

January 23, 2004

Mr. Joseph Solymossy  
Site Vice-President  
Prairie Island Nuclear Generating Plant  
Nuclear Management Company, LLC  
1717 Wakonade Drive East  
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2  
NRC INTEGRATED INSPECTION REPORT 05000282/2003008;  
05000306/2003008

Dear Mr. Solymossy:

On December 31, 2003, the U. S. Nuclear Regulatory Commission (NRC) completed a baseline inspection at your Prairie Island Nuclear Generating Plant, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on January 15, 2004, with you and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

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

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Sincerely,

**/RA/**

Patrick Loudon, Chief  
Branch 5  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000282/2003008; 05000306/2003008  
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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: 05000282/2003008; 05000306/2003008

Licensee: Nuclear Management Company, LLC

Facility: Prairie Island Nuclear Generating Plant, Units 1 and 2

Location: 1717 Wakonade Drive East  
Welch, MN 55089

Dates: October 1 through December 31, 2003

Inspectors: J. Adams, Senior Resident Inspector  
D. Karjala, Resident Inspector  
P. Higgins, Reactor Engineer  
D. W. Nelson, Radiation Specialist

Approved by: P. Loudon, Chief  
Branch 5  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000282/2003008, 05000306/2003008; 10/01/2003 - 12/31/2003; Prairie Island Nuclear Generating Plant, Units 1 & 2; Routine Baseline Inspection Report.

This report covers a 3-month period of baseline resident inspection and an announced baseline radiation protection inspection. The inspections were conducted by the resident inspectors and inspectors from the Region III office. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

**A. Inspector-Identified and Self-Revealed Findings**

No findings of significance were identified.

**B. Licensee-Identified Violations**

No findings of significance were identified.

## REPORT DETAILS

### Summary of Plant Status

Unit 1 remained at full power during the assessment period, except for brief periods when operators reduced power to facilitate routine surveillance's.

Unit 2 entered the inspection period in cold shutdown for a refueling outage. The licensee completed the outage and operators began power operation on October 10. At 70 percent power, the licensee identified a steam leak on the 23A feedwater heater flash tank. Operators reduced power and returned the reactor to Mode 2 to facilitate repairs. Following completion of repairs, operators returned to power operations, and achieved full power on October 15. Unit 2 remained at, or near, full power for the remainder of the assessment period.

### 1. REACTOR SAFETY

#### **Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity**

1RHS Heat Sink Performance (Pilot) (71111.HS)

#### a. Inspection Scope

##### Biennial Programmatic and Functional Review

The inspectors selected three heat exchangers from two risk significant systems, each directly connected to the safety-related cooling water system for review. The inspectors also reviewed two performance attributes associated with the ultimate heat sink. The inspector's review of the three heat exchangers and ultimate heat sink completed the biennial programmatic and functional review inspection sample.

The inspectors selected the D2 diesel generator jacket water heat exchanger, D2 diesel generator lubricating oil heat exchanger from the emergency alternating current (AC) power system, and the 21 component cooling water heat exchanger from the component cooling water system for review. With respect to the ultimate heat sink, the inspectors reviewed licensee actions for the prevention of clogging of heat sink and sub-components from macro-fouling, and controls to prevent biotic fouling.

During this inspection, the inspectors reviewed procedures and associated records, and completed walkdowns and observations to verify that:

- test methodology was consistent with accepted industry practices or equivalent;
- test conditions were consistent with the selected testing methodology;
- test acceptance criteria were consistent with design basis values;
- test results appropriately considered differences between testing conditions and design conditions;
- test frequency, based on test results, was sufficient to detect degradation prior to loss of heat removal capabilities below design basis values;
- test results considered test instrument inaccuracies and differences;

- tube and shell side heat loads were approximately equal;
- inspection methods for heat exchangers were consistent with expected degradation;
- established acceptance criteria were consistent with industry standards including acceptability of the cleaning interval;
- as-found conditions were appropriately dispositioned such that the final condition was acceptable;
- chemical treatments, methods used to control biotic fouling corrosion, and methods to control macro-fouling were sufficient to ensure required heat exchanger performance;
- conditions and operation were consistent with design assumptions in heat transfer calculations;
- the licensee evaluated the potential for water hammer, where applicable;
- heat exchangers did not exhibit excessive vibration during operation, as verified by direct observation or issues identified in corrective-actions documents;
- heat exchanges were periodically flow tested at maximum design flow, when practicable;
- the licensee has addressed the potential for macro-fouling of ultimate heat sink and its sub-components; and
- the licensee has implemented controls to prevent biotic fouling of ultimate heat sink and its sub-components.

The inspectors reviewed two corrective action program (CAP) action requests (AR) concerning heat exchanger and ultimate heat sink performance issues to verify that the licensee had appropriate thresholds for identifying issues and entering them in the corrective action program. The inspectors also evaluated the effectiveness of the corrective actions for identified issues, including the engineering justification for operability, where applicable.

b. Findings

No findings of significance were identified.

1RST Post-Maintenance and Surveillance Testing (Pilot) (71111.ST)

.1 Post-Maintenance Testing

a. Inspection Scope

During this inspection period, the inspectors completed four inspection samples, comprised of the following post-maintenance testing activities:

- D5 diesel generator following 18-month preventative maintenance on October 31, 2003;
- 22 diesel-driven cooling water pump following annual inspection on November 12, 2003;
- 21 Turbine-Driven Auxiliary Feedwater Pump following routine maintenance on November 13, 2003; and



- D6 Diesel Generator following 18-month preventative maintenance on December 12, 2003.

During completion of the inspection samples, the inspectors observed in-plant activities and reviewed procedures and associated records to verify that:

- testing activities satisfied the test procedure acceptance criteria;
- effects of the testing had been adequately addressed prior to the commencement of the testing;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy;
- applicable prerequisites described in the test procedures were satisfied;
- affected systems or components were removed from service in accordance with approved procedures;
- testing activities were performed in accordance with the test procedures and other applicable procedures;
- jumpers and lifted leads were controlled and restored, where used;
- test data/results were accurate, complete, and valid;
- test equipment was removed after testing;
- equipment was returned to a position or status required to support the operability of the system in accordance with approved procedures; and
- all problems identified during the testing were appropriately documented in the corrective action program.

b. Findings

No findings of significance were identified.

.2 Surveillance Testing

a. Inspection Scope

During this inspection period, the inspectors completed five inspection samples, comprised of the following surveillance testing activities:

- 12 Residual Heat Removal (RHR) Pump and Suction Valve from Refueling Water Storage Tank Quarterly test on November 19, 2003;
- D1 Diesel Generator Monthly Slow Start Test on December 1, 2003;
- 11 Turbine-Driven Auxiliary Feedwater Pump Suction and Discharge Pressure Switch Calibration on December 3, 2003;
- Unit 2, Train A Safeguards Logic Test at Power on December 4, 2003; and
- Unit 2, Train A Reactor Protection Logic Test at Power on December 4, 2003.

