

August 21, 1998

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

SUBJECT: NRC PRAIRIE ISLAND SECURITY INSPECTION REPORTS  
50-282/98013(DRS); 50-306/98013(DRS)

Dear Mr. Wadley:

On July 31, 1998, the NRC completed an inspection of your physical security program at the Prairie Island Nuclear Generating Plant. The enclosed report presents the results of that inspection.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of a selective examination of procedures and representative records, observations, and interviews with personnel. The objective of the inspection effort was to determine whether activities authorized by the license were conducted safely and in accordance with NRC requirements.

No violations of NRC requirements were noted in the areas that were reviewed. The security department self-assessment efforts continue to be strong. An Inspection Followup Item was identified pertaining to the number of alarms caused by environmental factors, and security force actions pertaining to those alarms.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room (PDR).

Sincerely,

/s/ S. A. Reynolds (for)

John A. Grobe, Director  
Division of Reactor Safety

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

Enclosure: Inspection Reports 50-282/98013(DRS); 50-306/98013(DRS)

See Attached Distribution

M. Wadley

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cc w/encl: Plant Manager, Prairie Island  
State Liaison Officer, State of Minnesota  
State Liaison Officer, State of Wisconsin  
Tribal Council, Prairie Island Dakota Community

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M. Wadley

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cc w/encl: Plant Manager, Prairie Island  
State Liaison Officer, State of Minnesota  
State Liaison Officer, State of Wisconsin  
Tribal Council, Prairie Island Dakota Community

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REGION III

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

Report Nos: 50-282/98013(DRS); 50-306/98013(DRS)

Licensee: Northern States Power Company

Facility: Prairie Island Nuclear Generating Plant

Location: 1717 Wakonade Dr. East  
Welch, MN 55089

Dates: July 27-31, 1998

Inspector: G. Pirtle, Physical Security Inspector

Approved by: James R. Creed, Chief, Plant Support Branch 1  
Division of Reactor Safety

## EXECUTIVE SUMMARY

Prairie Island Nuclear Generating Plant  
NRC Inspection Reports 50-282/98013; 50-306/98013

This inspection included a review of the physical security program. It was an announced inspection conducted by a regional physical security specialist.

- No violations or deviations were noted.
- Security facilities and equipment observed functioned as designed and compensatory measures were seldom required. However, we noted very high alarm rates for supposedly environmental-related alarms. Some minor inconsistencies were noted in security component testing (Section S.2).
- Records and documents reviewed were complete and accurate (Section S.3).
- Security force members were knowledgeable of post requirements and performed the duties in an adequate manner. A minor deficiency was noted pertaining to contractor personnel authorizing visitors into the protected area (Section S.4).
- No deficiencies were noted during the review of ten security force training and qualification records (Section S.5).
- Self-assessments were considered a strength. The self-assessment program was varied, aggressive, and well documented. Findings were effectively documented and monitored until closure (Section S.7).

## Report Details

### IV. Plant Support

#### **S2 Status of Security Facilities and Equipment**

a. Inspection Scope (81700)

The inspector reviewed the condition of security equipment and facilities required by the security plan. The equipment observed included, but was not limited to, search equipment, intrusion alarm equipment, alarm assessment equipment, and equipment within the security alarm stations. Facilities observed included the Main Access Facility and alarm stations.

b. Observations and Findings

Security equipment observed during the inspection functioned as designed and compensatory measures were implemented when appropriate, except for environmental caused alarms as described below. Maintenance support for security equipment was generally timely.

The inspector's review of alarm histories and trending data for the second quarter of 1998 showed a very high number of supposedly environment-caused alarms for the perimeter alarm system, particularly one specific type of alarm equipment. The trending data indicated that over 1100 such alarms had occurred between April and June 1998. The inspector's evaluation also indicated that the number of such alarms may have been up to 10 percent higher than the trending data indicated because some alarms were not counted unless certain criteria was met.

The security force's practice was to assess such alarms as nuisance alarms. As nuisance alarms, the zones did not have to be compensated for and taken out of service. The basis for the determination as a nuisance alarm was evaluation by Closed Circuit Television (CCTV) that rain or other environmental factors was the cause for the specific alarm. To be classified as a nuisance alarm, the cause of the alarm must be positively identified, (such as an animal observed in the zone), at the time the alarm is activated. The inspector's review of the available data also showed that allowing the alarms to continue, rather than take the zone(s) out of service and compensate for them, had caused delays in acknowledging and clearing such alarms, and greatly increased the possibility of missing a valid alarm that required a response. In some instances, the number and time of alarms received required the alarms to be acknowledged and cleared several at a time (referred to as blocking), rather than individually. Procedural guidance allowed a high degree of judgement to be exercised by the on-duty senior security force supervisor to cope with the very high alarm rates. However, the judgement allowed (to shut down zones and compensate for them) was not used for the time periods reviewed by the inspector.

