

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-282/84-07(DPRP)

Docket No. 50-282

License No. DPR-42

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

Facility Name: Prairie Island Nuclear Generating Plant

Inspection At: Prairie Island Plant Site
Red Wing, Minnesota

Inspection Conducted: May 21 - 23, 1984

Inspector: J. E. Hard

Approved By: *I. N. Jackiw*
I. N. Jackiw, Chief
Projects Section 2B

6-4-84
Date

Inspection Summary

Inspection of May 21 - 23, 1984 (Report No. 50-282/84-07(DPRP))

Areas Inspected: Special inspection of conditions surrounding the simultaneous opening of both shield building maintenance airlock doors for Unit 1 with the unit at full power. The inspection involved 11 inspector-hours onsite by one NRC inspector.

Results: One item of noncompliance was identified (failure to keep one shield building maintenance airlock door closed with the reactor at full power. See paragraph 3 below.)

DETAILS

1. Persons Contacted

E. Watzl, Plant Manager
D. Mendele, Plant Superintendent, Engineering
and Radiation Protection
A. Hunsted, Staff Engineer
R. Albrecht, Superintendent, Quality Engineering
B. Stephens, Lead Production Engineer
R. Fraser, Engineer

The inspector also had brief discussions on this matter with other plant personnel.

2. Background

The Prairie Island staff is required by Tech Specs to perform six-month leakage rate tests of the containment building airlocks. See TS 4.4, A.2. A test is performed by pressurizing the inner volume of an airlock to 46 psig and measuring the makeup flow rate to maintain this pressure over a two and a half hour period. The pertinent test is described in Surveillance Procedure 1136, "Volumetric Leakage Rate Test of Containment Airlocks." Service air from a hose to a nearby manifold is the source of air for the initial pressurization and is the usual source of makeup air. The general plant practice since about 1978 has been to open both shield building airlock doors during these tests to permit the hose connections discussed above. The total time the doors would be opened simultaneously in this procedure is about three and a half hours. Occasionally, a more convenient source of compressed air has been used for the makeup phase of the test. In these cases, the shield building airlock doors would be open simultaneously for about one hour.

3. Conditions on May 21, 1984

About 1040 on May 21 the inspector noted during a routine walk-through inspection of the auxiliary building that the two shield building maintenance airlock doors for Unit 1 were open with an air hose running through the airlock. SP 1136 was in progress. Unit 1 was operating at full power at the time. Discussions on this matter were held promptly with the plant staff and one airlock door was closed. The total time that the doors were open simultaneously was estimated by the shift supervisor to be about 30 minutes.

Limiting Condition for Operation Technical Specification 3.6.A.1 states that containment system integrity shall be maintained except when certain conditions exist. (Full power operation is not one of these conditions.) And, containment integrity is defined in part in TS 1.0.C.7 as having at least one door in each shield building airlock closed. (See Attachment,

Proposed Notice of Violation, for the exact working of the technical specifications.) Therefore, on May 21, 1984 the licensee exceeded their LCO on containment system integrity. This is a Severity Level IV violation.

4. Other Observations

- a. Westinghouse Standardized Technical Specifications permit shield building integrity to be violated for 24 hours before corrective action is required. See Sec. 3.6.8.2.
- b. SP 1136 is performed during reactor operation once per year per unit. Therefore, violation of shield building integrity from this source has been limited to about three and a half hours per year per unit.
- c. The operating staff had been considering the shield building airlock doors to be part of the auxiliary building Category I ventilation boundary rather than the correct classification as part of the shield building boundary. With the former interpretation, Tech Specs allow small openings to exist in the ventilation boundary for indefinite periods of time.
- d. Even with both shield building doors open during a DBA, it is not clear that unsatisfactory conditions would result since venting from the annulus, if any, would be to the auxiliary building which has its own filtered ventilation provisions.
- e. Licensee reported the event under the four-hour reporting requirement of 10 CFR 50.72.
- f. The following procedure/personnel related violations have occurred since September 1983:

| <u>Report Number</u> | <u>Subject</u> |
|--------------------------------|--|
| 83-18, 83-19 | Failure of No. 11 ST Pump |
| 83-19, 83-20 | Fill and vent procedure not revised to reflect the existence of a modification |
| 50-282/83-20 | Racking out of bustie breaker No. 26-8 |
| 83-22, 83-22 (being issued) | Operation with degraded grid voltage |
| 84-03, 84-03 | Logging requirements not being met |
| 84-05, 84-05 | Alarm annunciator procedure not available |

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Simultaneous opening of both shield
building airlock doors (subject of
the attached report)

5. Corrective Actions Instituted

Licensee immediately corrected the unsatisfactory condition. SF 1136 will henceforth require using a local air supply for all testing, therefore permitting shield building doors to remain closed.