During completion of the inspection samples, the inspectors observed in-plant activities and reviewed procedures and associated records to verify that:

- preconditioning does not occur;
- effects of the testing had been adequately addressed by control room personnel or engineers prior to the commencement of the testing;

- acceptance criteria was clearly stated, demonstrated operational readiness, and was consistent with the system design basis;
- plant equipment calibration was correct, accurate, properly documented, and the calibration frequency was in accordance with Technical Specifications, Updated Safety Analysis Report (USAR), procedures, and applicable commitments;
- measuring and test equipment calibration was current;
- test equipment was used within the required range and accuracy;
- applicable prerequisites described in the test procedures were satisfied;
- test frequency met Technical Specification requirements to demonstrate operability and reliability;
- the tests were performed in accordance with the test procedures and other applicable procedures;
- jumpers and lifted leads were controlled and restored where used;
- test data/results were accurate, complete, and valid;
- test equipment was removed after testing;
- where applicable for in-service testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers Code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data have been accurately incorporated in the test procedure;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented in the corrective action program.

b. Findings

No findings of significance were identified.

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

During this inspection, the inspectors completed one adverse weather inspection sample. The inspectors selected the Unit 1 and Unit 2 condensate storage tanks and the safety-related Unit 2 diesel generators D5 and D6. The inspectors completed system walkdowns and reviewed applicable procedures and associated records to verify that the risk significant systems were adequately protected against impending cold weather.

The inspectors used the licensee checklists and procedures to verify that the systems were aligned as required. In addition, the inspectors reviewed the corrective action program action requests and work orders to verify that the licensee had entered problems identified with cold weather operations into the corrective action system and was taking the appropriate compensatory actions.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

Partial System Walkdowns

a. Inspection Scope

During this inspection period, the inspectors completed two inspection samples, comprised of partial in-plant walkdowns of accessible portions of trains of risk-significant mitigating systems during times when the trains were of increased importance due to the unavailability of the alternate train. The inspectors verified the alignment of the following plant equipment:

- emergency diesel generator D5 while D6 was out of service for an 18-month inspection on December 8, 2003; and
- Unit 1 cooling water system and Unit 2 Train "A" cooling water system while the Unit 2 Train "B" cooling water system was out of service on December 17, 2003.

The inspectors utilized the licensee's applicable valve and electric breaker alignment checklists to verify that the components and required support systems were properly positioned to support the proper operation of the inspected systems. The inspectors also examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors reviewed outstanding work orders (WO) and AR CAPs associated with the trains to verify that those documents did not reveal issues that could affect train function. The inspectors used the information in the appropriate sections of the USAR to determine the functional requirements of the systems.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

On December 18 and 19, 2003, the inspectors conducted an in-plant walkdown of the Unit 1 and Unit 2 auxiliary building 695 foot elevation completing one internal flood protection inspection sample. These areas of the Unit 1 and 2 contain safety-related and risk significant equipment including both trains of residual heat removal pumps, safety injection pumps, and containment spray pumps.

The inspectors reviewed the applicable sections of the USAR, Individual Plant Examination, and plant procedures associated with internal flooding in the area of the Unit 1 and Unit 2 auxiliary building, 695 foot elevation.

The inspectors verified by physical inspection that the licensee maintained the material condition of piping systems in these areas. The inspectors also verified that drain paths from these areas had been maintained and that there were no accumulation of loose materials that could plug drain paths. The inspectors performed a physical examination of flood barrier integrity to determine if flood barriers were capable of performing their intended function.

The inspectors reviewed several AR CAPs to verify that problems associated with plant equipment relied upon to prevent or minimize flooding were identified at an appropriate threshold, and that corrective actions commensurate with the significance of the issue were identified and implemented.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

a. Inspection Scope

On December 15, 2003, the inspectors performed a quarterly review of Crew 5 during licensed operator requalification training in the simulator, completing one licensed operator requalification inspection sample. The inspectors observed a training crew during an as-found requalification examination in the plant's simulator facility. The inspectors compared crew performance to licensee management expectations. The inspectors verified that the crew completed all the critical tasks for the scenario. For any weaknesses identified, the inspectors observed that the licensee evaluators noted the weaknesses and discussed them in the critique at the end of the session.

The inspectors assessed the licensee's effectiveness in evaluating the requalification program, ensuring that licensed individuals operated the facility safely and within the conditions of their licenses, and evaluated licensed operator mastery of high-risk operator actions. The inspection activities included, but were not limited to, a review of high risk activities, emergency plan performance, incorporation of lessons learned, clarity and formality of communications, task prioritization, timeliness of actions, alarm response actions, control board operations, procedural adequacy and implementation, supervisory oversight, group dynamics, interpretations of technical specifications, simulator fidelity, and licensee critique of performance.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors performed issue/problem-oriented reviews of the auxiliary feedwater and the cooling water systems, completing two maintenance effectiveness inspection

samples. The inspectors reviewed repetitive maintenance activity to assess maintenance effectiveness, including maintenance rule activities, work practices, and common cause issues. Inspection activities included, but were not limited to, the licensee's categorization of specific issues including evaluation of performance criteria, appropriate work practices, identification of common cause errors, extent of condition, and trending of key parameters. Additionally, the inspectors reviewed implementation of the Maintenance Rule (10 CFR 50.65) requirements, including a review of scoping, goal-setting, performance monitoring, short-term and long-term corrective actions, functional failure determinations associated with reviewed condition reports, and current equipment performance status.

For each system reviewed, the inspectors reviewed significant WOs and AR CAPs to verify that failures were properly identified, classified, and corrected, and that unavailable time had been properly calculated. The inspectors reviewed documents to verify that minor discrepancies in the licensee's maintenance rule reports were corrected.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed risk assessments for the following four maintenance activities, completing four risk assessment and emergent work control inspection samples:

- unavailability of the 22 residual heat removal pump and the 22 diesel-driven cooling water pump for planned maintenance on November 12, 2003;
- unavailability of the D6 diesel generator, 12 charging pump, and the 13 condensate pump for planned maintenance on December 8, 2003;
- unavailability of the D2 diesel generator, the 22 diesel-driven cooling water pump, and the B cooling water loop for planned maintenance on December 17, 2003; and
- unavailability of the D2 diesel generator and the 121 instrument air compressor for planned maintenance on December 30, 2003.

