

May 11, 2006

EA 05-231

Mr. T. Palmisano
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 05000282/2006002;
05000306/2006002

Dear Mr. Palmisano:

On March 31, 2006, the U. S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Prairie Island Nuclear Generating Plant, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on April 13, 2006, 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.

On the basis of the results of this inspection, no findings of significance were identified.

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Sincerely,

/RA/

Richard A. Skokowski, Chief
Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 05000282/2006002; 05000306/2006002
w/Attachment: Supplemental Information

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REGION III

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

Report No: 05000282/2006002; 05000306/2006002

Licensee: Nuclear Management Company, LLC

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

Location: 1717 Wakonade Drive East
Welch, MN 55089

Dates: January 1 through March 31, 2006

Inspectors: J. Adams, Senior Resident Inspector
D. Karjala, Resident Inspector
M. Mitchell, Radiation Specialist

Approved by: R. Skokowski, Chief
Branch 3
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000282/2006002, 05000306/2006002; 1/01/06 - 3/31/06; Prairie Island Nuclear Generating Plant, Units 1 and 2.

This report covers a 3-month period of baseline resident inspection and announced baseline inspection on radiation protection and emergency preparedness. The inspection was conducted by the resident inspectors and inspectors from the Region III office. No findings were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. 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

None

B. Licensee-Identified Violations

Two violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the licensee's corrective action tracking numbers are listed in Section 4OA7.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near full power throughout the inspection period except that power was reduced to about 65 percent on January 17, 2006, for condenser tube repairs and cleaning. The unit was returned to 100 percent power on January 22, 2006, where it operated for the remainder of the inspection period.

Unit 2 operated at or near full power throughout the inspection period except that power was reduced to about 98 percent from January 11, 2006, until January 18, 2006, during replacement of the Emergency Response Computer System. On February 5, 2006, Unit 2 was shut down as required by Technical Specifications (TS) due to the inoperability of diesel generator D6 caused by high crankcase pressure. The diesel generator was repaired and the unit returned to 100 percent power on February 22, 2006. The unit operated at or near 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors performed three partial system equipment alignment inspection samples comprised of in-plant walkdowns of accessible portions of trains of risk-significant equipment associated with the mitigating systems and barrier integrity cornerstones. The inspectors conducted the inspections during times when the trains were of increased importance due to the redundant trains or other related equipment being unavailable. The inspectors also reviewed documents entering deficient conditions associated with equipment alignment issues into the corrective action program (CAP) verifying that the licensee was identifying issues at an appropriate threshold and entering those issues into their corrective action program in accordance with the fleet corrective action procedures.

The inspectors utilized the valve and electric breaker checklists, where applicable, to verify that the components were properly positioned and that support systems were lined up as needed. The inspectors also examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious performance deficiencies. The inspectors reviewed outstanding work orders (WOs) and CAPs associated with the operable trains to verify that those documents did not reveal issues that could affect the completion of the available train's safety functions. The inspectors used the information in the appropriate sections of the Updated Safety Analysis Report (USAR) to determine the functional requirements of the systems.

The inspectors verified the alignment of the following trains:

- D2 diesel generator during the unavailability of the D1 diesel generator for planned maintenance on January 23, 2006;
- D5 diesel generator during the unavailability of the D6 diesel generator for preventive maintenance on January 31, 2006; and
- 121 control room special ventilation system during the unavailability of the 122 control room special ventilation system on March 6, 2006.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

During the week of January 22, 2006, the inspectors performed a detailed in-plant walkdown of the alignment and condition of the Unit 1 auxiliary feedwater system. The auxiliary feedwater system is a risk-significant and safety-related mitigating system that provides a heat sink to remove decay heat from the reactor coolant system during off-normal and accident conditions. This inspection effort constituted one complete system alignment inspection sample. In addition, the inspectors reviewed CAPs associated with equipment alignment issues to verify that the licensee was identifying issues at an appropriate threshold and entering them into their corrective action program in accordance with fleet corrective action procedures.

The inspectors conducted in-plant walkdowns using the applicable alignment checklists and plant drawings to verify that system components were properly positioned to support the completion of system safety functions and to verify that the as-found system configuration matched the configuration specified in the system alignment checklist and plant drawings. The inspectors examined the material condition of the components, such as pumps, motors, valves, instrumentation, controls, bus relay settings, and electrical panels. The inspectors observed operating parameters of equipment to verify that there were no obvious performance deficiencies and examined all applicable outstanding design issues, temporary modifications, and operator workarounds (OWAs). The inspectors verified that tagging clearances were appropriate and attached to the specified equipment where applicable. The inspectors reviewed outstanding WOs and CAPs associated with the trains to determine if any degraded conditions existed that could affect the accomplishment of the system's safety functions. The inspectors referred to the TS, USAR, and other design basis documents to determine the functional requirements of the systems and verified those functions could be performed if needed. Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this inspection report.

b. Findings

No findings of significance were identified.