Subsequent to the onsite inspection, the security staff initiated Work Order No.

9810094, August 6, 1998, to evaluate and adjust, if needed, the alarm system's sensitivity at specified locations. Additionally, the security staff was in the process of evaluating current alarm system test procedures and evaluating existing security procedural guidance to determine if more specific guidance for actions to take during high alarm periods was needed. The results of the security staff's actions and evaluations will be monitored as an Inspection Followup Item (50-282/98013-01; 50-306/98013-01).

The inspector's review of the security testing program and observation of some component testing showed a minor inconsistency in testing of certain security components, such as duress alarms. The noted inconsistencies were being reviewed and evaluated by the security staff.

c. Conclusions

Security facilities and equipment observed by the inspector functioned as designed. Compensatory measures were seldom required. An Inspection Followup Item was identified in reference to very high alarm rates for supposedly environmental-related alarms. Some minor inconsistencies were noted in security component testing.

**S3 Security and Safeguards Procedures and Documentation**

a. Inspection Scope (81700)

The inspector reviewed selected procedures pertaining to the areas inspected and also reviewed appropriate logs, records, and other documents.

b. Observations and Findings

Records and documents reviewed were complete and accurate. Security procedures were well written, reviewed at the appropriate time, and were in sufficient depth to adequately address the tasks described.

c. Conclusions

Records and documents reviewed were complete and accurate.

**S4 Security and Safeguards Staff Knowledge and Performance**

a. Inspection Scope (81700)

The inspector toured various security posts and observed performance of duties to determine if the officers were knowledgeable of post requirements. Security event logs and other records pertaining to security force performance were also reviewed.

b. Observations and Findings



Security shift supervisors observed by the inspector provided excellent oversight of security activities in progress. Alarm station and security supervisor activity logs were current and accurate. Personnel observed on post were very knowledgeable of post responsibilities and procedures. The only minor deficiency noted was a practice pertaining to contractor personnel authorizing visitors. Although this practice was known by security supervision, it was not addressed by security procedures. When identified, the security staff agreed to address this issue.

c. Conclusions

Security force members were knowledgeable of post requirements and performed the duties in an adequate manner. A minor deficiency was noted pertaining to contractor personnel authorizing visitors into the protected area.

**S5 Security and Safeguards Staff Training and Qualification**

a. Inspection Scope (81700)

Ten training files for newly hired security personnel were reviewed. The inspector attended a training session conducted on recognizing explosive devices.

b. Observations and Findings

Security personnel were trained on all required job tasks. A licensee security supervisor certified the personnel as qualified in training and qualification criteria before the personnel were assigned duties. Records of physical examination results were complete and accurate. The observed training session was well conducted. Active participation by class members was evident.

c. Conclusions

No deficiencies were noted during the review of ten security force training and qualification records.

**S7 Quality Assurance in Security and Safeguards Activities**

a. Inspection Scope (81700)

The inspector reviewed self-assessment evaluations conducted by security staff and other personnel (licensee and contractor).

b. Observations and Findings

The self-assessment program for the security department continued to be a strength. The security department had developed a culture that encouraged self-assessment and critical review of practically every segment of the security program. The major program elements included audit and field observations by the Generation Quality Service (GQS) Department, self assessments by the security department, documented back shift

checks and evaluations by senior contract security force supervisors, and surveillance/audits of limited scope completed by individual security officers. NRC security inspection procedures (81000 series) were often used to define the scope of the audits. Audits were scheduled through 1998. All self-assessment findings were documented, actions assigned, and corrective actions implemented. The security staff had adhered to the audit schedule for the first six months of the year. The security department's self-assessment efforts were further strengthened by root cause analysis evaluations completed by a trained member of the security staff for each security force error that resulted in a loggable security event in 1998 (14 such evaluations were completed).

The inspector reviewed the most recent GQS audit of the security program (Audit No. AG 1997-S-3, with audit dates from July 1 to September 30, 1997). The scope of the audit was adequate. The audit's results were well documented. The vast majority of audit findings were positive, but problems were noted in reference to spacing between some jersey barriers in the vehicle barrier system; some communication difficulties; and security officer familiarity with a shotgun. Plans, procedures, testing and maintenance programs, response commitments, training and qualifications, and self-assessments were determined to be effective.