During these reviews, the inspectors compared the licensee's risk management actions to those actions specified in the licensee's procedures for the assessment and management of risk associated with maintenance activities. The inspectors verified that evaluation, planning, control, and performance of the work were done in a manner to reduce the risk and minimize the duration where practical, and that contingency plans were in place where appropriate. The inspectors used the licensee's daily configuration risk assessment records, observations of shift turnover meetings, observations of daily plant status meetings, and observations of shiftily outage meetings to verify that the equipment configurations had been properly listed, that protected equipment had been identified and was being controlled where appropriate, and that significant aspects of plant risk were communicated to the necessary personnel.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance Related to Non-Routine Plant Evolutions and Events (71111.14)

a. Inspection Scope

During this inspection period, the inspectors completed two inspection samples related to the following non-routine plant evolutions and events:

- Unit 2 reactor coolant system (RCS) draindown and reduced inventory operations evolution on October 1, 2003; and
- operator response to a reactor power transient event caused by the addition of excess boric acid to the volume control tank on December 2, 2003.

The inspectors reviewed operator performance and compared their actions to the specified actions contained in plant operating, annunciator response, and abnormal operating procedures. The inspectors independently assessed the causes for the transient events and compared inspector conclusions to the licensee's conclusions.

The inspectors also reviewed AR CAPs to verify that licensee personnel identified issues at an appropriate threshold and entered them into the corrective action program in accordance with station corrective action procedures. The inspectors verified that AR CAPs documenting minor issues identified during the performance of these inspection activities were entered into the licensee's corrective action system for resolution.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

During this inspection period, the inspectors completed two inspection samples related to the following operability evaluations:

- RHR Boric Acid Valve Leakage
- D5 and D6 Diesel Generator Piston Cracks

With regard to the RHR boric acid valve leakage, the inspectors reviewed Operability Recommendation (OPR) 000451 for valve 2RH-6-1; OPR 000453 for valve 2RH-10-1; OPR 000454 for valve 2RH-1-1; and OPR 000455 for valve 2RH-10-2. For the piston crack OPR, the inspectors reviewed the licensee's assessments of small cracks identified in two D5 diesel generator pistons and in one D6 diesel generator piston during boroscope exams. The inspectors performed the inspections by reviewing procedures and related records, and walking down associated plant equipment.

The inspectors reviewed the technical adequacy of the operability evaluations against Technical Specifications, USAR, and other design information; determined whether compensatory measures, if needed, were taken; and determined whether the evaluations were consistent with Administrative Work Instruction 5AWI 3.15.5, "Operability Determinations." The inspectors also reviewed AR CAPs to verify that licensee personnel identified issues at an appropriate threshold and entered them into the corrective action program in accordance with station corrective action procedures.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (OWAs) (71111.16)

Cumulative Effects of OWAs

a. Inspection Scope

On December 30, 2003, the inspectors reviewed the cumulative effect of all identified OWAs to determine if there was a significant impact on plant risk or on the operators' ability to respond to a transient or an accident. The inspectors reviewed operator logs, AR CAPs, and Operating Information documents to determine if there were OWAs that had not been evaluated.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

During this inspection period, the inspectors completed two inspection samples related to the following post-maintenance tests:

- Unit 2 RHR system pressure test following maintenance on system valves on October 7, 2003; and
- 22 turbine-driven auxiliary feedwater pump test following governor maintenance on October 9, 2003.

The inspectors reviewed PMT activities associated with the scheduled and emergent work activities listed above to verify that the testing was adequate for the scope of the work performed and the equipment remained capable of performing the intended function. The inspectors reviewed the appropriate sections of the Technical Specifications, USAR, and maintenance documents to determine the systems' safety functions and the scope of the maintenance. The inspectors also reviewed AR CAPs to verify that licensee personnel identified issues at an appropriate threshold and entered them into the corrective action program in accordance with station corrective action procedures.

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

a. Inspection Scope

The inspectors observed the licensee's performance during the portions of the 22nd Unit 2 refueling outage (2R22) conducted during this inspection period (October 1 through October 13, 2003). This inspection effort completed one refueling outage inspection sample that commenced and was counted as a sample in the previous inspection period. The inspection consisted of in-plant observations of equipment alignment, evolutions and outage activities. Specifically, the inspectors determined whether the licensee effectively managed elements of shutdown risk pertaining to reactivity control, decay heat removal, inventory control, electrical power control, and containment integrity.

The inspectors performed in-plant observations of the following outage activities daily:

- outage management turnover meetings to verify that the current shutdown risk status was accurate, well understood, and adequately communicated;
- walkdowns of the main control room to observe the alignment of systems important to shutdown risk;
- observed the operability of RCS instrumentation and compared channels and trains against one another;
- observed ongoing work activities in the plant; and
- reviewed issues that the licensee entered into its corrective action program to verify that identified problems were being entered into the program with the appropriate characterization and significance.

Additionally, the inspectors performed in-plant observations of the following specific activities:

- control room staff draining reactor level to the reactor vessel to the flange;
- control room staff operations at reduced inventory conditions;
- reactor pressure vessel head lift;
- reactor coolant system heat up;
- reactor start up;
- reactor low power physics testing; and
- generator synchronization to the grid.

b. Findings

No findings of significance were identified.



1R22 Surveillance Testing (71111.22)

a. Inspection Scope

During this inspection period, the inspectors completed four inspection samples related to the following surveillance test activities:

- Surveillance Procedure (SP) 2331; 21 Motor-Driven Auxiliary Feedwater Pump Auto Start and Functional Testing Each Refueling Shutdown on October 5, 2003;
- SP 2070, RCS Integrity Test on October 8, 2003;
- SP 2750; Post Outage Containment Close-Out Inspection on October 8, 2003;
- SP 2103; 22 Turbine-Driven Auxiliary Feedwater Pump Monthly Test; and

The inspectors performed in-plant observation of surveillance testing activities and in-office reviews of completed surveillance testing documentation to assess operational readiness and ensure that risk-significant structures, systems, and components were capable of performing their intended safety function. The inspection activities included, but were not limited to, a review for preconditioning, integration of testing activities, applicability of acceptance criteria, test equipment calibration and control, procedural use, control of temporary modifications or jumpers required for test performance, documentation of test data, Technical Specification applicability, impact of testing relative to performance indicator reporting, and evaluation of test data.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During this inspection period, the inspectors completed one temporary plant modification inspection sample. The inspectors reviewed temporary modification 03T163, which provided a tent and temporary heat for the cooling water dump to grade. The inspection activities included, but were not limited to, a review of design documents, safety screening documents, and USAR to verify that the temporary modification was consistent with modification documents, drawings and procedures. The inspectors also reviewed the post-installation test results to confirm that tests were satisfactory and the actual impact of the temporary modification on the permanent system and interfacing systems were adequately verified. The inspectors also reviewed AR CAPs to verify that licensee personnel identified issues at an appropriate threshold and entered them into the corrective action program in accordance with station corrective action procedures.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation and Simulator-Based Training (71114.06)

.1 Drill Evaluation

a. Inspection Scope

The inspectors observed the licensee's performance of an emergency preparedness drill on November 5, 2003, completing one emergency planning drill evaluation sample.

