December 22, 1999

EA 99-295

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

SUBJECT: PRAIRIE ISLAND INSPECTION REPORT 50-282/99016(DRP); 50-306/99016(DRP)

Dear Mr. Wadley:

On November 23, 1999, the NRC completed a baseline inspection at your Prairie Island Nuclear Generating Plant. The results of this inspection were discussed on November 23, 1999, with Mr. J. Sorensen and other members of your staff. The enclosed report presents the results of that inspection.

The inspection was an examination by the resident inspectors of activities conducted under your license as they relate to reactor safety, verification of performance indicators, event followup, 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.

In response to the performance indicator data errors identified in the enclosed report as well as in earlier reports, your staff is taking action to increase oversight and proceduralization of this important element of the new assessment process. Previously, your staff identified that the threshold from Green to White was crossed for the Emergency Response Organization (ERO) Drill Participation performance indicator in the second quarter of 1999. Corrective actions were taken and, as of the third quarter 1999, the performance indicator color was again Green. We reviewed the change in performance indicator color during a baseline inspection conducted in July 1999 and concluded that the change from Green to White was the result of a recent change in ERO position assignments that would not have impacted your ability to respond during an emergency. Consequently, no additional inspections are planned in the ERO Drill Participation area.

Regarding the errors in the safety system functional failure performance indicator data, as discussed in Inspection Report 50-282/99006(DRP); 50-306/99006(DRP), we are exercising Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to cite the violation, because these errors were not willful and are associated with data submitted during the voluntary pilot plant program.

If you contest the violation, you should provide a response within 30 days of the date of this inspection report, with the basis for you denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector the Prairie Island facility.

In accordance with 10 CFR Part 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you choose to provide one, will be placed in the NRC Public Document Room.

Sincerely,

/s/Roger Lanksbury, Chief

Roger Lanksbury, Chief
Reactor Projects Branch 5

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

Enclosure: Inspection Report 50-282/99016(DRP);
50-306/90016(DRP)

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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REGION III

Docket Nos:	50-282, 50-306
License Nos:	DPR-42, DPR-60
Report No:	50-282/99016(DRP); 50-306/99016(DRP)
Licensee:	Northern States Power Company
Facility:	Prairie Island Nuclear Generating Plant
Location:	1717 Wakonade Drive East Welch, MN 55089
Dates:	October 14 through November 23, 1999
Inspectors:	S. Ray, Senior Resident Inspector S. Thomas, Resident Inspector
Approved by:	Roger Lanksbury, Chief Reactor Projects Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

Prairie Island Nuclear Generating Plant, Units 1 & 2
NRC Inspection Report 50-282/99016(DRP); 50-306/99016(DRP)

The report covers a 6-week period of resident inspection.

The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process in draft Inspection Manual Chapter 0609.

Performance Indicator (PI) Verification

Cornerstone: Mitigating Systems

- **Safety System Unavailability, Emergency Alternating Current (AC) Power Systems:** The inspectors verified the Unit 1 and Unit 2 PI data for October 1996 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed including six periods of unavailability that were not reported. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor. (Section 4OA2.1)

- **Safety System Unavailability, High Pressure Safety Injection Systems:** The inspectors verified the Unit 1 and Unit 2 PI data for April 1998 through September 1999. The inspectors identified one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, in all of the above instances, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor. (Section 4OA2.2)

- **Safety System Unavailability, Auxiliary Feedwater Systems:** The inspectors verified the Unit 1 and Unit 2 PI data for July 1998 through September 1999. The inspectors identified several errors and misinterpretations in the data reviewed, including two periods of unavailability that were not reported. The inspectors identified that one period of unavailability for each train on Unit 1 was reported for the wrong quarter and one error in the number of required available hours in the second quarter of 1998 for Unit 2. The inspectors also identified that the licensee was not reporting unavailable time for the system when the reactor was subcritical but above the temperature where Technical Specifications required the system to be operable. Additionally, the inspectors determined that the licensee was not

timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor. (Section 4OA2.3)