1R05 Fire Protection Area Walkdowns (71111.05)

a. Inspection Scope

The inspectors conducted in-office and in-plant reviews of portions of the licensee's Fire Hazards Analysis and Fire Strategies to verify consistency between these documents and the as-found configuration of the installed fire protection equipment and features in the fire protection areas listed below. The inspectors selected fire areas for inspection based on their overall contribution to internal fire risk as documented in the Individual Plant Examination of External Events (IPEEE), their potential to impact equipment which could initiate a plant transient, or their impact on the plant's ability to respond to a security event. The inspectors assessed the control of transient combustibles and ignition sources, the material and operational condition of fire protection systems and equipment, and the status of fire barriers. In addition, the inspectors reviewed CAPs associated with fire protection issues to verify that the licensee was identifying issues at an appropriate threshold and entering them into their corrective action program in accordance with fleet corrective action procedures.

The following nine fire areas were inspected by in-plant walkdowns supporting the completion of nine fire protection zone walkdown samples:

- Fire Area 25, D1 diesel generator room, on January 18, 2006;
- Fire Area 31, auxiliary feedwater pump room, on January 17, 2006;
- Fire Area 32, auxiliary feedwater pump room, on January 17, 2006;
- Fire Area 41A, diesel-driven cooling water pump area, on January 19, 2006;
- Fire Area 41B, screenhouse below grade, on January 19, 2006;
- Fire Area 81, bus 15 room, on January 18, 2006;
- Fire Area 113, D5 day tank room, on January 18, 2006;
- Fire Area 115, D5 lubricating oil make-up tank room, on January 18, 2006; and
- Fire Area 117, bus 25 room, on January 19, 2006.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

The inspectors performed an in-office review of the most recently completed surveillance procedure for the inspection of plant flooding barriers and the abnormal procedure for flooding. The contents of these documents were compared to the plant

flood protection design sections in the USAR and the assumption contained in the IPEEE associated with an external flooding event. This inspection effort completed one annual external flood protection inspection sample.

The inspectors performed an in-plant inspection of flood protection barriers in the auxiliary building, turbine building, D5/D6 building, and the intake screenhouse during the period of March 6 through 29, 2006, comparing the as-found conditions of the flood protection panels against the acceptance criteria in the surveillance procedure. The inspectors also verified that the actions specified in the abnormal procedure for flooding could be performed in a timely manner (3 days) if required, and the necessary hardware and consumable materials were available and still within their shelf life.

The inspectors reviewed several CAP items to verify that minor deficiencies identified during this inspection were entered into the licensee's corrective action program, 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. As part of this inspection, the inspectors reviewed the documents listed in the Attachment.

b. Findings

On March 29, 2006, the inspectors visited the main warehouse to verify the existence of the flood protection materials listed in Table 1 of Surveillance Procedure 1293, "Inspection of Flood Control Measures," Revision 13. All the listed materials were found by inspectors but the Deck-O-Seal Gun Grade sealant was found 1 year beyond its shelf life expiration date.

Deck-O-Seal Gun Grade sealant is necessary during an exterior flood event to seal eight exterior doors for the turbine, auxiliary, and Unit 2 diesel generator buildings in accordance with the flood bulkhead installation instruction in Abnormal Operating Procedure AB-4, Attachment J, Figure J-1. In addition, AB-4 also specifies the use of the sealant to seal any gaps on the 11 exterior flood protection panels for the turbine building, auxiliary building, screenhouse, and Unit 2 diesel generator building in accordance with AB-4, Figure J-2. These doors and panels provide a flood barrier that protects plant safety-related equipment located at or below the 695 foot (above mean sea level) elevation.

The condition of the Deck-O-Seal Gun Grade sealant found by the inspectors was not in accordance Surveillance Procedure 1293, Step 7.2.7.C. This was an annual inspection that was completed by the licensee on February 17, 2006. Step 7.2.7.C specifies that the performer of the flood control measures inspection inform warehouse personnel to order four new kits of the sealant and to dispose of the expired shelf life sealant. This step was signed off as completed. However, upon inspection of the material in the warehouse, the inspectors noted a hand written date of March 2005 written on the sealant kits. The licensee's Shelf Life Program procedure FP-SC-PE-05, Revision 0, Step 3.7.2, requires the identifying and labeling of age-sensitive items with a shelf life expiration date on the attached part tag or quality tag as appropriate. Assuming that the licensee had followed their Shelf Life Program requirement to label the material with the expiration date, the inspectors concluded that the sealant was one year beyond its

expiration date. The inspectors requested additional documentation that would confirm the manufacture or purchase date but was told by the licensee that no additional purchase documentation could be located.

The inspectors noted that the licensee had failed to follow the Self Life Program as required by procedure FP-SC-PE-05. Step 5.3.1 states that the receipt of the sealant and its corresponding self life shall be entered into the Material Management System database. The licensee determined that the Deck-O-Seal Gun Grade sealant had not been entered into Material Management System database. This failure resulted in the sealant exceeding its shelf life by one year.

Finally, the inspector concluded that Surveillance Procedure 1293, Step 7.2.7.C was inadequate as written since it only required personnel performing the flood control measures inspection to notify warehouse personnel to order new sealant kits and dispose of the outdated material. There was no action to track the actual completion of the step (ie; the actual receipt of new and the disposal of the expired sealant).

The inspectors reviewed the issue for significance using the guidance provided in Inspection Manual Chapter 0612, Appendix B, dated September 30, 2005. The inspectors concluded that the issue was a performance deficiency since the warehouse personnel failed to enter the receipt of the material and its associated shelf life into the Material Management System database as required by procedure FP-SC-PE-05, and failed to reorder the Deck-O-Seal Gun Grade sealant when informed to do so by personnel performing Surveillance Procedure 1293.