The inspectors observed activities in the technical support center and attended the post-drill technical support center critique immediately following the drill and the controllers critique on November 6, 2003. The inspectors evaluated the drill performance and verified that licensee evaluators' observations were consistent with the inspectors' and that deficiencies were entered into the corrective action program.

b. Findings

No findings of significance were identified.

.2 Simulator-Based Training Exercise

a. Inspection Scope

The inspectors observed a licensed shift operating crew perform an "as-found" exercise on the simulator on December 15, 2003, completing one emergency planning simulator exercise sample. The inspectors observed activities in the control room simulator, attended the post-exercise critique, and reviewed the final exercise critique report. The inspectors evaluated the drill performance and verified that licensee evaluators' observations were consistent with the inspectors' and that deficiencies were entered into the corrective action program.

b. Findings

No findings of significance were identified.

**2. RADIATION SAFETY**

**Cornerstone: Occupational Radiation Safety**

2OS2 As-Low-As-Is-Reasonably-Achievable Planning and Controls (71121.02)

.1 Source-Term Reduction and Control

a. Inspection Scope

The inspectors verified that the licensee had developed an understanding of the plant source-term, that included knowledge of input mechanisms to reduce the source-term and that the licensee had a source-term control strategy in place that included a cobalt reduction strategy and shutdown ramping and operating chemistry plan which was

designed to minimize the source-term external to the core. Other methods used by the licensee to control the source-term including component and system decontamination, and use of shielding were evaluated. This activity completed one inspection sample.

The inspectors reviewed the licensee's identification of specific sources, along with exposure reduction actions and the priorities the licensee had established for implementation of those actions. The inspectors reviewed the source term reduction results achieved since the last refueling cycle against these priorities. For the current assessment period, the inspectors verified source reduction evaluations along with actions taken to reduce the overall source-term compared to the previous year. This activity completed one inspection sample.

#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification (71151)

##### **Cornerstones: Mitigating Systems and Barrier Integrity**

###### a. Inspection Scope

The inspectors reviewed the licensee submittals for the following performance indicators, completing four performance indicator verification inspection samples:

- Unit 1 Safety System Unavailability - Emergency AC Power Sources for the 4<sup>th</sup> quarter 2002 through the 3<sup>rd</sup> quarter 2003;
- Unit 1 Reactor Coolant System Leak Rate for the 4<sup>th</sup> quarter 2002 through the 3<sup>rd</sup> quarter 2003;
- Unit 2 Safety System Unavailability - Emergency AC Power Sources for the 4<sup>th</sup> quarter 2002 through the 3<sup>rd</sup> quarter 2003; and
- Unit 2 Reactor Coolant System Leak Rate for the 4<sup>th</sup> quarter 2002 through the 3<sup>rd</sup> quarter 2003.

The inspectors used performance indicator guidance and definitions contained in Nuclear Energy Institute Document 99-02, Revision 2, "Regulatory Assessment Performance Indicator Guideline," to verify the accuracy of the performance indicator data. The inspectors' review included, but was not limited to, conditions and data from logs, licensee event reports (LER), condition reports, and calculations for each performance indicator specified. The inspectors also reviewed AR CAPs to verify that licensee personnel identified issues at an appropriate threshold and entered them into the corrective action program in accordance with station corrective action procedures.

###### b. Findings

No findings of significance were identified.

#### 4OA2 Identification and Resolution of Problems (71152)

##### .1 Routine Review of Identification and Resolution of Problems

###### a. Inspection Scope

The inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that the licensee entered issues into its corrective action system at an appropriate threshold, that adequate attention was given to timely corrective actions, and that adverse trends were identified and addressed. Inspectors also performed a screening review of items entered into the corrective action program and observed daily corrective action program meetings to identify conditions that warranted additional follow-up.

###### b. Findings

No findings of significance were identified.

#### 4OA3 Event Followup (71153)

###### a. Inspection Scope

(Closed) LER 2-03-02: Unit 2 - Automatic Actuation of Unit 2 Emergency AC 4 Kilovolt (KV) Bus 26 Load Sequencer.

On July 26, 2003, while operating at 100 percent power, a fault to ground on an underground 13.8 KV feeder from the substation resulted in a loss of power to a Unit 2 Safeguards 4 KV bus when substation breakers opened to clear the fault. The bus load sequencer automatically initiated load rejection and load restoration following transfer to the station reserve transformer. The licensee lost charging flow when the two running charging pumps tripped and letdown automatically isolated as a result of the momentary loss of power to the bus. Control room operators manually started one charging pump and restored letdown.

A dielectric compound was used in the conductor terminations to fill the internal space around the conductor end on the underground feeder cables. Inspection of the "A" phase capnut conductor termination on the underground feeder from the substation indicated there was a phase to ground fault across the dielectric compound that had leaked out of the termination. Water in the cable contributed to this failure. The "A" phase termination leaked a sufficient amount of compound to allow water to fill the void. This provided a path for the ground fault to occur outside of the termination.

The licensee entered the issues into its corrective action program. The inspectors reviewed the LER and associated ARs and did not identify any new significant issues. The inspectors determined that the licensee took reasonable measures to evaluate the leaking termination. Therefore, a performance deficiency did not exist.

b. Findings

No findings of significance were identified.

4OA6 Meeting(s)

.1 Exit Meeting

The inspectors presented the inspection results to Mr. J. Solymossy and other member of licensee management at the conclusion of the inspection on January 15, 2004. The licensee did not identify any materials during the inspection as proprietary in nature.

.2 Interim Exit Meetings

The inspectors conducted an interim radiation protection inspection exit on December 11, 2003, with Mr. A. Johnson.

ATTACHMENT: SUPPLEMENTAL INFORMATION

**SUPPLEMENTAL INFORMATION**

**KEY POINTS OF CONTACT**

Licensee

A. Johnson, Radiation Protection Manager

**LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**

Opened and Closed

50-306/03-02-00	LER	Automatic Actuation of Unit 2 Emergency AC 4KV Bus 26 Load Sequencer (Section 4OA3)
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Discussed

None.