- **Safety System Unavailability, Residual Heat Removal System:** The inspectors verified the Unit 1 and Unit 2 PI data for October 1996 through September 1999. The inspectors determined that the licensee was inconsistent in reporting a train as unavailable during different performances of the same surveillance test. The inspectors also determined that the licensee was not timely in incorporating into the data reported revised guidance on availability during testing. However, inclusion of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band, and the errors were not willful, so the issues were considered to be minor. (Section 4OA2.4)

- **Safety System Functional Failures:** The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99006-02(DRP); 50-306/99006-02(DRP). The inspectors had determined that two functional failures had not been initially reported and that correction of the error caused the PI to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. The error was considered a violation of 10 CFR 50.9, “Completeness and Accuracy of Information.” However, the NRC exercised Discretion pursuant to Section VII.B.6 of the Enforcement Policy, not to issue a Notice of Violation. (Section 4OA2.8)

Cornerstone: Emergency Preparedness

- **Emergency Response Organization Drill Participation:** The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99009-01(DRS); 50-306/99009-01(DRS). The licensee had discovered an error in previously reported data that caused the PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered another error that offset the first error and caused the PI to cross back into the WHITE band. Thus, overall, the errors did not cause the PI to cross the threshold out of the WHITE band, and the errors were not willful, so the issues were considered to be minor. (Section 4OA2.8)

Cornerstone: Physical Protection

- **Protected Area Security Equipment Performance Index:** The inspectors reviewed an issue previously documented as Unresolved Item 50-282/99010-02(DRS); 50-306/99010-02(DRS). The NRC had discovered an error in previously reported PI data but correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The error was not willful and was considered a minor issue. (Section 4OA2.8)

Cornerstone: All

- The inspectors identified a number of errors in several of the PIs reported during the pilot period. The inspectors identified several contributing causes for the problems. One licensee staff person was usually relied on for the accuracy of the data. Independent technical review, quality assurance auditing, and management oversight of the process was lacking. Inconsistent record keeping, a lack of procedural guidance, misinterpretations of the guidance, and untimely incorporation of revised guidance were also contributors to errors. By the end of the period, the problems had been entered into the licensee's corrective action program and were being addressed. (Section 4OA2.9)

Report Details

During this inspection period, both units operated at or near full power except that power was reduced on Unit 2 on October 10-11 and November 20-21, 1999, for load following purposes.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R03 Emergent Work

a. Inspection Scope

The inspectors reviewed and observed the emergent work activities associated with the following documents:

- Work Order (WO) 9911942, “Investigate Slow Response of CS-46424 [11 auxiliary feedwater (AFW) pump control switch]";
- WO 9911199, “D6 Diesel Load Control Circuit Ramp Time is not Consistent”; and
- WO 9912277, “Inspect/Repair Motor Control Center Bucket for 111C-14 [12 diesel-driven cooling water pump jacket water heater].”

b. Observations and Findings

There were no findings identified and documented during this inspection.

1R04 Equipment Alignment

a. Inspection Scope

The inspectors performed a walkdown of the following systems or trains:

- 121 control room chiller while the 122 control room chiller was out-of-service for the performance of an annual planned maintenance activity, and
- 22 AFW pump while the 21 AFW pump was unavailable during a monthly surveillance test.

b. Observations and Findings

The were no findings identified and documented during this inspection.

1R05 Fire Protection

a. Inspection Scope

The inspectors walked down the following risk significant areas looking for any fire protection issues related to the control of transient combustibles, ignition sources, fire detection equipment, manual and automatic suppression capabilities, and barriers to fire propagation:

- fire zones 6 and 82 (D1 and D2 diesel generator rooms), and
- fire zones 31 and 32 (Unit 1 and Unit 2 AFW pump rooms).

b. Observations and Findings

There were no findings identified and documented during this inspection.

