October 24, 2000

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

SUBJECT: PRAIRIE ISLAND - NRC INSPECTION REPORT 50-282/2000011(DRS); 50-306/2000011(DRS)

Dear Mr. Sorenson:

On September 15, 2000, the NRC completed a baseline inspection at your Prairie Island Nuclear Generating Plant. The results of this inspection were discussed on September 15, 2000, with you and members of your staff. The enclosed report presents the results of that inspection and results of a September 27, 2000, meeting with you and members of your staff.

The inspection was an examination of activities conducted under your license as they relate to emergency preparedness 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 performance during your biennial emergency preparedness exercise and your staff's capability to self-assess your participants' performance. In addition, we reviewed your staff's determinations of performance indicators for the Emergency Preparedness Cornerstone.

Based on the results of this inspection, one finding was identified regarding the number of technical similarities in the accident scenarios that were used by your staff in an August 2, 2000, "practice drill" and the September 13, 2000, exercise. The similarities between the two scenarios compromised the emergency response organization's ability to test its implementation of the emergency plan and limited the NRC's ability to assess the licensee's exercise and critique performance. A root cause assessment conducted by your staff identified resource management and work organization planning as contributing causes to a number of similarities in the August and September scenarios. Further, your staff identified that these causes also contributed to similar concerns regarding the licensed operator examination program which you discussed during the September 27, 2000, meeting.

Due to the accident scenario similarities identified by your staff and the NRC inspection team during the September 11 - 15, 2000, onsite inspection, it is our understanding that you have decided to conduct another emergency preparedness exercise to fulfill the requirements of 10 CFR 50.47 (b)(14) and Appendix E to Part 50, Paragraph IV.F., on December 13, 2000. If our understanding of this issue is incorrect, please contact Mr. Thomas Ploski on my staff.

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).

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 50-282/2000011(DRS);
50-306/2000011(DRS)

cc w/encl: Site General Manager, Prairie Island
Plant Manager, Prairie Island
J. Bernstein, Deputy Commissioner, Minnesota
Department of Public Service
State Liaison Officer, State of Wisconsin
Tribal Council, Prairie Island Dakota Community
W. Curtis, FEMA, Region V

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State Liaison Officer, State of Wisconsin
Tribal Council, Prairie Island Dakota Community
W. Curtis, FEMA, Region V

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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:	50-282/2000011(DRS); 50-306/2000011(DRS)
Licensee:	Nuclear Management Company
Facility:	Prairie Island Nuclear Generating Plant
Location:	1717 Wakonade Drive East Welch, MN 55089
Dates:	September 11-15, 2000 with continuing in-office review through September 27, 2000
Inspectors:	T. Ploski, Senior Emergency Preparedness Analyst R. Jickling, Emergency Preparedness Analyst S. Ray, Senior Resident Inspector S. Thomas, Resident Inspector G. Wilson, Examiner Trainee
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

IR 50-282/2000011(DRS), IR 50-306/2000011(DRS), on 09/11 - 09/27/2000; Nuclear Management Company; Prairie Island Nuclear Generating Plant, Units 1 & 2. Emergency Preparedness.

The report covers a one week period of announced onsite inspection by three regional inspectors and two resident inspectors, and further in-office review of relevant records. The inspection focused on the Reactor Safety, Emergency Preparedness Cornerstone, and included the following: evaluation of licensee staff's capability to assess licensee participants' performance during the biennial emergency preparedness exercise; and the annual review of the three performance indicators associated with emergency preparedness.

REACTOR SAFETY

Cornerstone: Emergency Preparedness

No color. An issue was identified regarding the number of technical similarities in the accident scenarios that were used by licensee staff in the August 2, 2000 "practice drill" and the September 13, 2000 exercise. The use of the similar scenario compromised the licensee's ability to effectively test its implementation of the Emergency Plan and limited the NRC's ability to assess the licensee's exercise and critique performance. The licensee's root cause analysis indicated two root causes were common to a previously identified issue in the licensed operator training program.