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### 1RHS Heat Sink Performance - Pilot

Electric Power Research Institute NP-7552; Heat Exchanger Performance Guidelines; dated December 1991

Electric Power Research Institute TR-107397; Service Water Heat Exchanger Testing Guidelines; dated March 1998

Prairie Island Nuclear Generating Plant (PINGP) Procedure H21; Generic Letter 89-13 Implementing Program; Revision 6

PINGP Special Operations Procedure D73.1; Prairie Island Service Water Piping Inspection Program; Revision 2W

PINGP Design Basis Document System 14; Component Cooling Water; Revision 3W

PINGP Design Basis Document System 35; Cooling Water; Revision 4W

PINGP Design Basis Document System 38A; Emergency Diesel Generator System; Revision 2W

ENG-ME-254; Safeguard Bay Supply Capacity Analysis; Addenda 0

ENG-ME-254; Safeguard Bay Supply Capacity Analysis; Addenda 1

ENG-ME-404; Loss of Off Site Power with One Cooling Water Pump; Revision 1

ENG-ME-474; Cooling Water System Operation During Post-LOCA [Loss of Coolant Accident] Recirculation; Revision 1

ENG-ME-479; Plugging Criteria for Unit One Diesel Generator Heat Exchangers; Revision 0

ENG-ME-536; Residual Heat Removal and Component Cooling Water Heat Exchanger Capability During Post-LOCA Recirculation; Revision 0

Proto-Power Calculation 99-131, Determination of Component Cooling Water Heat Exchanger Design Basis; Revision B

Proto-Power Calculation 99-133, Determination of Diesel Generator Water Heat Exchanger Design Basis; Revision A

AR CAP 008933; Noticed Excessive Vibration of the Cooling Water Outlet of the 11 Component Cooling Water Heat Exchanger; dated March 26, 2002

AR CAP 025854; Clam Shells of Some Sort Found in Cooling Water System; dated October 18, 2002

Condition Evaluation 001249; Clam Shells of Some Sort Found in Cooling Water System; dated October 22, 2002

Other 002893; Verify Functionality of Critical Cooling Water Piping; dated November 8, 2002

AR CAP 034359; Proper Chlorine/Bromine Residuals Not Being Verified in the Cooling Water System; dated December 5, 2003

SP 1617; Component Cooling Water Heat Exchanger Quarterly Test; Revision 23

WO 0303375, Component Cooling Water Heat Exchanger Quarterly Test; dated October 4, 2003

SP 1151A; Train A Cooling Water System Quarterly Test; Revision 3

WO 0304617; Train A Cooling Water System Quarterly Test; dated October 28, 2003

SP 1151B; Train B Cooling Water System Quarterly Test; Revision 3

WO 0303275; Train B Cooling Water System Quarterly Test; dated October 12, 2003

SP 1128; Monthly Backflush of Emergency Bay Intake Pipe; Revision 8

WO 0305431; Monthly Backflush of Emergency Bay Intake Pipe; dated November 15, 2003

SP 2304; Unit 2 Component Cooling Heat Exchanger Performance Test; Revision 5

WO 0101382; Unit 2 Component Cooling Heat Exchanger Performance Test; dated September 17, 2003

WO 0208408; Unit 2 Component Cooling Heat Exchanger Performance Test; dated February 2, 2002

SP 1305; D2 Diesel Generator Monthly Slow Start Test; Revision 30

D2 Diesel Generator Operating Logs from August 18, 2001, through November 17, 2003

PINGP Preventive Maintenance (PM) Procedure 3119-2-21; 21 Component Cooling Heat Exchanger Refueling Inspection; Revision 15



WO 0208740; 21 Component Cooling Heat Exchanger Refueling Inspection; dated September 28, 2003

PINGP PM 3001-2-D2; D2 Diesel Generator 18 Month Inspection; Revision 17

WO 0202331; D2 Diesel Generator 18 Month Inspection; dated January 24, 2003

PINGP PM 3108-2; Cooling Water Emergency Intake Structure Five Year Inspection; Revision 2

WOs 0304022, 9804500, and U5713-CL-Q; Cooling Water Emergency Intake Structure Five Year Inspections

PINGP PM 3108-1-121; 121 Safeguards Traveling Screen Annual Inspection; Revision 11

WO 0112385; 121 Safeguards Traveling Screen Annual Inspection; dated March 5, 2003

WO 0209507; 121 Safeguards Traveling Screen Annual Inspection; dated May 21, 2003

PINGP PM 3108-1-122; 122 Safeguards Traveling Screen Annual Inspection; Revision 10

WO 0209464; 122 Safeguards Traveling Screen Annual Inspection; dated January 13, 2003

WO 0112386; 122 Safeguards Traveling Screen Annual Inspection; dated January 18, 2002

PINGP Form 1066; 21 Component Cooling Heat Exchanger Inspection Results; dated September 26, 2003

PINGP Form 1066; D2 Diesel Generator Heat Exchanger Inspection Results; dated January 2003

D2 Diesel Generator Eddy Current Testing Results; dated August 27, 2002

Prairie Island Report; 2002 Zebra Mussel Treatment of the Circulating Water System; dated April 16, 2002

PINGP Maintenance Procedure D104.1; Zebra Mussel Control Treatment: Circulation Water System; Revision 0 (Draft)

Letter from T. M. Parker to NRC Document Control Desk; Prairie Island Nuclear Generating Plant Response to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Systems;" dated January 29, 1990

1RST Post-Maintenance Testing (Pilot)

D5 Diesel Generator

SP 2295; D5 Diesel Generator 6 Month Fast Start Test; Revision 27

AR CAP 033764; Apparent Cracked Cylinder Head on D5 Engine 2 Cylinder B4; dated October 28, 2003

AR CAP 033830; Step 10.1 of PM 3001-2-D5 Had to be Repeated Due to Incorrect Plant Conditions; dated October 31, 2003

22 Diesel-Driven Cooling Water Pump

SP 1106B; 22 Diesel Cooling Water Pump Monthly Test; Revision 60

22 Turbine-Driven Auxiliary Feedwater Pump Monthly Test

SP 2102; 22 Turbine-Driven Auxiliary Feedwater Pump Monthly Test; Revision 71

AR CAP 034057; Control Valve 31419 on SP-2102 Time Tested Outside Reference Range; November 13, 2003

D6 Diesel Generator

WO 0213227; P3001-2-D6, D6 Diesel Generator 18 Month Inspection (Mechanical); Revision 6

WO 0213431; P3001-4-D6, D6 Diesel Generator 18 Month Inspection (Electrical); Revision 8

SP 2307; D6 Diesel Generator 6 Month Fast Start Test; Revision 21

SP 2335; D6 Diesel Generator 18 Month 24 Hour Load Test; Revision 9

AR CAP 034434; Repeat Maintenance on D6 Retest Injector Timing; dated December 11, 2003

AR CAP 034441; D6 Diesel Generator Building Motor Damper Actuator is Failed Open; dated December 11, 2003

AR CAP 034468; D6 Diesel Generator Picked Up More Load Than Expected When Synchronized to the Grid; dated December 12, 2003