1R09 Inservice Testing

a. Inspection Scope

The inspectors reviewed and observed the inservice test activities specified in the following procedures:

- Surveillance Test Procedure (SP) 1151, “Cooling Water System Test,” Revision 17;
- SP 1102, “11 Turbine-Driven AFW Pump Monthly Test,” Revision 67;
- SP 1100, “12 Motor-Driven AFW Pump Monthly Test,” Revision 57; and
- SP 2100, “21 Motor-Driven AFW Pump Monthly Test,” Revision 54.

b. Observations and Findings

There were no findings and documented during this inspection.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the licensee implementation of the maintenance rule requirements, including a review of scoping, goal setting, and performance monitoring, short-term and long-term corrective actions, and current equipment performance status, for the following components and systems:

- 22 reactor coolant pump, and

- **!** D5 diesel generator.

b. Observations and Findings

There were no findings identified and documented during this inspection.

1R13 Maintenance Work Prioritization

a. Inspection Scope

The inspectors reviewed the licensee's evaluation of plant risk, equipment configuration, and specific 10 CFR 50, Appendix R concerns associated with the following maintenance activities:

- **!** 12 charging pump quarterly preventive maintenance (PM) 3103-3-12, and
- **!** simultaneous, unexpected extension of PM 3102-3-22 on the 22 charging pump and testing in accordance with SP 2100 on the 21 AFW pump.

b. Observations and Findings

There were no findings and documented during this inspection.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following operability evaluations:

- **!** Safety Evaluation 549, "Normal Operation With Two Charging Pumps In Service," Revision 0;
- **!** D6 diesel generator operability with a degraded load ramp control circuit in WO 9911199, "Diesel Load Control Circuit Ramp Time is not Consistent," and Issue 19993016, "D6 Failed to Load to 100 Percent Within 60 Seconds During SP 2307";
- **!** 11 AFW pump operability with control switch malfunction in WO 9911942, "Investigate Slow Response of CS-46424"; and
- **!** 12 diesel-driven cooling water pump operability with one inoperable jacket water heater in WO 9912277, "Inspect/Repair Motor Control Center Bucket for 111C-14," and Design Basis Document SYS-35, "Cooling Water System," Revision 4.

b. Observations and Findings

There were no findings identified and documented during this inspection.

1R16 Operator Workarounds

a. Inspection Scope

The inspectors reviewed the following operator workarounds (OWAs) to identify any potential affect on the function of mitigating systems:

- OWA 19992520, “11 Safety Injection Accumulator In-leakage of 1 Percent Per Day”;
- OWA 19992527, “Boric Acid Heat Trace Alarms”; and
- OWA 19992528, “Unit 1 Fuel Leak.”

b. Observations and Findings

There were no findings identified and documented during this inspection.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed and observed the following post maintenance testing activities:

- testing of newly installed, environmentally qualified solenoid operating valves for steam exclusion dampers CD-34187 and CD-34188 in accordance with WOs 9908592, “Replace CD-34187 Solenoid Valve,” and 9911133, “Replace CD-34188 Solenoid Valve”;
- 122 diesel-driven fire pump following an annual planned maintenance activity in accordance with SP 1524, “122 Diesel Fire Pump Weekly Test,” Revision 20;
- operability verification of the D5 diesel generator in accordance with SP 2093, “D5 Diesel Generator Slow Start Test,” Revision 64, after a modification in accordance with WO 9910978, “Implement SPEC ME400 Removal of Three Starting Air Compressor Dryer Failure Alarms,” and an inspection in accordance with WO 9912001, “Remove Back Panel and Perform Inspection of Cabinet”; and
- operability verification of the D5 diesel generator in accordance with SP 2334, “D5 Diesel Generator 18 Month 24 Hour Load Test,” Revision 8, after maintenance in accordance with WO 9912403, “Check D5 Crankcase Breathers.”

b. Observations and Findings

There were no findings identified and documented during this inspection.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed surveillance testing conducted in accordance with the following documents:

- SP 1047, “Control Rod Exercise,” Revision 28;
- SP 2136.1, “Volumetric Leakage Rate Test Of Containment Personnel Airlock,” Revision 8; and
- SP 2334, “D5 Diesel Generator 18 Month 24 Hour Load Test,” Revision 8.

b. Observations and Findings

There were no findings identified and documented during this inspection.

1EP1 Drill, Exercise and Actual Event

Cornerstone: Emergency Preparedness

a. Inspection Scope

The inspectors observed two operator license requalification scenarios conducted on the plant simulator. The inspection effort was focused on determining if timely event notification was performed and if event classification was accurate and prompt.

b. Observations and Findings

There were no findings identified and documented during this inspection.

