*  
(Date)

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## SUMMARY OF FINDINGS

### Inspection Summary

The inspection on November 11-15, (75-17): consisted of a review and witness of the 1975 Monticello Integrated Leak Rate Test.

### Enforcement Items

None.

### Licensee Action on Previously Identified Enforcement Items

None.

### Other Significant Items

#### A. Systems and Components

1. During the ILRT, a ball valve in the TIP system was found to be leaking at approximately 500 scfh. The ball valves in the TIP penetrations are non testable and are not included in the local leak rate test program.
2. Unresolved Item - The licensee was asked in a telephone call following the inspection to consider corrective action for penetrations identified as leaking excessively in two or more local rate test programs. This will be followed up at a later inspection. (Paragraph 3, Report Details)

#### B. Facility Items (Plans and Procedures)

1. The containment was calculated to have an "as found" integrated leak rate of approximately 4 w/o/day which is in excess of the technical specification limit of 1.2 w/o/day.
2. The as left containment integrated leak rate at the conclusion of the test was approximately .25 w/o/day.
3. The licensee plans to run the next integrated leak rate test (ILRT) during the next refueling outage as required by their Technical Specification. This time interval prior to retest may be as great as 24 months which exceeds the approximate 18 month minimum interval required by 10 CFR 50, Appendix J, Section III.A.6(b) Justification for this departure from Appendix J requirement will be addressed in a License Amendment Request to be submitted to the Division of Reactor Licensing prior to December 31, 1975.

C. Managerial Items

None.

D. Noncompliance Identified and Corrected by the Licensee

None.

E. Deviations

None.

F. Status of Previously Reported Unresolved Items

None.

Management Interview

A management interview was conducted by Mr. Kohler 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 containment leakage from the ball valve in the TIP system found leaking during the ILRT was a reportable occurrence. The licensee stated that the valve would have to be examined after depressurization before a determination could be made regarding its reportability. Examination subsequent to the inspection resulted in the licensee concluding that this event was reportable. (Paragraph 5, Report Details)
- B. The licensee was asked whether future modifications to the TIP system penetrations would be made so that these penetrations could be classified as testable and included in the local leak rate test program. The licensee had not reached a conclusion at the completion of the inspection. (Paragraph 6, Report Details)
- C. The licensee had not established acceptance criteria for leakage from the reference vessel. The licensee stated he would develop such criteria. The inspector has no more questions regarding this item. (Paragraph 7, Report Details)

REPORT DETAILS

1. Persons Contacted

- C. Larson, Plant Superintendent
- D. Antony, Plant Engineer, Operations
- M. Hammer, Engineer
- B. Jenness, Engineer
- D. Goranson, Engineer
- M. Clarity, Superintendent, Plant Engineer and Radiation Protection
- H. Theobalt, Engineer
- H. Nimmo, Maintenance Supervisor

2. General

The inspector observed the integrated leak rate test. Conduct of the test was compared with the requirements of the licensee's test procedure, the technical specifications and 10 CFR 50, Appendix J.

3. As Found Containment Leak Rate

The results of the licensee's local leak rate test program were obtained. The containment leakage in the as found condition was estimated by the inspector to about 4 weight percent per day. The following leakage was considered significant in contributing to the as found containment leakage.

<u>Penetration</u>	<u>Leakage (scfh) at 41 psig</u>
Seismic Restraint Part D	15
AO-2561	168
2561B	
Main Steam Drain Line	306
HPCI-9	21
CRD Return Line (CRD-31)	450
XP-6	60
Core Spray A Injection Check	29
Core Spray B Injection Check	101
Ball valve in TIP system	500
	<u>1652</u>

$$(1) \frac{1652}{344} \times .9 \text{ w/o/day} = 4.3 \text{ w/o/day}$$

(1) .9 w/o/day is equivalent to approximately 344 scfh.

4. Leaking Penetrations Identified In Previous Local Leak Rate Tests

The inspector obtained the results of the 1973, 1974 and 1975 local leak rate test program and has identified the following penetrations as showing excessive leakage in two or more tests.

<u>Penetration</u>	<u>Leakage (scfh)</u>		
	<u>1973</u>	<u>1974</u>	<u>1975</u>
Main Steam Drain Line (MO2373)	26	484	306
HPCI-9	940	65.6	21
CRD Return Line (CRD-31)	98	—	450
XP-6 (Standby By Control)	Note 1	—	60
Core Spray Injection Check A	970	331	29
Core Spray Injection Check B	Note 1	396	103

The licensee was asked in a followup telephone call whether he was considering corrective action for these penetrations. The inspector will follow this item in a subsequent inspection and has no further questions at this time.

5. TIP Leakage

The ILRT began on 0900 November 14, 1975, upon attaining a containment internal pressure of 41 psig. During the first 16 hours of the ILRT, the containment leakage rate was calculated to be about 1.6 w/o/day, exceeding the allowable leakage rate of .9 w/o/day. At approximately 0100 on November 15, 1975, a leak was discovered in a ball valve of one of the TIP penetrations. Upon isolating this leak, the containment integrated leak rate dropped to about .25 w/o/day.

The inspector estimated that the ball valve was leaking at about 1.35 w/o/day equivalent to about 500 scfh.

6. Reportability of TIP Leakage

At the conclusion of the inspection the inspector stated that the leakage through the ball valve in the TIP system was a reportable occurrence. The basis the inspector used for this conclusion was that it crossed one of the boundaries (the containment) to exceed its allowable leak rate.

The licensee stated that reportability of this occurrence could not be determined until the valve was examined after containment depressurization. Although the valve was not leak tested before pressurization, preventative maintenance was performed on the valve. The licensee took the position that the leak would not be reportable if it could have been attributed to the preventative maintenance performed on the valve.

- (1) Would not hold test pressure.

After depressurization the licensee determined that the leakage was a reportable occurrence.

7. Possible Modifications to Ball Valve TIP Penetrations

The licensee has classified the TIP penetrations as non testable. The licensee was asked whether future modification of these three penetrations would be made so that they could be classified as testable and included in the local leak rate test program. At the conclusion of the inspection no decision has been made by the licensee about design modifications to the TIP system.

8. Acceptance Criteria For Reference Vessel Leakage

Before containment pressurization and after containment depressurization the licensee is required to perform a leak test on the reference vessel used in the ILRT. The reference vessel had a leak rate of .1 w/o/day at 50 psig before the test. Excessive leakage of the reference vessel after containment depressurization would invalidate the results of the ILRT.

The licensee had not developed any acceptance criteria for allowable reference vessel leakage after containment depressurization and stated he would do so before the next ILRT. The inspector has no more questions regarding this item at this time.