AR CAP 034475; D6 Engine 2 Low Temperature Thermostatic Element Stuck Open During SP 2037 Causing Overcooling; dated December 13, 2003

AR CAP 034505; Apparent Trend - Trouble Conducting D5/D6 Maintenance On-Line within the Seven Day Allowed Outage Time; dated December 16, 2003

AR CAP 034544; Mechanical Maintenance D6 Post Job Brief Comments; dated December 18, 2003

Condition Evaluation (CE) 004322; Diesel Generator Picked Up More Load Than Expected When Synchronized to the Grid; dated December 15, 2003

CE 004323; Diesel Generator Picked Up More Load Than Expected When Synchronized to the Grid; dated December 15, 2003

Apparent Cause Evaluation (ACE) 008809; CE 004322; Diesel Generator Picked Up More Load Than Expected When Synchronized to the Grid; dated December 15, 2003

#### 1RST Surveillance Testing (Pilot)

##### 12 RHR Pump

SP 1089B; Train B RHR Pump and Suction Valve from Refueling Water Storage Tank Quarterly Test; Revision 5

AR CAP 034156; Boric Acid Leaks Discovered on Unit 1 RHR Valves RH-2-1 and RH-3-3; November 19, 2003

AR CAP 034157; Boric Acid Leak Found on 12 RHR Pump Seal During Inspection; November 19, 2003

##### D1 Diesel Generator

SP 1093; D1 Diesel Generator Monthly Slow Start Test; Revision 76

Safety Evaluation # 376; Diesel Generators D1/D2 Exhaust Fires; Addendum 0

##### 11 Auxiliary Feedwater Pump

SP 1234A; 11 Auxiliary Feedwater Pump Suction and Discharge Pressure Switches Calibration; Revision 3

AR CAP 034362; 11 Turbine-Driven Auxiliary Feedwater Pump Suction Pressure Switch 17704 Found Out-of-Tolerance; dated December 5, 2003

##### Safeguards Logic Test at Power

SP 2032A; Safeguards Logic Test at Power Train A; Revision 17

##### Rector Protection Logic Test at Power

SP 2035A; Rector Protection Logic Test at Power Train A; Revision 33

#### 1R01 Adverse Weather

PINGP Periodic Test Procedure (TP) 2823; D5 Diesel Generator High Temperature and Low Temperature Water Quality Quarterly Inspection; Revision 6

PINGP TP 2824; D6 Diesel Generator High Temperature and Low Temperature Water Quality Quarterly Inspection; Revision 6

PINGP TP 1637; Winter Plant Operation; Revision 31

WO 0304351; TP 1637, Winter Plant Operation; dated October 6, 2003

PINGP System Restart Checklist C28-11; Condensate Storage Tank Winter Operation; Revision 9

AR CAP 034581; 121 Auxiliary Building Hot Water Circulating Pump Tripped Two Times in 24 Hours; dated December 20, 2003

1R04 Equipment Alignment

D5 Diesel Generator

PINGP Integrated Checklist C1.1.20.7-9; D5 Diesel Generator Valve Status; Revision 10

PINGP Integrated Checklist C1.1.20.7-10; D5 Diesel Generator Auxiliaries and Local Panels and Switches; Revision 6

PINGP Integrated Checklist C1.1.20.7-11; D5 Diesel Generator Main Control Room Switch and Indicating Light Status; Revision 4

PINGP Integrated Checklist C1.1.20.7-12; D5 Diesel Generator Circuit Breakers and Panel Switches; Revision 9

AR CAP 034356; Weld Porosity Found on D6 Engine Prelube Inlet Replacement Hose; dated December 4, 2003

AR CAP 034311; Commercial Grade Evaluation PI-0159, Testing of D5 and D6 Hoses Needs Revision; dated December 2, 2003

AR CAP 034281; Discoloration and/or Debris in Lube Oil of 1A Starting Air Compressor; dated December 1, 2003

Cooling Water System

Integrated Checklist C1.1.35-1; Cooling Water System Unit One; Revision 9

Integrated Checklist C1.1.35-2; Cooling Water System Unit 2; Revision 9

Integrated Checklist C1.1.35-3; Cooling Water System; Revision 23

1R06 Flood Protection Measures (Internal)

NSPLMI-94001; Prairie Island Nuclear Generating Plant Individual Plant Examination; Revision 0

Design Basis Document TOP-05; Design Bases Document for in Hazards; Revision 2

PINGP Procedure H36; Plant Flooding; Revision 0

Administrative Work Instruction 5AWI 8.9.0; Internal Flooding Drainage Control; Revision 1

AR CAP 034550; Unit 1 RHR Flood Barriers in Unit 1 Containment Spray Pump Room May Be Compromised; dated December 18, 2003

AR CAP 034551; Unit 2 RHR Flood Barriers in Unit 2 Containment Spray Pump Room May Be Compromised; dated December 18, 2003

AR OPR 000466; Operability Recommendation, CAP 034550 and CAP 034551; dated December 19, 2003

1R11 Licensed Operator Requalification Program

Administrative Work Instruction 5AWI 3.15.0; Plant Operation; Revision 14

Simulator Exercise Guide; P91605-001 SQ-44; Revision 0

Evaluation Comment Form; Crew 5, Group 2; dated December 15, 2003

1R12 Maintenance Rule Implementation

Auxiliary Feedwater Pressure Switch Problems

Maintenance Rule System Specific Basis Document; Auxiliary Feedwater System; Revision 6

Maintenance Rule Evaluation (MRE) 000059; Potential Overthrust of Motor Valve 32239 and Actuator; dated November 25, 2002

MRE 000193; Evaluation of 12 Auxiliary Feedwater Pump Suction Pressure Switch 17776 As-Found Data Greater Than Tolerance; dated July 29, 2003

ACE 008753; Evaluation of 12 Auxiliary Feedwater Pump Suction Pressure Switch 17776 As-Found Data Greater Than Tolerance; dated July 29, 2003

AR CAP 031586; Evaluation of 12 Auxiliary Feedwater Pump Suction Pressure Switch 17776 As-Found Data Greater Than Tolerance; dated July 27, 2003

AR CAP 034362; 11 Turbine-Driven Auxiliary Feedwater Pump Suction Pressure Switch 17704 Found Out-of-Tolerance; dated December 8, 2003

CE 003212; Evaluation of 12 Auxiliary Feedwater Pump Suction Pressure Switch 17776 As-Found Data Greater Than Tolerance; dated July 29, 2003

CE 004275; 11 Turbine-Driven Auxiliary Feedwater Pump Suction Pressure Switch 17704 Found Out-of-Tolerance; dated December 8, 2003

General Condition Report 200187232; Pressure Switch 17704, 11 Turbine-Driven Auxiliary Feedwater Pump Low Suction Pressure Switch Was Found Out-of-Tolerance; dated December 19, 2002