4. OTHER ACTIVITIES

4OA2 Performance Indicator (PI) Verification

Cornerstone: Mitigating Systems

.1 Safety System Unavailability, Emergency Alternating Current (AC) Power Systems

a. Inspection Scope

The inspectors verified the Safety System Unavailability, Emergency AC Power Systems PI data reported by the licensee for October 1996 through September 1999 for Unit 1 and Unit 2.

b. Observations and Findings

The inspectors identified several errors and misinterpretations in the data reviewed. Correction of the errors would not have caused the PI to cross the threshold out of the GREEN licensee response band. The most significant errors included:

- The D1 and D2 diesel generators were taken out-of-service every 6 months in order to perform an oil change on the generator bearing in accordance with PM 3001-1-D1 and 3001-1-D2. The task included placing the diesel generator start switch in pull-out, placing a hold card on the switch, and draining the oil from the bearing. As a result, the diesel was not in a condition where it could be immediately returned to service and the unavailable hours should have been reported but were not.

- The D1 diesel generator was taken out-of-service for 78.2 hours in July 1998 to resolve a bearing insulation problem. The unavailable hours should have been reported but were not.

- The D1 diesel generator was taken out-of-service in May 1998 to conduct special testing of a protective relay. The task included isolating starting air and fuel to the engine, placing the output breaker in test, placing the load sequencer in test, and placing several hold cards on diesel components. The diesel was not in a condition where it could be immediately returned to service and the unavailable hours should have been reported but were not.

- The D2 diesel generator was taken out-of-service on two occasions in September and October 1997 due to problems with lubricating oil system piping. The unavailable hours should have been reported but were not.

- The D6 diesel generator was taken out-of-service in April 1999 to swap two fuel injectors. The unavailable hours should have been reported but were not.

- On August 18, 1999, Addendum 1 to Draft Revision B to the Nuclear Energy Institute (NEI) 99-02, “Regulatory Assessment PI Guideline,” was issued which, among other changes, clarified and limited the test and surveillance conditions under which a component could be considered “immediately” available. The result was that many routine surveillance tests and PM activities were expected to be reported as making the components unavailable when they had been considered available in the past. Draft Revision C to the Guideline was issued on September 10, 1999, and contained the same clarification regarding availability during testing.

The licensee did not conduct a timely and thorough evaluation of its SPs and PMs and change the data reported in light of that new definition in the data submitted in September and October, 1999.

The licensee corrected most of the above errors by its November 1999 PI data submittal and intended to correct the remaining errors by the end of 1999. Inclusion of all of the additional unavailable time would not have caused the PI to cross the threshold out of the GREEN licensee response band. The discrepancies were entered into the licensee's corrective action system as Issue 19993132.

During the inspection, errors were identified in the PI data submitted to the NRC. However, because these errors were not significant, in that no change in the NRC's action would have resulted from this data, and they were not willful, this is a minor violation not subject to formal enforcement action.

.2 Safety System Unavailability, High Pressure Injection System

a. Inspection Scope

The inspectors verified the Safety System Unavailability, High Pressure Safety Injection Systems PI data reported by the licensee for April 1998 through September 1999 for Unit 1 and Unit 2.

b. Observations and Findings

The inspectors identified one error and a misinterpretation that could have caused additional errors in the data reviewed. Correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The following issues were identified:

- For the second quarter of 1999, the required available hours reported for Unit 2 showed 24 extra hours (2207 vs 2183) for each train. There were actually only 2183 hours in that quarter.

- Similar to the previously discussed issue for the Emergency AC Power Systems PI, the licensee was generally not counting the system as being unavailable during surveillance testing and was not timely in incorporating the revised guidance into the data reported. The licensee was re-evaluating the activities in light of the new definition of "immediately" available.

- The licensee was not correctly interpreting the guidance in NEI 99-02 regarding reporting unavailable time when the reactor was subcritical but at a temperature above 200 degrees Fahrenheit, where TSs required that the safety injection system be operable. Although the guidance allowed the estimation of required available hours by using only the time the reactor was critical, it required counting all unavailable time when the system was required by TSs. The licensee had not

intended to report unavailable time when subcritical. However, no actual cases were identified where unavailable time had not been reported for this PI.

