June 5, 2000

Mr. M. Wadley
President, Nuclear Generation
Northern States Power Company
414 Nicollet Mall
Minneapolis, MN 55401

SUBJECT: PRAIRIE ISLAND RADIATION SAFETY INSPECTION REPORT
50-282/2000007(DRS); 50-306/2000007(DRS)

Dear Mr. Wadley:

On May 12, 2000, the NRC completed a routine inspection at your Prairie Island Nuclear Station. The results of this inspection were discussed on May 12, 2000, with Mr. Don Schulke and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination of activities conducted under your license as they relate to radiation safety and to compliance with the Commission's rules and regulations and with the conditions of your license. Within these areas the inspection consisted of a selective examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, this inspection focused on the implementation of your radiological access control, ALARA (as-low-as-is-reasonably-achievable) planning and controls, and radiation worker practices during the Unit 2 Refueling Outage. In addition, we reviewed your staff's evaluation of the performance indicator for the occupational radiation safety cornerstone.

Based on the results of this inspection, no significant inspection findings were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter (and its enclosure(s)) will be placed in the NRC Public Document Room and is available on the NRC Public Electronic Reading Room (PERR) link at the NRC home page, namely http://www.nrc.gov/NRC/ADAMS/index.html.

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

Sincerely,

/RA/

Gary L. Shear, Chief
Plant Support Branch
Division of Reactor Safety

Docket Nos. 50-282; 50-306
License Nos. DPR-42; DPR-60

Enclosure: Inspection Report 50-282/2000007(DRS);
50-306/2000007(DRS)

cc w/encl: Site General Manager, Prairie Island
Plant Manager, Prairie Island
S. Minn, Commissioner, Minnesota
Department of Public Service
State Liaison Officer, State of Wisconsin
Tribal Council, Prairie Island Dakota Community

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S. Minn, Commissioner, Minnesota
Department of Public Service
State Liaison Officer, State of Wisconsin
Tribal Council, Prairie Island Dakota Community

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-282; 50-306
License Nos:	DPR-42; DPR-60
Report No:	50-282/2000007(DRS); 50-306/2000007(DRS)
Licensee:	Northern States Power Company
Facility:	Prairie Island Nuclear Generating Plant
Location:	1717 Wakonade Dr. East Welch, MN 55089
Dates:	May 8-12, 2000
Inspector:	M. Mitchell, Radiation Specialist
Approved by:	Gary L. Shear, Chief, Plant Support Branch Division of Reactor Safety

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

SUMMARY OF FINDINGS

Prairie Island, Units 1 & 2
NRC Inspection Report 50-282/2000007(DRS); 50-306/2000007(DRS)

The report covers a 1-week period of announced inspection by a regional radiation specialist. This inspection focused on occupational radiation safety and included a review of the access control program, radiation worker practices, and ALARA (as-low-as-is-reasonably-achievable) planning and controls in conjunction with the Unit 2 Refueling Outage. In addition, the inspector reviewed the licensee's performance indicator (PI) data associated with the occupational radiation safety cornerstone.

RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

- There were no significant inspection findings identified.

Performance Indicators Verification

- Occupational Radiation Safety Performance Indicator (PI). The licensee identified one incident relative to the occupational radiation safety cornerstone during the first quarter of 2000, which was reported as a single PI occurrence. The licensee's PI tabulation indicated that performance was in the licensee response band (green). The licensee identified a failure to survey and lock a high radiation area, as required by the technical specifications.

Report Details

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control

.1 Plant Walkdowns and Radiological Boundary Verifications

a. Inspection Scope

The inspector performed walkdowns of the radiologically protected area (RPA) to verify the adequacy of radiological boundaries and postings. Specifically, the inspector performed confirmatory radiation measurements in the Reactor, Auxiliary, and Radwaste Buildings to verify that radiologically significant work areas (high radiation areas (HRAs), radiation areas, and airborne radioactivity areas) were properly posted and controlled.

b. Observations and Findings

There were no findings identified and documented during this inspection.

.2 Reviews of Radiation Work Permits

a. Inspection Scope

The inspector reviewed radiation work permits (RWPs) and electronic dosimeter (ED) alarm set points for both dose rate and accumulated dose to verify that adequate work controls were in place to maintain worker exposures ALARA (as-low-as-is-reasonably-achievable).

b. Observations and Findings

No inspection findings were identified or documented.

.3 Reviews of Radiologically Significant Work

a. Inspection Scope

The inspector reviewed the conduct of work activities in the RPA that were expected to result in significant radiological exposures. Specifically, the inspector verified the adequacy of radiological controls (e.g., radiation work permits and ALARA reviews), surveys, and ALARA pre-job briefings for the following work activities:

- Reactor Coolant Pump Seal Replacement
- Steam Generator Eddy Current Testing
- Steam Generator Hand Hole Machining

b. Observations and Findings

No inspection findings were identified.