The inspectors reviewed the examples of minor findings provided in Inspection Manual Chapter 0612, Appendix E, dated September 30, 2005, and concluded that none of the examples closely matched this finding. The inspectors then used the minor questions presented in Inspection Manual Chapter 0612, Appendix B, Section 3. The inspectors concluded that the performance deficiency may be minor if the expired sealant was tested and satisfactory performance was demonstrated. The inspectors discussed the potential significance of this issue with the licensee and was later informed by the licensee that they were planning to test of the expired sealant. This issue is being considered an Unresolved Item (URI 05000282/2006002-01; 05000306/2006002-01) pending completion of the expired sealant performance test.

1R11 Licensed Operator Requalification (71111.11)

.1 Quarterly Observation of Licensed Operator Requalification Simulator Training

a. Inspection Scope

On January 30, 2006, the inspectors performed a quarterly review of licensed operator requalification training in the simulator, completing one licensed operator requalification inspection sample. The inspectors observed a crew during an evaluated exercise in the plant's simulator facility. The inspectors compared crew performance to licensee management expectations. The inspectors verified that the crew completed all of the critical tasks for each exercise 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 would operate 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 TS, 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 reviewed repetitive maintenance activities to assess maintenance effectiveness, including maintenance rule (10 CFR 50.65) activities, work practices, and common cause issues. The inspectors performed two issue/problem-oriented maintenance effectiveness samples. The inspectors assessed the licensee's maintenance effectiveness associated with problems on the following structures, systems, and components:

- station and instrument air compressors, and
- containment spray system.

The inspectors conducted in-office reviews of the licensee's maintenance rule evaluations of equipment failures for maintenance preventable functional failures and equipment unavailability time calculations, comparing the licensee's evaluation conclusions to applicable Maintenance Rule (a)1 performance criteria. Additionally, the inspectors reviewed scoping, goal-setting (where applicable), performance monitoring, short-term and long-term corrective actions, functional failure definitions, and current equipment performance status.

The inspectors reviewed CAPs for significant equipment failures associated with risk-significant and safety-related mitigating equipment to ensure that those failures were properly identified, classified, and corrected. The inspectors reviewed other CAPs to assess the licensee's problem identification threshold for degraded conditions, the appropriateness of specified corrective actions, and that the timeliness of the implementation of corrective actions were commensurate with the safety significance of the identified issues. Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors conducted in-plant walkdowns and in-office reviews of risk assessments for two planned maintenance activities and two maintenance activity that involved emergent equipment failures. The inspectors' efforts completed four risk assessment and emergent work control inspection samples. The following combinations of equipment unavailability were reviewed:

- the planned unavailability of diesel generator D2, the 121 instrument air compressor, the 21 cooling water pump, one of two cooling water supply valves to the instrument air compressors, and the 11 circulating water pump on January 18, 2006;
- the emergent failure of the D6 diesel generator with the unavailability of the 124 air compressor, and the failure of CV-31876, 21 main feedwater pump recirculation valve on February 5, 2006;
- the emergent unavailability of diesel generator D6 with the planned unavailability of diesel generator D2 and the 122 safeguards traveling screen on February 13, 2006; and
- the planned unavailability of 12 component cooling water pump, 12 component cooling water heat exchanger, 121 and 122 bypass gates, and the 122 air compressor on March 14, 2006.

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. 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, daily plant status meetings, and equipment walkdowns 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. The documents reviewed by the inspectors are listed in the Attachment.

b. Findings

No findings of significance were identified.

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

.1 Operator Response to the Failing Open of the 21 Main Feedwater Pump Recirculation Valve

a. Inspection Scope

On February 3, 2006, the 21 main feedwater pump recirculation valve failed open due to the failure of a solenoid controlling air to the valve's diaphragm. The failure diverted a portion of the feedwater pump output back to the main condenser. The failure resulted in a plant transient on both the secondary and primary cycles. The inspectors reviewed the operator's response to this transient completing one personnel performance to non-routine plant event inspection sample.

The inspectors observed the performance of operations personnel in the control room during the unplanned and non-routine evolution comparing their response to the actions specified in the applicable plant procedures. The inspectors also reviewed selected plant parameters to ensure the plant responded as designed. The documents reviewed by the inspectors are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Technical Specifications Required Shutdown of Unit 2

a. Inspection Scope

On February 5, 2006, the inspectors observed operator performance during a Unit 2 shutdown required by TS due to the inoperability of diesel generator D6. The observation of operator performance constituted one personnel performance to non-routine plant evolution inspection sample.

The inspectors observed the performance of operations personnel in the control room during the shutdown and cooldown of Unit 2 (a non-routine evolution) to verify that operators conducted the evolution in accordance with plant procedures. The documents reviewed by the inspectors are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the technical adequacy of six operability evaluations completing six operability evaluation inspection samples. The inspectors conducted

these inspections by in-office review of associated documents and in-plant walkdowns of affected areas and plant equipment.