Report Details

1. REACTOR SAFETY

Cornerstone: Emergency Preparedness (EP)

1EP1 Drill, Exercise, and Actual Events

a. Inspection Scope

The inspectors reviewed the September 2000 exercise's objectives and scenario to ensure that the exercise would acceptably test major elements of the licensee's emergency plan. The inspectors verified that simulated problems provided an acceptable framework to support demonstration of the licensee's capabilities to implement its emergency plan.

The inspectors evaluated exercise performance, focusing on the risk-significant activities of emergency classification, notification, and protective action recommendations, as well as implementation of accident mitigation strategies in the following emergency response facilities:

- Control Room Simulator (CRS)
- Technical Support Center (TSC)
- Operational Support Center (OSC)
- Emergency Operations Facility (EOF)

The inspectors also assessed the licensee's recognition of abnormal plant conditions, transfer of responsibilities between facilities, internal communications, interface with offsite officials, readiness of emergency facilities and related equipment, and overall implementation of the Prairie Island Nuclear Generating Plant's emergency plan.

The inspectors attended post-exercise critiques in the TSC, OSC, and EOF to evaluate the licensee's initial self-assessment of its exercise performance and later met with the licensee's lead exercise evaluators to obtain the licensee's refined assessments of its exercise participants' performances. The inspectors also attended the licensee exercise evaluators' subsequent presentation of self-identified performance strengths and concerns to plant management.

The inspectors also reviewed the scenario for a "practice drill" conducted on August 2, 2000 and a draft critique summary.

b. Findings

The inspectors' identified that the August and September accident scenarios contained numerous technical similarities, such as: most of Unit 1's and Unit 2's initial conditions; plant systems that were postulated to degrade; Emergency Action Levels related to the Alert and Site Area Emergency declarations; and the accident mitigation strategy. The inspectors noted that bases of the offsite Protective Action Recommendations (PARs) were sufficiently different, although the postulated times of identifying the need for initial

and revised PARs were the same in both scenarios. The inspectors concluded that due to the scenario similarities the licensee did not adequately demonstrate its capability to implement its emergency plan in accordance with the requirements of 10 CFR 50.47 (b)(14) and Appendix IX E to Part 50, Paragraph IV. F. The licensee has until December 31, 2000, to adequately demonstrate implementation of its emergency plan during an exercise.

As a result of the similarities in the August "practice drill" and September 13, 2000 exercise scenarios, the licensee initiated a high priority, root cause investigation team to identify the root causes.

The root cause investigation team's report was received on September 22, 2000. The NRC Region III management and inspection staff noted that two of the licensee's three identified root causes ("resource management" and "work organization planning") were common to the aforementioned EP scenario issue and to a previous issue on the licensed operator examination program.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors performed a review of PI data for the public Alert and Notification System (ANS), Emergency Response Organization (ERO) Drill Participation, and Drill and Exercise Performance (DEP) to verify the accuracy and completeness of reported data. Procedures for emergency preparedness PI data gathering were reviewed and discussed with the licensee. Documentation related to the raw data for each indicator was evaluated, including relevant control room simulator training sessions, periodic ANS test records, and EP drill records.

b. Findings

There were no findings identified during this inspection.

4OA6 Management Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Sorenson and other members of licensee management and staff at the conclusion of the inspection on September 15, 2000. The licensee acknowledged the findings presented and did not identify any information discussed as proprietary.