2OS3 Radiation Monitoring Instrumentation

.1 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspector verified the calibration of selected radiation survey instruments and observed several Radiation Protection (RP) technicians' selection and operational checks of portable radiation survey instruments for several jobs requiring technician job coverage.

b. Observations and Findings

There were no findings identified during this inspection.

2OS4 Radiation Worker Performance

a. Inspection Scope

During work evolutions (Section 2OS1.3), the inspector observed radiological control practices of personnel within the RPA. Additionally, the inspector attended Radiation Protection technician shift turnover meetings and outage management meetings.

b. Observations and Findings

There were no inspection findings identified.

4 OTHER ACTIVITIES

4OA1 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed Condition Resolution Documents (CRs) associated with technician performance, radiation worker practices, radiological instrumentation, and control of HRAs, initiated since January 2000.

b. Observations and Findings

There were no inspection findings identified.

4OA2 Performance Indicator Verification

a. Inspection Scope

The inspector reviewed the licensee's assessment of its performance indicator (PI) for occupational radiation safety. Specifically, the inspector reviewed historical CRs concerning Locked HRA control problems to assess overall performance in this area. In addition, the inspector reviewed the preliminary corrective actions for an event on March 27, 2000, that resulted in the licensee's failure to properly secure a Locked High Radiation Area.

b. Observations and Findings

The March 27, 2000, event and licensee follow-up were documented in NRC Inspection Report 50-282/2000004(DRP); 50-306/2000004(DRP). The event involved a resin sluice evolution that created a high radiation area greater than one rem/hr, which the licensee failed to timely identify and timely secure. For the first quarter of 2000 (January to March 2000), the licensee reported one PI occurrence based on concurrent nonconformance related to the March 27, 2000, event. The NRC is continuing to review this event in light of the licensee's PI report for the first quarter of 2000 to determine if the event resulted in a single PI occurrence as reported by the licensee or if the event resulted in multiple PI occurrences. However, performance in this PI remained in the licensee response band (green). One Unresolved Item remains under review. (URI 50-282/2000-007-01; 50-306/2000-007-01)

4OA5 Management Meetings

.1 Exit Meeting Summary

The inspector presented the inspection results to Mr. Don Schulke and other members of licensee management and staff at the conclusion of the inspection on May 12, 2000. The licensee acknowledged the findings presented and did not identify any information discussed as proprietary.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

A. Johnson, General Superintendent Radiation Protection
T. Beard, Corporate Health Physicist
G. Malinowski, Radiation Protection Supervisor
D. Schulke, Plant Manager

NRC

M. Mitchell, Radiation Specialist
Scott Thomas, Resident Inspector
Steve Ray, Senior Resident Inspector

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-282/2000-007-01 50-306/2000-007-01	URI	Occupational Radiation Safety PI reporting issues (4OA2)

Closed

None

Discussed

None

LIST OF ACRONYMS USED

ALARA	As-Low-As-Is-Reasonably-Achievable
CARD	Condition Assessment and Resolution Document
DRS	Division of Reactor Safety
ED	Electronic Dosimeter
HRA	High Radiation Area
PERR	Public Electronic Reading Room
PI	Performance Indicator
RP	Radiation Protection
RPA	Radiologically Protected Area
RWP	Radiation Work Permit

LIST OF DOCUMENTS REVIEWED

Assessments and Audits

1999 PING Annual RP Program Self-Assessment

Reports

Exposure Overview by Activity/Task, 4/29/00 to 5/8/00
Hot Spot Tracking Report
Deep Gamma Dose Esposure by RWP/ Worker, 4/29/00 to 5/10/00

Radiation Work Permits

Radiation Work Permit No. 2001 (Revision 0)
Radiation Work Permit No. 2006 (Revision 0)
Radiation Work Permit No. 2008 (Revision 0)
Radiation Work Permit No. 2040 (Revision 1)
Radiation Work Permit No. 2059 (Revision 0)
Radiation Work Permit No. 2051 (Revision 0)

ALARA Reviews

ALARA Review, SG Primary Side Work

Condition Reports

20000154
20000188
20000277
20000843
20000874
20001144
20001217
20001287
20001350
20001377
20001431
20001511

Procedures

PINGP 258 (Revision 10), “Radiation Protection Survey Record”
D20.17 (Revision 12), “Sluicing Resin from 21 Evap Condensate IX to a Resin Shipping Liner”
D20.27 (Revision 4), “Sluicing Resin from 11 Evap Condensate IX to Low Level Resin Liner”
D20.29 (Revision 14), “Sluicing Resin from 21 Evap Condensate IX to Low Level Resin Liner”