The licensee corrected the error regarding the extra 24 hours in the November 1999 PI data submittal. In addition, the licensee began reporting unavailability time during testing in that submittal. The correction and additions did not cause the PI to cross the threshold out of the GREEN licensee response band. The discrepancies were entered into the licensee's corrective action system as Issue 19993132.

During the inspection, an error was identified in the PI data submitted to the NRC. However, because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

.3 Safety System Unavailability, Auxiliary Feedwater Systems

a. Inspection Scope

The inspectors verified the Safety System Unavailability, Auxiliary Feedwater Systems PI data reported by the licensee for July 1998 through September 1999 for Unit 1 and Unit 2.

b. Observations and Findings

The inspectors identified several errors and misinterpretations in the data reviewed. Correction of the errors would not cause the PI to cross the threshold out of the GREEN licensee response band. The following errors were identified:

- The licensee reported 0.5 planned unavailable hours for Unit 1, Train 1, and 0.43 planned unavailable hours for Unit 1, Train 2, for the third quarter of 1999. That unavailability actually occurred during surveillance testing on October 1, 1999, and should have been reported for the fourth quarter.

- The licensee did not report a short period of unavailability of Unit 1, Train 1 for corrective maintenance on September 2, 1998.

- The licensee did not report a period of unavailability of Unit 2, Train 2 for corrective maintenance on August 5, 1998.

- Similar to the previously discussed issue for the High Pressure Injection Systems PI, the licensee reported that there were 2207 required hours for the system for Unit 2 during the second quarter of 1998. There were actually only 2183 hours existing in that quarter.

- Similar to the previously discussed issue for the Emergency AC Power Systems PI, the licensee was generally not counting the system as being unavailable during surveillance testing and was not timely in incorporating the revised guidance into

the data reported. The licensee was re-evaluating the activities in light of the new definition of “immediately” available.

- **!** Similar to the previously discussed issue for the High Pressure Injection Systems PI, the licensee was not reporting unavailable hours when the reactor was subcritical but at a temperature above 350 degrees Fahrenheit, where the TSs required the system to be operable. Some brief period of unavailable time may not have been reported because of this misinterpretation and the licensee has reviewed its data to determine if corrections were needed. However, no significant time periods of unavailability while the reactor was subcritical were identified.

The licensee corrected some of the errors in its November 1999 PI data submittal and intended to correct the remaining errors by the end of 1999. Inclusion of all of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee response band. The discrepancies were entered into the licensee’s corrective action system as Issue 19993132.

During the inspection, errors were identified in the PI data submitted to the NRC. However, because these errors were not significant, in that no change in the NRC’s action would have resulted from this data, and they were not willful, this is a minor violation not subject to formal enforcement action.

.4 Safety System Unavailability, Residual Heat Removal System

a. Inspection Scope

The inspectors verified the Safety System Unavailability, Residual Heat Removal System PI data reported by the licensee for October 1996 through September 1999 for Unit 1and Unit 2.

b. Observations and Findings

The inspectors determined that the licensee was inconsistent in reporting unavailable time during surveillance testing.

Similar to the previously discussed issue for the Emergency AC Power Systems PI, the licensee was generally not counting the system as being unavailable during surveillance testing and was not timely in incorporating the revised guidance into the data reported. However, in this case, the inspectors determined that the licensee was inconsistent in that it sometimes reported a train as being unavailable during surveillance testing and sometimes reported it as available during another performance of the same test. The licensee was re-evaluating the activities in light of the new definition of “immediately” available.

The licensee revised some of the data in its November 1999 PI data submittal and intended to revise the remaining data by the end of 1999. Inclusion of all of the additional unavailable time would not cause the PI to cross the threshold out of the GREEN licensee

response band. The discrepancies were entered into the licensee's corrective action system as Issue 19993132.

During the inspection, errors were identified in the PI data submitted to the NRC. However, because these errors were not significant, in that no change in the NRC's action would have resulted from this data, and they were not willful, this is a minor violation not subject to formal enforcement action.