September 27, 2000 Management Meeting Summary

Region III management and staff met with Mr. J. Sorensen and members of his staff to discuss the results of a root cause investigation conducted by licensee staff on the causes for the similarities in the August and September accident scenarios and an earlier NRC concern on the licensee's licensed operator examination program.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

M. Agen, EP Coordinator
K. Albrecht, Steam Generator Replacement Manager
T. Amundson, General Superintendent of Engineering
E. Eckholt, Licensing Project Manager
L. Finholm, EP Instructor
L. Gard, General Superintendent of Maintenance
J. Goldsmith, General Superintendent of Design Engineering
D. Herling, Superintendent of Operations
A. Johnson, General Superintendent of Radiation Protection and Chemistry
J. Leveille, Licensing Engineer
M. Pfeffer, EP Instructor
D. Schuelke, Plant Manager
J. Sorenson, Site General Manager
D. Westphal, Nuclear Management Corporation
M. White, Lead Reactor Operator

NRC

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

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

LIST OF ACRONYMS USED

ANS	Alert and Notification System
CFR	Code of Federal Regulations
CRS	Control Room Simulator
DEP	Drill and Exercise Performance
DRS	Division of Reactor Safety
EOF	Emergency Operations Facility
EP	Emergency Preparedness
ERO	Emergency Response Organization
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OA	Other Activities
OSC	Operational Support Center
PANS	Public Alert and Notification System
PERR	Public Electronic Reading Room
PI	Performance Indicator
TSC	Technical Support Center

INSPECTION PROCEDURES USED

71114	Reactor Safety-Emergency Preparedness
71114.01	Exercise Evaluation
71151	Performance Indicator Verification

LIST OF DOCUMENTS REVIEWED

Miscellaneous

Quarterly “PANS Fixed Siren Trend Reports” Through the Second Quarter of Year 2000
Nei 99-02, Revision 0, “Regulatory Assessment Pi Guideline”
Scenario Manual and Draft Critique Report of the August, 2, 2000 “Practice Exercise”
Scenario Manual for the September 13, 2000 “Evaluated Exercise”
“Siren History 2000," dated September 8, 2000
ERO Rosters July 1999 through June 2000
Ero Drill and Exercise Participation Summaries July 1999 through June 2000
“NRC DEP PI Information” Summaries July 1999 through June 2000
“Root Cause Analysis for Condition Report No. 20003685 - August 2, 2000 Drill Scenario Too Similar to September 13, 2000 Exercise,” Revision 0

Condition Report

20003685

Procedures

F3-1, Revision 16, “Onsite Emergency Organization”
F3-2, Revision 26, “Classification of Emergencies”
F3-4, Revision 26, “Responsibilities during an Alert, Site Area, or General Emergency”
F3-5, Revision 19, “Emergency Notifications”
F3-6, Revision 14, “Activation and Operation of the TSC”
F3-7, Revision 14, “Activation and Operation of the OSC”
F3-8, Revision 15, “Recommendations for Offsite Protective Actions”
F3-9, Revision 15, “Emergency Evacuation”
F3-10, Revision 17, “Personnel Accountability”
F3-12, Revision 13, “Emergency Exposure Control”
F3-13, Revision 14, “Offsite Dose Calculations”
F3-14.1, Revision 10, “Onsite Radiological Monitoring”
F3-15, Revision 20, “Responsibilities of the Radiation Survey Teams During a Radioactive Airborne Release”
F3-18, Revision 7, “Thyroid Iodine Blocking Agent (Potassium Iodide)”
F3-19, Revision 6, “Personnel and Equipment Monitoring and Decontamination”
F8-1, Revision 4, “EOF Organization”
F8-2, Revision 6, “Responsibilities During an Alert, Site Area, or General Emergency in the EOF”
F8-3, Revision 4, “Activation and Operation of the EOF”
F8-5, Revision 4, “Offsite Dose Assessment and Protective Action Recommendations”
F8-6, Revision 4, “Radiological Monitoring and Control at the EOF”
F8-9, Revision 5, “Event Termination or Recovery”
F8-10, Revision 5, “Record Keeping in the EOF”
H33, Revision 1, “Performance Indicator Reporting”
H33.1, Revision 1, “Performance Indicator Reporting Instructions”
H33.2, Revision 1, “Performance Indicator Reporting Forms”