The inspectors compared degraded or nonconforming conditions of risk-significant structures, systems, or components associated with barrier and mitigating systems and against the functional requirements described in the TS, USAR, and other design basis documents; determined whether compensatory measures, if needed, were implemented; and determined whether the evaluation was consistent with the requirements of Administrative Work Instruction 5AWI 3.15.5, "Operability Determinations." The following operability evaluations were reviewed by inspectors:

- C on January 12, 2006, Operability Recommendation (OPR) 01008542, that documented the operability of the D1 and D2 diesel generators during extreme cold weather;
- C on January 18, 2006, Prompt Operability Determination 01010676, that documented the operability of the D2 diesel generator with a fuel oil leak on the mechanical seal of the fuel oil booster pump;
- C on January 25, 2006, OPR 01011307, that documented the operability of containment particulate radiation monitors 1R11 and 2R11 following the discovery that the filter paper drive was operating at twice the speed specified in the technical manual;
- C on February 13, 2006, OPR 01009304, that documented the operability of Unit 1 and 2 auxiliary feedwater pumps following the discovery that the steam generator blowdown flow control valve's quality classification were non-safety-related;
- C on March 9, 2006, OPR 01011774, that documented the operability of 16 steam generator blowdown indication lights and two motors following a change of classification from non-safety-related to safety-related; and
- C on March 28, 2006, OPR 01020661, that documented the operability of D1 diesel generator following discovery of a jacket water cooling leak.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors completed four assessments of post-maintenance testing completing four post-maintenance test inspection samples. The inspectors selected post-

maintenance tests associated with important mitigating and barrier integrity systems to ensure that the testing was performed adequately, demonstrated that the maintenance was successful, and that operability of associated equipment and/or systems was restored. The inspectors conducted these inspections by in-office review of documents and in-plant walkdowns of associated plant equipment. The inspectors observed and assessed the post-maintenance testing activities for the following maintenance activities:

- C Surveillance Procedure (SP) 2307, D6 Diesel Generator 6-Month Fast Start Test; and SP 2335, D6 Diesel Generator 18-Month 24-Hour Load Test, following replacement of cylinder pistons and liners on February 16, 2006;
- C 122 control room chiller and air handler following completion of Test Procedure 1806, "122 Control Room Chiller Inspection," and Preventive Maintenance Procedure 3147-2-122, "122 Control Room Air Handler Annual Inspection," on March 7, 2006;
- C WO 00265122-02, post-maintenance test of SV-33498, D2 diesel generator room outside air damper following replacement of a solenoid valve on March 14, 2006; and
- C WO 00091187 Task 4, post-maintenance test of cooling water tube leak repairs on the 14 containment fan cooling unit on March 28, 2006.

The inspectors reviewed the appropriate sections of the TS, USAR, and maintenance documents to determine the systems' safety functions and the scope of the maintenance. The inspectors also reviewed CAPs to verify that the licensee was identifying issues at an appropriate threshold and entering them into their corrective action program in accordance with fleet corrective action procedures. Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities (71111.20)

.1 Unit 2 Maintenance Outage

a. Inspection Scope

The inspectors observed the licensee's performance during the Unit 2 maintenance outage 2F2401 conducted between February 5 and February 21, 2006, to perform repairs and modifications to D5 and D6 diesel generators. These inspection activities represent one outage inspection sample.

This inspection consisted of an in-office and in-plant review of outage activities performed by the licensee. The inspectors conducted in-office reviews of outage related documentation and in-plant observations of the following daily outage activities:

- observed outage management turnover meetings to verify that the current shutdown risk status was accurate, well understood, and adequately communicated;
- performed main control room walkdowns to observe the alignment of systems important to shutdown safety;
- observed operability of reactor coolant system instrumentation and compared channels and trains against one another;
- observed ongoing work activities and foreign material exclusion control; and
- reviewed selected 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 or in-office reviews of the following specific activities:

- observed the reactor shutdown from full power to hot shutdown; and
- reviewed SP 2750, Post Outage Containment Close-Out Inspection.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

During this inspection period, the inspectors completed four surveillance inspection samples. Observation of SP 1102 completed the quarterly inservice testing inspection requirement of a risk-significant pump or valve. The inspectors selected the following surveillance testing activities:

- C SP 1102, Turbine-Driven Auxiliary Feedwater Pump Monthly Test, Revision 85, on January 27, 2006;
- C SP 1002A, Analog Protection System Calibration, Revision 36, Channel B hot loop temperature, cold loop temperature, average temperature, and differential temperature instruments on February 2, 2006;
- SP 2101, 21 Motor-Driven Auxiliary Feedwater Pump Once Every Refueling Shutdown Flow Test, Revision 37; and SP 2103, 22 Turbine-Driven Auxiliary Feedwater Pump Once Every Refueling Shutdown Flow Test, Revision 42, on February 21, 2006; and
- SP 1295, D1 Diesel Generator 6-Month Fast Start, Revision 36, on February 27, 2006.

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

- preconditioning did 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 TS, 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 TS 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.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors conducted an in-office review of documentation associated with temporary modification EC 623 completing one temporary modification inspection sample. Temporary modification EC 623 installed a blind flange in the upper coil of the east face of the 11 Containment Fan Coil Unit as a temporary repair for a leak. As part

of this inspection, the documents listed in the Attachment were utilized to evaluate the potential for an inspection finding.