Cornerstone: Barrier Integrity

.5 Reactor Coolant System Activity

a. Inspection Scope

The inspectors verified the Reactor Coolant System Activity PI data reported by the licensee for September 1998 through August 1999 for Unit 1 and Unit 2. The inspectors the method of generating the data by observing the shift chemist perform a reactor coolant activity measurement in accordance with Radiation Protection Implementing Procedures 3603, "Unit 1 Mixed Bed Demineralizer Samples," Revision 1, and 3382, "Individual Gamma Emitters," Revision 6.

b. Observations and Findings

There were no findings identified and documented during this inspection.

.6 Reactor Coolant System Leakage

a. Inspection Scope

The inspectors verified the Reactor Coolant System Leakage PI data reported by the licensee for October 1998 through September 1999 for Unit 1 and Unit 2. The inspectors also reviewed the method of generating the data by reviewing SP 1001AA, "Daily Reactor Coolant System Leakage Test," Revision 30.

b. Observations and Findings

There were no findings identified and documented during this inspection.

.7 Containment Leakage

a. Inspection Scope

The inspectors verified the Containment Leakage PI data reported by the licensee for October 1998 through September 1999 for Unit 1 and Unit 2. As listed in Section 1R22 of this report, the inspectors also observed the part of the method of generating the data by observing the performance of a volumetric leak rate test of the Unit 2 containment personnel airlock.

b. Observations and Findings

There were no findings identified and documented during this inspection. The inspectors noted that the data was conservative because the licensee chose to report the maximum pathway leakage rather than the minimum pathway leakage as allowed by the guidance in NEI 99-02.

.8 Followup of Previously Identified PI Problems

Cornerstone: Mitigating Systems

(Closed) Unresolved Item (URI) 50-282/99006-02(DRP); 50-306/99006-02(DRP): Improperly Reported PI Data. This issue was previously discussed in Inspection Report 50-282/99006(DRP); 50-306/99006(DRP), Section 4OA2. During the inspection, errors were identified in the PI data submitted to the NRC. The licensee failed to include two safety system functional failures in the data submitted in May 1999. Inclusion of the two extra failures caused the Safety System Function Failures PI to cross the GREEN-to-WHITE threshold for the first quarter of 1999 for Unit 2. A discussion of the cause and effect of the error on the NRC's assessment process was contained in the above mentioned report. The discrepancies were entered into the licensee's corrective action system as Issues 19991278, 19991299, and 19991956.

The errors were considered a violation of 10 CFR 50.9, "Completeness and Accuracy of Information." However, because these errors were not willful and were associated with data submitted during the voluntary pilot plant program, the NRC is exercising Discretion pursuant to Section VII.B.6 of the Enforcement Policy not to issue a Notice of Violation. (Enforcement Action (EA) 99-295)

Cornerstone: Emergency Preparedness

(Closed) URI 50-282/99009-01(DRS); 50-306/99009-01(DRS): Error in Emergency Response PI Data. This issue was previously discussed in Inspection Report 50-282/99009(DRS); 50-306/99009(DRS), Section 4OA2. The licensee discovered an error in previously reported data that caused the Emergency Response Organization Drill Participation PI to cross the WHITE-to-GREEN band threshold when it was corrected. Shortly after that NRC inspection, the licensee discovered an offsetting error in the PI data

that caused the PI to cross back to the WHITE band. The discrepancies were entered into the licensee's corrective action system as Issue 19992378.

During the inspection, errors were identified in the PI data submitted to the NRC. However, because the errors were not significant, in that no change in the NRC's action would have resulted from this data, and they were not willful, this is a minor violation not subject to formal enforcement action

Cornerstone: Physical Protection

(Closed) URI 50-282/99010-02(DRS); 50-306/99010-02(DRS): Incomplete Data Collected for Security Equipment PI. This issue was previously discussed in Inspection Report 50-282/99010(DRS); 50-306/99010(DRS), Section 4OA2. The NRC identified an error in the PI data previously reported. Correction of the error did not cause the PI to cross the threshold out of the GREEN licensee response band. The discrepancy was entered into the licensee's corrective action system as Issue 19992387.

