March 19, 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 50-282/01-08(DRS); 50-306/01-08(DRS)

Dear Mr. Sorensen:

On March 9, 2001, the Nuclear Regulatory Commission (NRC) completed the baseline annual inspection of safety evaluations of changes, tests, or experiments (10 CFR 50.59) at your Prairie Island Nuclear Generating Plant. The enclosed report documents the inspection results which were discussed on March 9, 2001, with you and other members of your staff.

This inspection examined activities conducted in accordance with the requirements of 10 CFR 50.59 under your license as they relate to changes to facility structures, systems, and components; normal and emergency procedures; and the updated safety analysis report. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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 http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Ronald N. Gardner, Chief
Electrical Engineering Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-282/01-08(DRS)
50-306/01-08(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
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Sincerely,
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Ronald N. Gardner, Chief
Electrical Engineering Branch
Division of Reactor Safety

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

Enclosure: Inspection Report 50-282/01-08(DRS)
50-306/01-08(DRS)

See Attached Distribution

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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:	50-282/01-08(DRS); 50-306/01-08(DRS)
Licensee:	Nuclear Management Company, LLC
Facility:	Prairie Island Nuclear Generating Plant
Location:	1717 Wakonade Drive East Welch, MN 55089
Dates:	March 5 - 9, 2001
Inspector:	Doris M. Chyu, Reactor Inspector
Approved by:	Ronald N. Gardner, Chief Electrical 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

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety

- Occupational
- Public

Safeguards

- 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 05000282-01-08(DRS), IR 05000306-01-08(DRS), on 03/05-03/09/2001, Nuclear Management Company, LLC, Prairie Island Nuclear Generating Plant, Units 1 & 2. Evaluation of Changes, Tests, or Experiments report.

This inspection was conducted by a regional reactor inspector. No findings of significance were identified during this inspection.

Report Details

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R02 Evaluation of Changes, Tests or Experiments (71111.02)

.1 Review of Evaluations and Screenings for Changes, Tests or Experiments

a. Inspection Scope

The inspector reviewed 11 safety evaluations performed pursuant to Federal Regulations 10 CFR 50.59. The safety evaluations were related to temporary and permanent plant modifications, set-point changes, procedure changes, potential conditions adverse to quality, and changes to the licensee's updated safety analysis report. The inspector confirmed that the safety evaluations were thorough and that prior NRC approval was obtained when appropriate. The inspector also reviewed 14 safety evaluation screenings, where the licensee had determined that a 10 CFR 50.59 safety evaluation was not necessary. In regard to the changes reviewed where no 10 CFR 50.59 safety evaluation was performed, the inspector verified that the changes did not meet the threshold to require a 10 CFR 50.59 safety evaluation. These safety evaluations and screenings were chosen based on risk significance of samples from the different cornerstones.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspector reviewed the licensee's condition reports concerning 10 CFR 50.59 safety evaluations and screenings to verify that the licensee had an appropriate threshold for identifying issues. The inspector evaluated the effectiveness of the corrective actions for the identified issues.

b. Findings

No findings of significance were identified.

4OA5 Other

.1 (Closed) URI 50-282/306-97012-01(DRS): NRC review of the licensee's evaluation of hot shorts and a determination of the plant's susceptibility to motor operated valve (MOV) damage. The licensee completed the subject evaluation and determined that 32 safe shutdown related MOVs were susceptible to physical damage by fire-induced hot shorts. Condition Report (CR) 19981794 was initiated. This was the subject of LER 50-282/306-98010, Revision 00. The NRC had issued an Enforcement Discretion letter dated March 30, 1999, in which this violation of 10 CFR Part 50, Appendix R, Section III.G, was categorized at Severity Level III (EA 98-256). The corrective actions were reviewed and determined to be appropriate which served as part of the bases for the exercise of enforcement discretion to not issue a Notice of Violation or a Civil Penalty. This item is closed.

.2 (Closed) LER 50-282/306-1998-015, Revision 1: Containment to residual heat removal (RHR) MOV's Appendix R safe shutdown analysis issues. The subject LER was discussed in Inspection Report 50-282/306-98016 as Item 98016-01. This was also the subject of the Enforcement Discretion which was issued on March 30, 1999. The NRC had determined that the information regarding the reasons for the violation and the corrective actions taken to prevent recurrence were already adequately addressed in the subject LER. Therefore, this violation was treated as a Non-Cited Violation in the above enforcement discretion letter. This item is closed.

.3 (Closed) LER 50-282/306-1998-014, Revision 1: Fire Area 32 Appendix R safe shutdown analysis issues. The fire barrier for MV-32335 cables was removed in Fire Area 32. However, the removed barrier was required in accordance with an approved NRC exemption for this area. The subject LER was discussed in Inspection Report 50-282/306-98016 as Item No. 98016-02. This was also the subject of the Enforcement Discretion which was issued on March 30, 1999. The NRC determined that the information regarding the reasons for the violation and the corrective actions taken to prevent recurrence were already adequately addressed in the subject LER. Therefore, this violation was treated as a Non-Cited Violation in the above enforcement discretion letter. The license had since installed one-hour rated barriers on MV 32335 cables. This item is closed.

