## February 8, 2001

Mr. J. Sorensen Site General Manager Prairie Island Nuclear Generating Plant Nuclear Management Company, LLC 1717 Wakonade Drive East Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT - NRC INSPECTION

REPORT 50-282/01-04(DRS)

Dear Mr. Sorensen:

On February 1, 2001, the NRC completed a routine inspection at your Prairie Island Nuclear Generating Plant, Unit 1. The results were discussed on February 1, 2001, with Mr. M. Werner and other members of your staff. The enclosed report presents the results of that inspection.

This inspection was an examination of activities conducted under your license as they relate to the effectiveness of your program for monitoring degradation of vital system boundaries. Specifically, the inspector evaluated the implementation of your inservice inspection program for monitoring degradation of the reactor coolant system boundary and the risk significant piping system boundaries. Within these areas, the inspection consisted of selected examination of procedures and representative records, and interviews with personnel.

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

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <a href="http://www.nrc.gov/NRC/ADAMS/index.html">http://www.nrc.gov/NRC/ADAMS/index.html</a> (the Public Electronic Reading Room).

Sincerely,

/RA/

John M. Jacobson, Chief Mechanical Engineering Branch Division of Reactor Safety

Docket No.: 50-282 License No.: DPR-42

Enclosure: Inspection Report 50-282/01-04(DRS)

See Attached Distribution

cc w/encl: Plant Manager, Prairie Island

M. Wadley, Chief Nuclear Officer

G. Eckholt, Site Licensing Manager

S. Northard, Nuclear Asset Manager

J. Malcolm, Commissioner, Minnesota

Department of Health

State Liaison Officer, State of Wisconsin

Tribal Council, Prairie Island Dakota Community

J. Silberg, Esquire

Shawn, Pittman, Potts, and Trowbridge

P. Tester, Assistant Attorney General

Minnesota Office of Attorney General

S. Bloom, Administrator

Goodhue County Courthouse

Commissioner, Minnesota Department

Of Commerce

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Sincerely,
/RA/
John M. Jacobson, Chief
Mechanical Engineering Branch
Division of Reactor Safety

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cc w/encl: Plant Manager, Prairie Island

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# U.S. NUCLEAR REGULATORY COMMISSION REGION III

Docket No: 50-282 License No: DPR-42

Report No: 50-282/01-04(DRS)

Licensee: Nuclear Management Company, LLC

Facility: Prairie Island Nuclear Generating Plant, Unit 1

Location: 1717 Wakonade Drive East

Welch, MN 55089

Dates: January 29 - February 1, 2001

Inspector: D. E. Jones, Reactor Inspector

Approved by: John M. Jacobson, Chief

Mechanical Engineering 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
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness
- Occupational
  - Public
- Physical Protection

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

IR 05000282-01-04(DRS); on 01/29-02/01/01, Nuclear Management Company, LLC, Prairie Island Nuclear Generating Plant, Unit 1. Inservice Inspection (ISI) report.

This report covers the initial annual baseline inspection of the effectiveness of the licensee's inservice inspection program for monitoring degradation of the reactor coolant system boundary and the risk significant piping system boundaries. This inspection was conducted by a Region III reactor engineer. No findings of significance were identified.

## Report Details

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R08 Inservice Inspection (Inspection Procedure 71111.08)

#### a. <u>Inspection Scope</u>

The inspector reviewed the implementation of the licensee's inservice inspection program for monitoring degradation of the reactor coolant system boundary and the risk significant piping system boundaries. Specifically, the inspector observed in-process ultrasonic, magnetic particle, eddy current activities, and reviewed one modification package, including radiographs. The steam generator eddy current examination review consisted of observation of data acquisition (Row 1, Column 35, U-bend area with a motorized rotating pancake coil), and initial findings. The review also verified that the licensee was implementing (Prairie Island Low Row U-Bend Plan) the lessons learned from a recent steam generator tube rupture event at another facility.

# b. <u>Findings</u>

No findings of significance were identified.