During the inspection, an error was identified in the PI data submitted to the NRC. However, because the error was not significant, in that no change in the NRC's action would have resulted from this data, and it was not willful, this is a minor violation not subject to formal enforcement action.

Cornerstone: All

.9 PI Verification General Comments

a. Inspection Scope

The inspectors noted a number of problems with PI data accuracy as discussed in the previous eight sections. The inspectors reviewed the licensee's process for gathering and reporting the data.

b. Observations and Findings

The inspectors identified several contributing causes for the PI data errors:

- The data was generally gathered, verified, and reported all by one individual for each PI. There was no independent technical review of the data.
- There was no program for audits of the process by Quality Services or other groups.
- There was little management oversight of the process.
- There were no procedures for the process.

- Operators were inconsistent in their use of and the amount of information included in the computerized Limiting Conditions for Operation log.

- The licensee misinterpreted the requirement to count unavailable time while subcritical but at a temperature above which the safety injection and auxiliary feedwater systems were required to be operable by TSs.

- The guidance on when a system can be considered immediately available during testing changed midway through the pilot program as discussed in Section 4OA2.1. The licensee was slow to recognize and incorporate the changed guidance.

The inspectors noted that the problems were being addressed by the licensee's corrective action program by the end of the inspection period.

4OA3 Event Follow-up

Cornerstone: Initiating Events

a. Inspection Scope

The inspectors reviewed an event which occurred on November 11, 1999, which led to an automatic emergency safety feature actuation.

b. Observations and Findings

The inspectors determined that the event was of minor risk significance and was being addressed within the licensee's corrective action program.

On November 11, 1999, safeguards 4.16-kilovolt Bus 16 de-energized unexpectedly when the offsite source supplying the bus tripped. The bus was automatically repowered with the closure of another offsite source breaker. The cause of the de-energization was an inadvertent CT-11 [normal cooling tower transformer supply to safeguards Bus 16] lockout, caused by a shorted relay that had been bumped while breaker CT11-1 was being re-installed into its cubicle following planned maintenance on the breaker.

The inspectors verified that Bus 16 was being powered from its alternate source and that the Bus 16 automatic sequencing function had performed properly. Also, the inspectors verified that any safeguards equipment that had been lost (de-energized) due to the momentary de-energization of Bus 16 were restored promptly through operator actions or

standby components from the other safeguards train automatically started. The inspectors observed the restoration efforts which quickly returned the electric plant to the pre-event configuration.

The inspectors verified that the licensee reported the event to the NRC in accordance with 10 CFR Part 50.72 within the time limit specified. The inspectors also verified that the event was entered into the licensee's corrective action program, as Issue 19993133, "Accidental Actuation of CT-11 Lock-Out Relay Caused Loss of One Off-Site Source to Safeguards Bus 16."

The licensee intended to issue Licensee Event Report (LER) 1-99-008, "Auto-start of Component Cooling Water Pump and Auto-sequencing of 4kV [4-kilovolt] Safeguards Bus to Alternate Source Following Bus Lockout Caused by a Bumped Relay," for this event in accordance with 10 CFR Part 50.73. When issued, the LER will be considered open and will be reviewed by the inspectors.

The inspectors performed a Phase 1 risk significance screening on the impact of this event in accordance with NRC Inspection Manual Chapter 06XX, "Significance Determination Process." Because the event had no effect on mitigating systems, the event screened out of the process and was determined to be a minor issue with little safety significance.

4OA4 Other

Cornerstone: Mitigation Systems

The licensee revised several LERs regarding fire protection and safe shutdown issues based on newer information. The following earlier revisions are considered closed to minimize redundant issue tracking:

LER 50-282/98010-00; 50-306/98010-00: Discovery That 32 Appendix R Related Motor-Operated Valves are Susceptible to Physical Damage by Fire Induced Hot Shorts;

LER 50-282/98012-00; 50-306/98012-00

LER 50-282/98012-01; 50-306/98012-01

LER 50-282/98012-02; 50-306/98012-02: Fire Area 58/73 Appendix R Safe Shutdown Analysis Issues;

LER 50-282/98014-00; 50-306/98014-00: Fire Area 32 Appendix R Safe Shutdown Analysis Issues; and

LER 50-282/98015-00; 50-306/98015-00: Containment to Residual Heat Removal Motor-Operated Valves Appendix R Safe Shutdown Issues.