.4 (Closed) LER 50-282/306-1998-010, Revision 1: Discovery that 32 safe shutdown related MOV's are susceptible to physical damage by fire-induced hot shorts. The licensee identified that eight additional MOVs in the RHR were determined to be safe shutdown related and are susceptible to the same type of damage. These were the same valves identified in LER 50-282/306-1998-015-01 and subject of the Enforcement Discretion issued on March 31, 1999 (EA 98-256). It was determined that sufficient inventory would be available in the reactor water storage tank (RWST) to allow time following the fire to establish another makeup source or to pump water in containment back to the RWST. Therefore, the safety significance is low. This violation was already treated as a Non-Cited Violation in the above enforcement discretion letter. This item is closed.

.5 (Closed) LER 50-282/306-1998-012, Revision 3: Fire Areas 58/73 Appendix R safe shutdown analysis issues. As a part of the initial LER and supplements, the licensee reevaluated the technical bases for each exemption for 11 fire areas. Some discrepancies were identified and documented in Revision 3 of the LER. The discrepancies in all fire areas, with the exception of three fire areas, were not violations of regulatory requirements.

In Fire Area 31 where Train B auxiliary feed water (AFW) pumps are located, the licensee relied on the Train A AFW pumps to be available for safe shutdown functions. Therefore, Division A AFW pump circuits were protected in this area. The licensee identified that the following Train A circuits were located in the Fire Area 31 and not protected:

- 11 AFW pump discharge valves
- 12 AFW pump discharge valves
- 12 AFW CST supply valves

The licensee had since installed rated fire barriers to protect the Division A circuits in Division B AFW pump room. This deficiency was similar to the concern identified in Inspection Report 50-282/306-98016 as Item 98016-02, LER 50-282/302-98014, and its supplements for Fire Area 32 (Train A AFW pump room). The inspection report and LER were the subject of an enforcement discretion issued on March 30, 1999. Due to the availability of alternate core cooling method (feed and bleed), the NRC determined the risk of not providing core cooling with AFW pump was relatively low. Therefore, the deficiency in Fire Area 32 was classified as a Non-Cited Violation in the above enforcement discretion letter. The inspectors considered this deficiency in Fire Area 31 similar to that in Fire Area 32 and as another example of a previously identified violation.

The approved exemption for Fire Areas 31 and 32 required installation of 1-hour rated barriers for Train B circuits. However, protecting Train B in the Train B AFW pump did not ensure that Train A circuits would be available. The licensee revised the safe shutdown capability for Fire Area 31 to rely on Train A equipment and protected Train A circuits in Fire Area 31. The licensee was in the process of re-submitting the exemption to change fire wrapping of Division B to Division A in Fire Area 31. This item is closed.

For Fire Area 32 and 58/73, the licensee re-stated the problems with the removal of 1-hour rated barrier as previously discussed in LER 50/282/306-98012 and its supplements which were the subject the enforcement discretion issued on March 30, 1999, and a Non-Cited Violation. Therefore, no further followup action was required. This item is closed.

4OA6 Management Meetings

Exit Meeting Summary

The inspector presented the inspection results to Mr. Sorensen and other members of licensee management at the exit meeting held on March 9, 2001. The licensee acknowledged the results of the inspection. No proprietary information was identified.

LIST OF PERSONS CONTACTED

Licensee

T. Amundson, General Superintendent of Plant Engineering
D. Anderson, Project Manager
G. Gore, NGS Superintendent of Mechanical Engineering
J. Kivi, Licensing Engineer
J. Sorensen, Site Vice President
S. Thomas, Principle Engineer
M. Werner, Interim Plant Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

50-282/306-97012-01	URI	NRC review of the licensee's evaluation of hot shorts and a determination of the plant's susceptibility to MOV damage
50-282/306-1998-015-01	LER	Containment to RHR MOV's Appendix R safe shutdown analysis issues
50-282/306-1998-014-01	LER	Fire Area 32 Appendix R safe shutdown analysis issues
50-282/306-1998-010-01	LER	Discovery that 32 safe shutdown related MOV's are susceptible to physical damage by fire-induced hot shorts
50-282/306-1998-012-03	LER	Fire Areas 58/73 Appendix R safe shutdown analysis issues

Discussed
None

LIST OF BASELINE PROCEDURES PERFORMED

The following procedure(s) were used to perform the inspection during the report period. Documented findings are contained in the body of the report.