Additionally, the inspector reviewed ten GQS observation reports, dated between July 24 and September 29, 1997. The GQS observation reports adequately addressed areas such as: explosive detector annual tests; stress firing; security self-assessment program; vehicle barrier system inspection; review of security and safeguards contingency plans to identify any adverse impact on plant or personnel safety; and other areas. The observations were performance orientated.

The inspector reviewed the security audit finding summary report maintained by the security staff to track audits and related corrective actions completed by security force personnel. Twenty-seven audits had been completed since January of 1998. Some of the audit subjects included: post orders; management effectiveness; testing and maintenance; physical barriers; compensatory measures; and access controls. Procedure and practice deficiencies were routinely identified, followed up, and closed. The contractor security Quality Improvement Suggestion program resulted in 57 security-related suggestions being submitted, evaluated, and acted upon between December 25, 1997 and July 4, 1998.

c. Conclusions

Self-assessments were considered a strength. The self-assessment program was varied, aggressive, and well documented. Findings were effectively documented and corrective actions were implemented

## **S8 Miscellaneous Security and Safeguards Issues (92904)**

- S8.1 (Closed) Licensee Event Report (LER) 9608: The licensee submitted a security-related LER (No. 9608) on April 24, 1996, pertaining to the failure to report in a timely manner suspension of some security measures during a severe weather condition. The corrective action identified in the LER was completed.
- S8.2 (Closed) LER 9620: The licensee submitted a security-related LER (No. 9620) on January 8, 1997, pertaining to an incident which occurred in August 1996 (and discovered in December 1996) in which an individual granted unescorted access authorization was admitted for in-patient medical care by referral from the Employee Assistance Program counselor and the individual's unescorted access was not terminated during the period of in-patient care as required by the licensee's procedures. The individual's access was revoked on December 9, 1996. No similar incidents have occurred.
- The LER identified four corrective actions that would be implemented to prevent recurrence of the incident. The inspector confirmed that the four corrective actions had been implemented (See Section S8.1 of Report No. 50-263/97005, dated June 2, 1997 for related information).
- S8.3 (Closed) Inspection Followup Item (Report Nos. 50-282/96006-12; 50-306/96006-12): The shelf life for pepper spray was not being effectively monitored. Procedures have been developed and implemented to monitor the shelf life of pepper spray on a monthly basis during equipment inventories.
- S8.4 (Closed) Violation (Report Nos. 50-282/97005-01; 50-306/97005-01): Visitor entry records for the Independent Spent Fuel Storage Installation were falsified on one occasion by a security supervisor. The licensee responded to the Notice of Violation (Notice) by letter dated June 2, 1997. The inspector confirmed that the corrective actions identified in the licensee's response to the Notice were completed.
- S8.5 (Closed) Unresolved Item (Report Nos. 50-282/97007-01; 50-306/97007-01): A portion of the Vehicle Barrier System (VBS) did not have an engineering analysis completed to confirm that the barrier could meet NRC criteria identified in 10 CFR 73.55 (c)(9). The required engineering analysis was completed and forwarded to the NRC for review. The analysis was considered adequate.
- S8.6 (Closed) Inspection Followup Item (Report Nos. 50-282/97007-02; 50-306/97007-02): A revision to the security plan was required to address NRC review comments for revision 36 of the security plan. The required revision (No. 37) was submitted to the NRC, reviewed, and considered adequate to address review comments for the previous revision.

- S8.7 (Closed) Unresolved Item (Report Nos. 50-282/97007-04; 50-306/97007-04):  
Procedure guidance was necessary to address VBS contingencies that would be reported to the NRC or logged as security events. Procedure guidance was completed for those events that would be logged as security events or reported to the NRC.
- S8.8 (Closed) Inspection Followup Item (Report Nos. 50-282/97013-02; 50-306/97013-02):  
Procedure weaknesses were noted pertaining to vehicle entry and exit into the protected area, and testing of a segment of the CCTV system. The appropriate procedures were adequately revised.

### **X.1 Exit Meeting Summary**

The inspector presented the inspection results to licensee management at the conclusion of the onsite inspection on July 31, 1998. The licensee acknowledged the findings presented. The inspector asked the licensee whether any materials examined or inspection findings discussed during the exit meeting should be considered as proprietary or safeguards information. It was agreed that the specific alarm zones supposedly adversely affected by the environment and compensatory measures for inactivated alarms should be treated as safeguards information and exempt from public disclosure until the issue is resolved. No other proprietary or safeguards information was identified.