The current revisions of the LERs remain open pending further NRC evaluation.

4OA5 Meetings, including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. J. Sorensen and other members of licensee management at the conclusion of the inspection on November 23, 1999. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. Amundson, General Superintendent Engineering
J. Goldsmith, General Superintendent Engineering, Nuclear Generation Services
J. Gonyeau, Life Cycle and Management Support Engineer
J. Hill, Nuclear Performance Assessment Manager
A. Johnson, General Superintendent Radiation Protection and Chemistry
G. Lenertz, General Superintendent Plant Maintenance
D. Schuelke, Plant Manager
T. Silverberg, General Superintendent Plant Operations
M. Sleigh, Superintendent Security
J. Sorensen, Site General Manager

NRC

S. Burgess, Senior Reactor Analyst

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Closed

50-282/99006-02(DRP); 50-306/99006-02(DRP)	URI	Improperly Reported PI Data
50-282/99009-01(DRS); 50-306/99009-01(DRS)	URI	Error in Emergency Response PI Data
50-282/99010-02(DRS); 50-306/99010-02(DRS)	URI	Incomplete Data Collected for Security Equipment PI
50-282/98010-00; 50-306/98010-00	LER	Discovery That 32 Appendix R Related Motor-Operated Valves are Susceptible to Physical Damage by Fire Induced Hot Shorts
50-282/98012-00; 50-306/98012-00	LER	Fire Area 58/73 Appendix R Safe Shutdown Analysis Issues
50-282/98012-01; 50-306/98012-01	LER	Fire Area 58/73 Appendix R Safe Shutdown Analysis Issues

50-282/98012-02; 50-306/98012-02	LER	Fire Area 58/73 Appendix R Safe Shutdown Analysis Issues
50-282/98014-00; 50-306/98014-00	LER	Fire Area 32 Appendix R Safe Shutdown Analysis Issues
50-282/98015-00; 50-306/98015-00	LER	Containment to Residual Heat Removal Motor-Operated Valves Appendix R Safe Shutdown Issues

Discussed

50-282/98010-01; 50-306/98010-01	LER	Discovery That 32 Appendix R Related Motor-Operated Valves are Susceptible to Physical Damage by Fire Induced Hot Shorts
50-282/98012-03; 50-306/98012-03	LER	Fire Area 58/73 Appendix R Safe Shutdown Analysis Issues
50-282/98014-01; 50-306/98014-01	LER	Fire Area 32 Appendix R Safe Shutdown Analysis Issues
50-282/98015-01; 50-306/98015-01	LER	Containment to Residual Heat Removal Motor-Operated Valves Appendix R Safe Shutdown Issues
50-282/99008-00	LER	Auto-start of Component Cooling Water Pump and Auto-sequencing of 4kV Safeguards Bus to Alternate Source Following Bus Lockout Caused by a Bumped Relay

LIST OF ACRONYMS USED

AC	Alternating Current
AFW	Auxiliary Feedwater
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EA	Enforcement Action
LER	Licensee Event Report
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
OWA	Operator Workaround
PI	Performance Indicator
PM	Preventive Maintenance
SP	Surveillance Procedure
TS	Technical Specification
URI	Unresolved Item
WO	Work Order

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) 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 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 little effect on safety. WHITE findings indicate issues with some increased importance to safety, which may require additional NRC inspections. YELLOW findings are more serious issues with an even higher potential to effect safety and would require the NRC to take additional actions. RED findings represent an unacceptable loss of safety margin and would result in the NRC taking significant actions that could include ordering the plant shut down.

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 incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. The color for an indicator corresponds to levels of performance that may result in increased NRC oversight (WHITE), performance that results in definitive, required action by the NRC (YELLOW), and performance that is unacceptable but still provides adequate protection to public health and safety (RED). GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections.

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. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, as described in the matrix. 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.

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