#### 4. OTHER ACTIVITIES

#### 4OA2 Identification and Resolution of Problems

#### a. Inspection Scope

The inspector reviewed four condition reports and four discrepancy reports related to inservice inspection issues to verify the identification of problems at an appropriate threshold. The inspector also verified that the corrective actions were appropriate.

#### b. Findings

No findings of significance were identified.

## 4OA6 Management Meetings

## Exit Meeting Summary

The inspector presented the inspection results to Mr. M. Werner, Plant Manager, and other members of licensee management at the exit meeting held on February 1, 2001. The licensee acknowledged the results of the inspection. No proprietary information was identified.

#### PARTIAL LIST OF PERSONS CONTACTED

#### Licensee

- J. Sorenson, Site Vice President
- M. Werner, Plant Manager
- R. Pearson, Steam Generator Program Engineer
- P. Hajovy, ISI Coordinator
- S. Redner, NDE Consulting Specialist
- D. Whitcomb, ISI Engineer

# U.S. Nuclear Regulatory Commission (NRC)

- S. Ray, Senior Resident Inspector
- S. Thomas, Resident Inspector

## LIST OF NONDESTRUCTIVE EXAMINATION ACTIVITIES OBSERVED

- Ultrasonic Examination (Procedure ISI-UT-1A) of Weld 18LSU (MS-188), Main Steam "B" pipe-to-cap weld
- Magnetic Particle Inspection (Procedure ISI-MT-1) of Weld 18 LSU (MS-188), Main Steam "B" pipe-to-cap weld
- Ultrasonic Examination (Procedure ISI-UT-5B) of Weld N-1 IR, Steam Generator 12 Feedwater Nozzle Inner Radii from the Blend Radius
- Ultrasonic Examination (Procedure ISI-UT-3) of Weld W-F, Steam Generator 12 Transition to Shell (Girth) Weld

#### PARTIAL LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort.

## **Reports**

Prairie Island Inservice Inspection Summary Report, Interval 3, Period 2, Refueling Outage date 04/25/99 to 05/26/99, Report date 08/04/99

Northern States Power Company Welding and Brazing Qualifications

#### Procedures

Procedure No. ISI-ET-1.0, "Bobbin Coil Data Analysis," Revision 12, 01/19/01

Procedure No. ISI-NDE-0, "Equipment, Personnel and Material Reporting," Revision 10, 01/24/01

Procedure No. ISI-MT-1, "Dry Magnetic Particle Examination," Revision 11, 11/17/00

Procedure No. ISI-UT-1A, "Ultrasonic Examination of Ferritic Piping Weld to Appendix VIII," Revision 0, 01/22/01

Procedure No. ISI-UT-3, "Ultrasonic Examination of Ferritic Vessels," Revision 9, 01/05/00

Procedure No. ISI-UT-5B, "Ultrasonic Examination of Steam Generator Feedwater Nozzle Inner Radii From the Blend Radius," Revision 3, 10/07/98

MQS Inspection Procedure No. 20.A.100-1989, "Radiographic Examination of Welds (General Requirements)," Revision 2, 01/22/93

MQS Inspection Procedure No. 20.A.131-1989, "Radiographic Examination of Welds," Revision 0, 03/13/93

Procedure No.5AWI 9.10.1, "Special Processes," Revision 1, 02/11/97

Procedure No. 5AWI 1.10.0, "Corrective Action Process," Revision 3, 10/12/99

Procedure No.5AWI 1.10.1, "Condition Reporting Process," Revision 3, 11/17/00

Procedure No. ISIA 1.6, "Inservice Inspection Administration Discrepancy Tracking," Revision 1, 12/11/00

### **Modification Package**

Work Order No. 0100517, Unit 1 Loop "B" Pressurizer Spray Valve Replacement

#### Radiographs

Unit 1 Loop "B" Pressurizer Spray Valve Replacement, Work Order No. 0100517, Welds FW-1 and FW-2

## Condition Report Nos.

2000504, 2010566, 20010828, 20011046

#### Discrepancy Report Nos.

PI 2001-001, 2001-002, 2001-003, 2001-004