The inspection activities included, but were not limited to, a review of design documents, safety screening documents, and the USAR to determine that the temporary modification was consistent with modification documents, drawings, and procedures. The inspectors also reviewed actual impact of the temporary modification on the permanent and interfacing systems. The inspectors also reviewed the CAPs listed in the Attachment to verify that the licensee was identifying issues at an appropriate threshold and entering them into their corrective action program in accordance with the fleet corrective action procedure.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems
(71122.01)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the most current Radiological Effluent Release Report, dated May 12, 2005, to determine if the program was implemented as described in Radiological Effluent Technical Standards (RETS)/Offsite Dose Calculation Manual (ODCM), and to determine if ODCM changes were made in accordance with Regulatory Guide 1.109 and NUREG-0133. The inspectors determined if any modifications made to radioactive waste system design and operation changed the dose consequence to the public. The inspectors determined if technical and/or 10 CFR 50.59 reviews were performed when required, and determined whether radioactive liquid and gaseous effluent radiation monitor set-point calculation methodology changed since completion of the modifications. The inspectors reviewed the licensee's 2005 Tritium Ground Water Sampling Results for anomalies which included one onsite monitoring well that has measurable levels of tritium, and to assure the licensee reported findings from the previous year in the Annual Effluent Report. The inspectors determined if anomalous results reported in the current Radiological Effluent Release Report were adequately resolved.

The inspectors reviewed the RETS/ODCM to identify the effluent radiation monitoring systems and its flow measurement devices, effluent radiological occurrence performance indicator incidents in preparation for onsite follow-up, and the USAR description of all radioactive waste systems. This review represents one sample.

b. Findings

No findings of significance were identified. However, the inspectors evaluated the adequacy of the licensee's surveillance program for onsite tritium ground water monitoring. This program was instituted in response to unexpectedly high sample results found in 1989, which have fluctuated to the present. While elevated tritium levels have not been detected consistently since the licensee took specific actions to reduce tritium release to the ground water, 1 well of 20 monitored has recently showed measurable levels of tritium. The licensee stated that the measurable and fluctuating tritium in the single well has been explained as a ground water flow anomaly in the past period of study. The licensee notes that the tritium levels in the ground water fluctuate at levels less than 5 percent of the Environmental Protection Agency's drinking water standard of 20,000 picocuries/liter. During the inspection, the licensee was continuing the process of assessing the potential cause(s) of the slightly elevated sample results. The NRC will continue review of the licensee's assessment when it is completed. Therefore, this issue remains under review by the NRC and is categorized as an Unresolved Item (URI), (URI 05000282/2006002-02; 05000306/2006002-02).

.2 Onsite Inspection

a. Inspection Scope

The inspectors walked-down the major components of the gaseous and liquid release systems, (e.g., radiation and flow monitors, demineralizers and filters, tanks, and vessels) to observe current system configuration with respect to the description in the USAR, ongoing activities, and equipment material condition. This review represents one sample.

The inspectors observed the routine processing, (including sample collection and analysis), and release of radioactive liquid waste to determine if the appropriate treatment equipment was used, and that radioactive liquid waste was processed and released in accordance with procedure requirements, and observed the sampling and compositing of liquid effluent samples. The inspectors reviewed several radioactive gaseous effluent release permits, including the projected doses to members of the public to determine if appropriate treatment equipment is used and that the radioactive gaseous effluent is processed and released in accordance with RETS/ODCM requirements. This review represents one sample.

The inspectors reviewed the records of abnormal releases or releases made with inoperable effluent radiation monitors, and reviewed the licensee's actions for these releases to ensure an adequate defense-in-depth was maintained against an unmonitored, unanticipated release of radioactive material to the environment. This review represents one sample.

The inspectors reviewed the licensee's technical justification for changes made by the licensee to the ODCM, as well as to the liquid or gaseous radioactive waste system design, procedures, or operation since the last inspection. The review was performed to determine whether the changes affected the licensee's ability to maintain effluents As-Low-As-Reasonably-Achievable, and whether changes made to monitoring

instrumentation resulted in a non-representative monitoring of effluents. This review represents one sample.

The inspectors reviewed a selection of monthly, quarterly, and annual dose calculations to ensure that the licensee properly calculated the offsite dose from radiological effluent releases, and to determine if any annual RETS/ODCM dose limits, (i.e., Appendix I to 10 CFR Part 50 values) were exceeded. This review represents one sample.

The inspectors reviewed air cleaning system surveillance test results to ensure that the systems were operating within the licensee's acceptance criteria. The inspectors reviewed surveillance test results the licensee uses to determine the stack and vent flow rates. The inspectors determined if the flow rates were consistent with RETS/ODCM or USAR values. This review represents one sample.

The inspectors reviewed records of instrument calibrations performed since the last inspection for each point of discharge effluent radiation monitor and flow measurement device, and reviewed any completed system modifications and the current effluent radiation monitor alarm set-point value for agreement with RETS/ODCM requirements. The inspectors also reviewed calibration records of radiation measurement (i.e., counting room) instrumentation associated with effluent monitoring and release activities and the quality control records for the radiation measurement instruments. This review represents one sample.

The inspectors reviewed the results of the interlaboratory comparison program to determine the quality of radioactive effluent sample analyses performed by the licensee. The inspectors reviewed the licensee's quality control evaluation of the interlaboratory comparison test and the associated corrective actions for any deficiencies identified. The inspectors reviewed the licensee's assessment of any identified bias in the sample analysis results and the overall effect on calculated projected doses to members of the public. In addition, the inspectors reviewed the results from the licensee's Quality Assurance audits to determine whether the licensee met the requirements of the RETS/ODCM. This review represents one sample.

b. Findings

No findings of significance were identified.