Notebook Attachment for Issue Number 19992263; 12 Motor Driven Auxiliary Feedwater Pump Low Discharge Pressure Switch PS-17777 and 11 Turbine-Driven Auxiliary Feedwater Pump Low Suction Pressure Switch PS-17704 Were Found Out-of-Tolerance

Notebook Attachment for Issue Number 19992785; Unit 2 Auxiliary Feedwater Pump Suction Pressure Switches PS-17779 and PS-17705 Were Found Out-of-Tolerance

Cooling Water Bearing and Seal Water Problems

Maintenance Rule System Specific Basis Document; Cooling Water System; Revision 6

MRE 000003; Units 1 and 2 in Probabilistic Risk Assessment Orange Condition; dated April 23, 2002

MRE 000009; 12 Diesel-Driven Cooling Water Pump Inoperable Due to Governor Hunting; dated June 13, 2002

MRE 000006; Overspeed of 22 Diesel-Driven Cooling Water Pump; dated May 31, 2002

MRE 000026; 12 Diesel-Driven Cooling Water Pump Inoperable; dated August 15, 2002

MRE 000033; Loss of Bearing Seal Water to 22 Diesel-Driven Cooling Water Pump; dated October 2, 2002

MRE 000036; Loss of Bearing Seal Water to 12 Diesel-Driven Cooling Water Pump; dated October 24, 2002

MRE 000111; 12 Diesel-Driven Cooling Water Pump Lineshaft Bearing Cooling Water Flow Can't Be Maintained Above 0.1 Gallons Per Minute; dated February 28, 2003

MRE 000209; 121 Cooling Water Pump Bearing Water Loss of Flow Alarm; dated September 13, 2003

MRE 000209; 121 Cooling Water Pump Bearing Water in the Bypass Mode; dated September 14, 2003

AR CAP 023088; Units 1 and 2 in Probabilistic Risk Assessment Orange Condition; dated April 23, 2002

AR CAP 023800; 12 Diesel-Driven Cooling Water Pump Inoperable Due to Governor Hunting; dated June 13, 2002

AR CAP 023341; Overspeed of 22 Diesel-Driven Cooling Water Pump; dated May 31, 2002

AR CAP 024661; 12 Diesel-Driven Cooling Water Pump Inoperable; dated August 15, 2002

AR CAP 025483; Loss of Bearing Seal Water to 22 Diesel-Driven Cooling Water Pump; dated October 2, 2002

AR CAP 025825; Loss of Bearing Seal Water to 12 Diesel-Driven Cooling Water Pump; dated October 24, 2002

AR CAP 028205; 12 Diesel-Driven Cooling Water Pump Lineshaft Bearing Cooling Water Flow Cannot Be Maintained Above 0.1 Gallons Per Minute; dated February 28, 2003

AR CAP 032431; 121 Cooling Water Pump Bearing Water Loss of Flow Alarm; dated September 13, 2003

AR CAP 032473; 121 Cooling Water Pump Bearing Water in the Bypass Mode; dated September 14, 2003

AR CAP 034483; Troubleshooting Errors Lead to Repeat Maintenance; dated December 15, 2003

ACE 008558; Cooling Water System in Maintenance Rule Category A1; dated October 22, 2002

1R13 Maintenance Risk Assessments and Emergent Work Control

PINGP Procedure H24.1; Assessment and Management of Risk Associated with Maintenance Activities; Revision 6

Unit 1 and 2 Configuration Risk Assessment for November 12, 2003; December 8, 2003; December 17, 2003; and December 30, 2003

1R14 Nonroutine Evolutions

Reduced Inventory Operations

PINGP Operating Procedure 2C1.6; Shutdown Operations Unit 2; Revision 18

PINGP Operating Procedure 2C4.2; RCS Inventory Control - Post Refueling; Revision 15

Unit 2 Operating Logs; dated September 29 through October 1, 2003

AR CAP 033146; Drain of the Reactor Vessel; dated September 30, 2003

Reactor Power Transient

Administrative Work Instruction 5AWI 12.1.2; Reactivity Management Program; Revision 0

PINGP Form 1224; Crew Meeting Review of Noteworthy Event/Near Miss/Change; dated December 2, 2003

Temporary Change Notice 2003-1524; Temporary Change to PINGP Operating Procedure 12.4; Volume Control Tank Gas Control; Revision 10

AR CAP 034664; Improper Response During Recovery from Loss of 23 Heater Drain Tank Pump; dated December 29, 2003

1R15 Operability Evaluations

RHR System Valves with Boric Acid Leaks  
SP 2082; RHR System Leakage Test; Revision 24

PINGP Procedure H31; Radioactive Fluid Leakage Outside of Containment Reduction Program; Revision 1

Technical Specification 5.5.2; Primary Coolant Sources Outside Containment; Amendment Number 149

AR OPR 000451; 2R22 Startup Hold: 2RH-6-1 Boric Acid Leak at Valve Bonnet; dated October 6, 2003

AR OPR 000453; 2R22 Startup Hold: 2RH-10-1 Boric Acid Leak; dated October 7, 2003  
AR OPR 000454; 2R22 Startup Hold: 2RH-1-1 Has Boric Acid Leak; dated October 7, 2003

AR OPR 000455; 2R22 Startup Hold: 2RH-10-2 Has Boric Acid Leakage Indications; dated October 7, 2003

D5 and D6 Piston Cracks

AR CAP 033753; D5 Engine 1Piston Combustion Chamber Lip Cracks on Two Cylinders; dated October 27, 2003

AR CAP 034396; Piston Lip Ring Cracks in D6 Engine 2, Cylinder B5; dated December 8, 2003

External Operating Experience 023894; Piston Lip Ring Cracking at Calvert Cliffs - Technical Report from Wartsila; dated January 14, 2003

Wartsila Technical Service Report MTR02/049

CE 003996; D5 Engine 1Piston Combustion Chamber Lip Cracks on Two Cylinders; dated October 28, 2003

1R16 OWAs

Prairie Island Operator Work Arounds; dated December 24, 2003

1R19 Post-Maintenance Testing

RHR System Pressure Test



WO 0211943; SP 2168.10 RHR System Pressure Test; dated September 12, 2003

SP 2168.10; RHR System Pressure Test; Revision 7

22 Turbine-Driven Auxiliary Feed Pump

PINGP PM 3132-1-22; 22 Turbine-Driven Auxiliary Feed Pump Refueling Inspection; Revision 34

WO 0308847; 22 Turbine-Driven Auxiliary Feed Pump Tripping on Overspeed; dated October 8, 2003