## PARTIAL LIST OF PERSONS CONTACTED

### Licensee:

T. Amundson, Acting Plant Manager  
J. Eirikis, District Manager, The Wackenhut Corporation (TWC)  
J. Hill, Quality Assurance  
D. Hutchson, Nuclear Security Specialist  
C. Johnson, Operations Supervisor, TWC  
G. Miserendino, Corporate Security Director  
D. Parrish, Security System Engineer  
M. Sleigh, Superintendent, Security  
E. Timmer, Nuclear Security Specialist

### NRC

Steven Ray, Senior Resident Inspector

## INSPECTION PROCEDURES USED

IP 81700      Physical Security Program For Power Reactors  
IP 92904      Followup - Plant Support

## ITEMS OPENED AND CLOSED

### Opened

50-282/980013-01      IFI      Excessive Alarms and Ineffective Response to Multiple Alarms  
50-306/98013-01      IFI      Excessive Alarms and Ineffective Response to Multiple Alarms

### Closed

50-282/96006-12      IFI      Effectively Monitoring Shelf Life For Pepper Spray  
50-306-96006-12      IFI      Effectively Monitoring Shelf Life For Pepper Spray  
50-282/97005-01      VIO      Falsification of Visitor Entry Records For the Independent Spent Fuel Storage Installation  
50-306/97005-01      VIO      Falsification of Visitor Entry Records For the Independent Spent Fuel Storage Installation  
50-282/97007-01      URI      A Portion of The Vehicle Barrier System Required an Engineering Analysis

50-306/97007-01	URI	A Portion of The Vehicle Barrier System Required an Engineering Analysis
50-282/97007-02	IFI	Need to Revise Security Plan to Address Review Comments For Revision 36 of The Plan
50-306/97007-02	IFI	Need to Revise Security Plan to Address Review Comments For Revision 36 of The Plan
50-282/97007-04	URI	Guidance Required For Reporting and Logging Security Events Involving The Vehicle Barrier System
50-306/97007-04	URI	Guidance Required For Reporting and Logging Security Events Involving The Vehicle Barrier System
50-282/97013-02	IFI	Some Weaknesses Were Noted in Security Procedures
50-306/97013-02	IFI	Some Weaknesses Were Noted in Security Procedures
50-282/9608	LER	Delay in Reporting The Suspension of Some Security Measures
50-282/9620	LER	An Individual's Unescorted Access Should Have Been Denied

#### **LIST OF ACRONYMS USED**

CCTV	Closed Circuit Televison
GQS	Generation Quality Service
IFI	Inspection Followup Item
IP	Inspection Procedure
LER	Licensee Event Report
TWC	The Wackenhut Corporation
URI	Unresolved Item
VBS	Vehicle Barrier System
VIO	Violation

## **PARTIAL LISTING OF DOCUMENTS REVIEWED**

Sampling Review of Security Event Logs from January 1998 to July 1, 1998

Licensee Event Report 96-20, "An Individual's Security Access Should Have Been Revoked Following Determination of Questionable Fitness", dated January 8, 1997

Licensee Event Report 9608, "Temporary Suspension of Safeguards Compensatory Measures", dated April 24, 1996

Security Procedure SIP 5.1, "Reporting of Security Events", Revision 0, Approved December 8, 1997

Security Procedure SIP 4.3, "Contingency Equipment Inspection and Inventory", Revision 0, Approved November 5, 1997

Security Procedure SIP 1.2, "Admittance and Exit of Personnel", Revision 7, Approved February 27, 1997

Security Procedure SIP 1.3, "Vehicle Admittance and Control", Revision 11, Approved February 27, 1998

Security Procedure SIP 3.2, "CAS/SAS Operations", Revision 8, Approved July 13, 1998

Security Procedure SIP 5.0, "Compensatory Measures", Revision 4, Approved June 8, 1998

Security Procedure SAP 2.1, "Self Assessment Program", Revision 0, Approved January 21, 1998

Security Procedure SAP 2.7, "Alarm Data Trending", Revision 0, Approved February 5, 1998

Security Procedure SAP 2.8, "Quarterly Security Report", Approved January 29, 1998

Quarterly Security Reports (Trending Data) for Third and Fourth Quarters of 1997 and First and Second Quarters of 1998

Sampling Review of Fourteen Error Reduction Reports (Root Cause Analysis) For Security Caused Loggable Security Events

Generation Quality Services Audit No. AG 1997-S-3 for Audit Period Between July 1 and September 30, 1997

Ten Generation Quality Services Security-Related Observation Reports Dated Between July 24 and September 29, 1997

Security Self-Assessment Audits Findings Summary Report for the Period Between January and July 1998