.3 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, Licensee Event Reports, and Special Reports related to the radioactive effluent treatment and monitoring program since the last inspection to determine if identified problems were entered into the corrective action program for resolution. The inspectors also reviewed the licensee's self-assessment program to determine if it was capable of identifying repetitive deficiencies or significant individual deficiencies in problem identification and resolution.

The inspectors also reviewed corrective action reports from the radioactive effluent treatment and monitoring program since the previous inspection, interviewed staff and reviewed documents to determine if the following activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk:

- initial problem identification, characterization, and tracking;
- disposition of operability/reportability issues;
- evaluation of safety significance/risk and priority for resolution;
- identification of repetitive problems;
- identification of contributing causes;
- identification and implementation of effective corrective actions;
- resolution of Non-Cited Violations (NCVs) tracked in the corrective action system; and
- implementation/consideration of risk significant operational experience feedback.

This review represents one sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors reviewed the licensee submittals for two performance indicators for Prairie Island Units 1 and 2, completing four performance indicator verification inspection procedure samples. The inspectors used performance indicator guidance and definitions contained in Nuclear Energy Institute Document 99-02, Revision 3, "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, condition reports, and calculations for each performance indicator specified. The inspectors also reviewed the CAPs listed in the Attachment to this report to verify that the licensee was identifying issues at an appropriate threshold and entering them into their corrective action program in accordance with corrective action procedures.

The licensee's reporting of the following performance indicators were verified:

Unit 1

- Reactor Scrams for the 2nd quarter 2004 through the 4th quarter 2005;
- Reactor Scrams with Loss of Normal Heat Removal for the 2nd quarter 2004 through the 4th quarter 2005.

Unit 2

- Reactor Scrams for the 2nd quarter 2004 through the 4th quarter 2005;
- Reactor Scrams with Loss of Normal Heat Removal for the 2nd quarter 2004 through the 4th quarter 2005.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

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

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action program at an appropriate threshold, that adequate attention was given to ensure timely corrective actions, and that adverse trends were identified and addressed. This does not count as an annual sample.

b. Findings and Observations

No findings of significance were identified.

.2 Annual Problem Identification and Resolution Sample

a. Inspection Scope

During the week of February 6, 2006, the inspectors selected a corrective action program issue for detailed review, completing one problem identification and resolution annual inspection sample. The inspectors selected an issue associated with elevated crankcase pressure on diesel generator D6 that was identified and entered into the corrective action program with CAP 01013473.

The inspectors conducted a review of the Root Cause Evaluation report, previous evaluations, and corrective actions in order to assess the effectiveness of the licensee's efforts to correct the identified problem. The inspectors also ensured that

the licensee had identified the full extent of the issue, conducted an appropriate evaluation, and that licensee-identified corrective actions were appropriately prioritized.

The key documents reviewed by the inspectors associated with this inspection are listed in the Attachment to this report.

b. Findings and Observations

No findings of significance were identified.

.3 Review of Corrective Action Aspects of the Maintenance of Emergency Action Levels for the External Flooding Event

a. Inspection Scope

The inspectors conducted an in-plant and in-office review of the licensee's implementation of their corrective action program as it applied to their identification that plant transformers may not be relied upon to a river level of 698 feet above mean sea level as specified in the Prairie Island USAR. This issue was originally presented as a preliminary White finding in Inspection Report 05000282/2005011; 05000306/2005011. The focus of this issue was associated the establishment of a potentially non-conservative emergency action classification process, as contained in Prairie Island Emergency Plan. That process potentially would not have resulted in the licensee staff declaring a required Site Area Emergency under certain flooding conditions (see also Section 4OA5.1). This review does not constitute an inspection sample, as this was an inspection sample in the previous quarter.

b. Observations

In the previous inspection period, the inspectors identified an apparent violation having preliminarily low to moderate safety significance for a failure to maintain in effect emergency plans that met the requirements specified in 10 CFR 50.54(q) and risk-significant planning standard 10 CFR 50.47(b)(4). Specifically, the establishment of a non-conservative emergency action level classification process.

This condition was initially identified as the result of a licensee evaluation that concluded transformers associated with each offsite power source to both the Unit 1 and 2 safety-related and non-safety-related 4160 volt buses had limiting elevations below 698 feet above mean sea level. The USAR, Section 2.4.3.5, "Floods," stated that the transformers will function when flooded to 698.0 feet above mean sea level. The entry conditions for the licensee's declaration of a Site Area Emergency at 698 feet above mean sea level was based on a river water level above which the functionality of site transformers can no longer be relied upon. The licensee initiated corrective action and changed the USAR referenced river elevation to 695 feet above mean sea level but failed to correct references to the 698 feet above mean sea level for the Site Area Emergency in the current emergency action level scheme or in the Nuclear Energy Institute 99-01, Revision 4 emergency action level scheme submittal that was under preparation at the time of discovery.

On March 1, 2006, the licensee attended a regulatory conference at the NRC Region III office to present information associated with the significance of the issue. Based on the information presented at the regulatory conference and additional information obtained by the licensee through a third party analysis, NRC Region 3 Management concluded that additional inspection and reviews of the impact of a river level of 698 feet above mean sea level on plant transformers and other critical electrical equipment were warranted. As a result of the additional inspection, the inspectors concluded that plant transformers would remain available with the river level of 698 feet. Since the transformers remained available at the pre-existing river level of 698 feet, then the emergency action level in the Prairie Island Emergency Plan for the site area emergency never technically required a change to the 695 foot elevation. Therefore, no violation of emergency preparedness requirements occurred when the licensee failed to implement their corrective action process and change the emergency action level for the flooding site area emergency following the change to the USAR.