WO 0308867; Turbine Governor Valve is Sticking; dated October 8, 2003

AR CAP 033446; Turbine-Driven Auxiliary Feed Pump Overspeed; dated October 10, 2003

CE 003875; Turbine-Driven Auxiliary Feed Pump Overspeed; dated October 13, 2003

AR CAP 033345; Control Valve 31108 Found Unacceptable by Post-Maintenance Air Operated Valve Testing; dated October 7, 2003

1R20 Refueling and Other Outage Activities

PINGP Operating Procedure 2C1.4; Unit 2 Power Operations; Revision 31

PINGP Operating Procedure 2C1.3; Unit 2 Shutdown; Revision 50

PINGP Operating Procedure 2C1.2; Startup Procedure; Revision 27

PINGP Operating Procedure 2C15; Residual Heat Removal System Unit 2; Revision 28

PINGP Operating Procedure 2C28.1; Auxiliary Feedwater System Unit 2; Revision 11

PINGP Operating Procedure C19.9; Containment Boundary Control During Mode 5, Cold Shutdown and Mode 6, Refueling; Revision 10

Administrative Work Instruction 5AWI 15.6.1; Shutdown Safety Assessment; Revision 1

PINGP Form 1103; Unit 2 Shutdown Safety Assessment; Revision 19

PINGP Maintenance Procedure D30; Post Refueling Startup Testing; Revision 36

1R22 Surveillance Testing

21 Motor Driven Auxiliary Feedwater Pump Functional Testing During Refueling

SP 2331; 21 Motor-Driven Auxiliary Feedwater Pump Auto Start and Functional Testing Each Refueling Shutdown; Revision 12

AR CAP 033320; Time Delay Appeared to be Excessive for Auxiliary Feedwater Pump Suction Pressure Trip During SP 2331; dated October 6, 2003

Post Outage Containment Close-Out Inspection

SP 2750; Post Outage Containment Close-Out Inspection; Revision 26

AR CAP 033389; Secure Card Found On Valve With Tag Section Verified Removed; dated October 9, 2003

Turbine-Driven Auxiliary Feedwater Pump Tests

SP 2102; 22 Turbine-Driven Auxiliary Feedwater Pump Monthly Test; Revision 71

SP 2376; Auxiliary Feedwater Flow Path Verification Test After Each Cold Shutdown; Revision 13

Reactor Coolant System Integrity

SP 2070; Reactor Coolant System Integrity Test; Revision 33

1R23 Temporary Modifications

Fleet Modification Procedure FP-E-MOD-03; Temporary Modifications; Revision 0

Temporary Modification 03T163; Temporary Tent and Heater for Cooling Water Dump to Grade; dated November 11, 2003

Nuclear Management Corporation 10 CFR 50.59 Screening; Temporary Modification 03T163; Revision 0

WO 0306630; Install Temporary Heater/Tent for Cooling Water Dump to Grade; dated December 1, 2003

AR CAP 033596; Wasted Resources to Support Recurrent Temporary Modification Installation and Removal; dated October 17, 2003

AR CAP 034216; Temporary Modification for Temporary Heater for Cooling Water Dump to Grade; dated November 24, 2003

1EP6 Drill Evaluation and Simulator-Based Training

PINGP Emergency Plan Drill; November 5, 2003; Revision 0

PINGP Emergency Plan Drill Conducted on November 5, 2003; Critique Report; dated December 10, 2003

AR CAP 033887; Untimely Site Area Evacuation Declaration During Emergency Plan Drill; dated November 5, 2003

AR CAP 033884; Drill Assembly/Accountability Initiation Untimely; dated November 5, 2003

AR CAP 033888; Failure to Verify CAT I Vent Openings Closure Within 6 Minutes of Safety Injection Actuation; dated November 5, 2003

Simulator Exercise Guide P91605-001, SQ-44; Revision 0

Evaluation Comment Form; Crew 5, Group2; dated December 15, 2003

2OS2 As-Low-As-Is-Reasonably-Achievable Planning and Controls

Request for Phased Approval; Zinc Injection for the Prevention of Pure Water Stress Cracking Corrosion

Prairie Island Nuclear Generating Plant S/G A and B Dose Rates; January 1, 1975, through November 12, 2003

Excellence Action Plans; Industrial, Radiation, Nuclear, Environmental, and Public Safety; dated November 11, 2003

4OA1 Performance Indicator Verification

Safety System Unavailability - Emergency AC Power Sources

PINGP 1318B; Performance Indicators - Mitigating Systems Unavailability for the 4<sup>th</sup> Quarter 2002, 1<sup>st</sup> Quarter 2003, 2<sup>nd</sup> Quarter 2003, and 3<sup>rd</sup> Quarter 2003; Prairie Island Unit 1 and 2

Operating Logs for Units 1 and 2; October 1, 2002, through September 30, 2003

Reactor Coolant System Leak Rate

PINGP 1318B; Performance Indicators -Reactor Coolant System Identified Leak Rate for the 4<sup>th</sup> Quarter 2002, 1<sup>st</sup> Quarter 2003, 2<sup>nd</sup> Quarter 2003, and 3<sup>rd</sup> Quarter 2003; Prairie Island Unit 1 and 2

PINGP Section Work Instruction SWI O-53; Operations Performance Indicator Reporting; 4<sup>th</sup> Quarter 2002, 1<sup>st</sup> Quarter 2003, 2<sup>nd</sup> Quarter 2003, and 3<sup>rd</sup> Quarter 2003; Prairie Island Unit 1 and 2; Revision 0

Operating Logs for Units 1 and 2; October 1, 2002 through September 30, 2003

PINGP Procedure H33.1; Performance Indicator Reporting Instructions; Revision 5

PINGP Procedure H33; Performance Indicator Reporting; Revision 5

AR CAP 029671; Performance Indicator Unavailability Tracking Improvements Needed; dated April 11, 2003

AR CAP 030204; NRC Monthly Report Data Entry Error; dated May 9, 2003

AR CAP 030790; Incorrect Data Reported to the Performance Indicator Coordinator; dated June 11, 2003

## LIST OF ACRONYMS USED

AC	Alternating Current
ACE	Apparent Cause Evaluation
ADAMS	Agencywide Documents Access and Management System
AR	Action Request
CAP	Corrective Action Program
CE	Condition Evaluation
CFR	Code of Federal Regulations
KV	Kilovolts
LER	Licensee Event Report
MRE	Maintenance Rule Evaluation
NRC	U.S. Nuclear Regulatory Commission
OPR	Operability Recommendation
OWA	Operator Workaround
PINGP	Prairie Island Nuclear Generating Plant
PM	Preventive Maintenance
RCS	Reactor Coolant System
RHR	Residual Heat Removal
SP	Surveillance Procedure
TP	Test Procedure
USAR	Updated Safety Analysis Report
WO	Work Order