Inspection Procedure(s)

Number	Title
71111.02	Evaluations of Changes, Tests or Experiments
71152	Identification and Resolution of Problems (Reference Only)

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
AFW	Auxiliary Feedwater
AWI	Administrative Work Instruction
CC	Component Cooling
CFR	Code of Federal Regulations
CR	Condition Report
DRS	Division of Reactor Safety
EA	Enforcement Action
EDG	Emergency Diesel Generator
ISI	In-service Inspection
IST	In-service Testing
LER	Licensee Event Report
MOV	Motor Operated Valve
NRC	Nuclear Regulatory Commission
RHR	Residual Heat Removal
RWST	Reactor Water Storage Tank
SBO	Station Blackout
SE	Safety Evaluation
SES	Safety Evaluation Screening
SI	Safety Injection
SP	Surveillance Procedure
URI	Unresolved Item
USAR	Updated Safety Analysis Report

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 NRC inspectors 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. Inclusion of a document in this list does not imply NRC acceptance of the document, unless specifically stated in the inspection report.

Administrative Work Instructions (AWIs)

5AWI 3.3.2, "Safety Evaluation Screenings," Revision 17
5AWI 3.3.3, "Safety Evaluations," Revision 9
5AWI 6.1.4, "Design Change Project Description/Safety Assessment," Revision 1W
5AWI 6.5.0, "Temporary Modifications," Revision 8W

Procedures and Related Documents

Alarm Response Procedure for Annunciator Locations:
47016-0602, 11 RHR Pit Sump Hi/Lo Level
47016-0603, 12 RHR Pit Sump Hi/Lo Level
47013-0307, Control Bank Lo Limit
47013-0207, Control Banks Lo-lo-limit
47047-R-26, 11/21 RHR Cubicle Air Monitor
47017-R-27, 12/22 RHR Cubicle Air Monitor
SP 1130, "Containment Vacuum Breakers Quarterly Tests," Revision 33

Condition Reports (CRs) Generated Prior to Inspection

CR 19993066, Non-Conservative Assumptions Used for Containment Vacuum Breaker Analysis in the USAR

Condition Reports Generated During Inspection

CR 20012304, Error Found in SES 320 and Technical Manual Heat Exchanger Data Sheet for CC Heat Exchangers.
CR 20012329, CC Heat Exchanger not Being Timed Full Open on SP 1155 and 2155.

Safety Evaluations

SE for Mod 98CC01, "CC Cross Leakage Modification," Revision 0
SE for Mod 99SI01, "SI Test Line Orifice Installation," Revision 0
SE 469, "CC Heat Exchanger Specification Sheet Change," Revision 0
SE 527-10-01, "Revise USAR References to Reactor Makeup Controls," Revision 0
SE 555, "USAR Section 8.4.4 EDG Loading During an SBO Event," Revision 0
SE 557, "Recirculation - Passive Failure," Revision 0
SE 558, "Containment Vacuum Relief System," Revision 0
SE 561, "Alternate Method to Cool RCP Seals," Revision 0
SE 565, "RHR Pump Pit Leak Detection," Revision 0

SE 568, “Containment Spray Nozzle Test,” Revision 0
SE 564, “Correct Deficiency in USAR Description of Integrated SI Testing,” Revision 0

Safety Evaluation Screenings

SES 320, “Component Cooling Heat Exchanger Fouling Factor,” Revision 1
SES 624, “Testing of Reactor Trip Breaker Auxiliary Contacts,” Revision 0
SES 626, “CC Temperature Control Valves,” Revision 0
SES 653, “SI Recirculation Line Flow Meter Replacement,” Revision 0
SES 666, “Auxiliary Feedwater Full Flow Test Maximum Power Limitation,” Revision 0
SES 669, “Bypass of Control Room Vent Damper Limit Switches and SE Contacts,” Revision 0
SES 684, “Revision to Cycle Low Head SI Valves in SP 1126 and SP 2126,” Revision 0
SES 685, “Bypass RHR MV Pressure Trip/Interlock in Refueling,” Revision 0
SES 719, “Unit 2 - 2000 ISI Inspection Discrepancies Dispositioned Use-As-Is,” Revision 0
SES 721, “21 CC Pump New Reference Vibration Data,” Revision 0
SES 755, “Addition of Fusible Link to Fire Door #62,” Revision 0
SES 763, “Reduction of Design Closing Force for Diaphragm Containment Isolation Valves,” Revision 0
SES 764, “Snubber 1-RPCH-159 Exceeded 5-year Service Life (Use As Is Disposition),” Revision 0
SES 815, “SI Pump Runout Limit,” Revision 0

Calculations

Calculation No. ENG-ME-407, “SI Test Line Orifice Flow Rate,” Revision 0
Calculation No. ENG-ME-299, “Piping Internal Pressurization,” Revision 2.

Others

Prairie Island Nuclear Generating Plant Report of Changes, Tests and Experiments - December 1999 and March 2000.
USAR 8.4.4, Station Blackout
USAR Section 10.2.3.2.2, Reactor Makeup Control
USAR Section 10.4.2, Component Cooling System
USAR Section 14.4.4, Chemical and Volume Control System Malfunction