Based on the inspectors review of this issue, they noted two shortcomings related to licensee's implementation of their corrective action program. First, the inspectors concluded that the licensee performed an inaccurate evaluation of the potential problem that resulted in an unnecessary change to the USAR. Second, once the licensee identified and implemented a corrective action to change the USAR referenced river level from 698 to 695 feet above mean sea level, they failed to also revise the current emergency action level scheme and Nuclear Energy Institute 99-01, Revision 4 emergency action level scheme submittal. Both of these documents had their basis tied to the river level referenced in the USAR.

The inspectors reviewed this event for potential enforcement action as it applied to problem identification and resolution requirements. The inspectors concluded that this issue was associated with the functional area of emergency preparedness and 10 CFR 50, Appendix B, criteria do not apply to the emergency preparedness functional area. Therefore, there was no violation of the requirements contained in 10 CFR 50, Appendix B, Criterion XVI, "Corrective Actions." When the inspectors discussed these deficiencies with licensee plant management acknowledged that their implementation of the corrective action process did not meet management expectation nor the corrective action procedural requirements. The licensee has entered the deficient condition into their corrective action program with CAP 01001641.

40A5 Other Activities

.1 (Closed) Apparent Violation (AV) 05000282/2005011-03; 05000306/2005011-03: Degraded Risk-Significant Planning Standard Follow Up and Resolution

a. Inspection Scope

The inspectors conducted additional in-plant and in-office review of information presented by the licensee at a regulatory conference held in the NRC Region III office on March 1, 2006, to discuss the significance of the preliminary White finding. The preliminary White finding was associated the establishment of a potentially non-conservative emergency action classification process, as contained in Prairie Island Emergency Plan. That process potentially would not have resulted in the

licensee staff declaring a required Site Area Emergency under certain flooding conditions (IR 050000282/2005011; 050000306/2005011).

The inspectors conducted a physical walkdown of the switchyard, relay house, and plant transformers and interviewed plant engineers. Additionally, inspectors reviewed information contained in a third party-evaluation of plant transformers and associated critical electrical component elevations, the design and routing of underground cables, the licensee's root cause evaluation report, and actions specified in plant normal and abnormal procedures to verify that electrical supplies would have remained available at a river level of 698 feet above mean sea level.

b. Findings

In the previous inspection period, the inspectors identified an apparent violation having preliminarily low to moderate safety significance for a failure to maintain in effect emergency plans that met the requirements specified in 10 CFR 50.54(q) and risk-significant planning standard 10 CFR 50.47(b)(4). Specifically, the establishment of a non-conservative emergency action level classification process, as contained in Prairie Island Emergency Plan potentially would not have resulted in the licensee staff declaring a required Site Area Emergency under certain flooding conditions.

This condition was initially identified as the result of a licensee evaluation that concluded transformers associated with each offsite power source to both the Unit 1 and 2 safety-related and non-safety-related 4160 volt buses had limiting elevations below 698 feet above mean sea level. The USAR, Section 2.4.3.5, "Floods," stated that the transformers will function when flooded to 698.0 feet above mean sea level. In addition, the entry conditions for the licensee's declaration of a Site Area Emergency at 698 feet above mean sea level was based on a river water level above which the functionality of site transformers can no longer be relied upon. The licensee initiated corrective action and changed the USAR referenced river elevation to 695 feet above mean sea level but failed to correct references to the 698 feet above mean sea level for the Site Area Emergency in the current emergency action level scheme or in their Nuclear Energy Institute 99-01 Revision 4 emergency action level scheme submittal that was under preparation at the time of discovery. Subsequently this oversight was identified by the inspectors.

On March 1, 2006, the licensee attended a regulatory conference at the NRC Region III office to present information associated with the significance of the issue. Based on the information presented at the regulatory conference and additional information recently obtained by the licensee through additional third party analysis, the inspectors conducted additional inspection and reviews of the effect of a river level of 698 feet above mean sea level on plant transformers and other critical electrical equipment. The inspectors concluded that plant transformers would remain available with the river level of 698 feet. Since alternating current power remained available to plant transformers at a river level of 698 feet above mean sea level, NRC Head Quarters and Regional Emergency Preparedness staff concluded that the risk-significant planning standard 10 CFR 50.47(b)(4) was not degraded and therefore, there was no finding and no violation of NRC requirements. These two AV's are closed.

.2 Implementation of Temporary Instruction (TI) 2515/165 - Operational Readiness of Offsite Power and Impact on Plant Risk

a. Inspection Scope

The objective of TI 2515/165, "Operational Readiness of Offsite Power and Impact on Plant Risk," was to confirm, through inspections and interviews, the operational readiness of offsite power systems in accordance with NRC requirements. On March 21 through March 24, 2006, the inspectors reviewed licensee procedures and discussed the attributes identified in TI 2515/165 with licensee personnel. In accordance with the requirements of TI 2515/165, the inspectors evaluated the licensee's operating procedures used to assure the functionality/operability of the offsite power system, as well as the risk assessment, emergent work, and/or grid reliability procedures used to assess the operability and readiness of the offsite power system.

The information gathered while completing this TI was forwarded to the Office of Nuclear Reactor Regulation for further review and evaluation.

b. Findings

No findings of significance were identified.

.3 Resolution of URI 05000282/2005011-02, Previously Unevaluated OWA Associated with the Cold Weather Operation of the Unit 1 Diesel Generators.

a. Inspection Scope

During the previous inspection period, inspectors identified a condition associated with the operation of the Unit 1 diesel generator ventilation during cold weather conditions. The ventilation system is a risk-significant support system for the Unit 1 safety-related diesel generators D1 and D2. This condition was previously unidentified and unevaluated as an OWA by the licensee. The licensee entered the condition into their corrective action program with CAP 01007904.

The inspectors reviewed the licensee's evaluation of the OWA and performed an independent assessment as to the operator's ability to implement abnormal and emergency operating procedures. Additionally, the inspectors reviewed the results of a time validation study of expected operator actions following a postulated event concurrent with the existence of the OWA. The inspectors also reviewed OWA for increased potential for personnel error including:

- required operations contrary to past training or required more detailed knowledge of the system than routinely provided;
- required a change from longstanding operational practices;
- required operation of system or component in a manner that is different from similar systems or components;
- created the potential for the compensatory action to be performed on equipment or under conditions for which it is not appropriate;

- impaired access to required indications, increase dependence on oral communications, or required actions under adverse environmental conditions; and
- required the use of equipment and interfaces that had not been designed with consideration of the task being performed.

Key documents used by the inspectors in conducting this inspection are listed in the Attachment to this report.

b. Findings

No findings of significance were identified and URI 05000282/2005011-02 is closed.

4OA6 Meeting(s)

.1 Exit Meeting

The inspectors presented the inspection results to Mr. T. Palmisano and other members of licensee management at the conclusion of the inspection on April 13, 2006. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

An interim exit meeting was conducted for:

- Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Program Inspection with Mr. P. Huffman, Plant Manager, on March 17, 2006.

.3 Regulatory Conference

A public meeting was conducted on March 1, 2006, at the Nuclear Regulatory Commission (NRC) Region III office in Lisle, Illinois. This was concerning a possible greater than green finding and apparent violation for a non-conservative emergency action level scheme. The meeting summary is available in ADAMS (ML061020547). The NMC presentation materials are also available (Package Accession Number ML060740345).

4OA7 Licencee-Identified Violations

The following violations of very low significance were identified by the licensee and are violations of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Manual, NUREG-1600, for being dispositioned as NCVs.

Cornerstone: Mitigating Systems

- .1 It is required, in part, in 10 CFR 50, Appendix B, Criterion III, that the design control measures shall provide for verifying or checking the adequacy of design. Further, the Prairie Island USAR, Section 8.1, requires that emergency power for engineered safety features shall conform to General Design Criteria 39, Emergency Power for Engineered Safety Features (U.S. Atomic Energy Commission, Proposed General Design Criteria for Nuclear Power Plant Construction Permits, July 10, 1967) to provide capacity assuming a failure of a single active component. Contrary to the above the metering portion of the circuits was added as part of the Station Blackout modification in 1989 without adequately verifying or checking the adequacy of the design as evidenced by the determination that the Prairie Island Unit 1 design of the phase and ground relay current transformer circuits for safeguards buses 15 and 16 were vulnerable to a failure of a common portion of the circuit. As a result, plant operators declared Unit 1 safeguards buses 15 and 16 inoperable and declared one path from the grid inoperable. The buses were transferred to an alternate source, the relaying disconnects were opened, and the buses were declared operable. On February 8, 2005, a temporary modification of the relaying scheme was implemented. This issue was identified based on the licensee's review of an event reported at another licensee, and was described in CAP 040867 and Licensee Event Report 05000282/2005001-00 dated February 5, 2005. Furthermore, this issue was the subject of URI 05000282/2005004-02. Subsequently, the licensee further evaluated the design and determined that a single failure would not result in a loss of both Unit 1 safeguards buses. Regional inspectors reviewed the licensee's evaluation and found it to be acceptable, therefore, this URI is closed.

Cornerstone: Public Radiation Safety

- .2 The licensee's ODCM states the minimum number of operable radioactive liquid effluent monitoring instrumentation channels required during operation. Table 2.2 of the ODCM describes the action required by the licensee when less than the minimum number of operable radioactive liquid effluent monitoring instrumentation channels are available. The ODCM specifically requires one Discharge Canal Monitor R-21 be operable at all times. If R-21 is inoperable, the licensee is required to take grab samples at least once per 12 hours and analyze the sample for gamma emitters. Additionally, they must restore R-21 within 30 days. Contrary to the above, and as described in CAP040479, on January 8, 2005, R-21 was taken out of service and the licensee failed to conduct a Discharge Canal grab sample in the first 12 hours. The licensee identified the missed sample and conducted the required sampling and analysis approximately 17.5 hours after declaring R-21 out of service. The sample showed no increases when compared with other Discharge Canal sampling. During the period R-21 was out of service the licensee released the 121 Aerated Drain Tank monitor tank. The release was monitored using the Liquid Radwaste Effluent Line (R-18). No increase was noted on R-18 during the release and no alarms were received. The finding is of very low safety significance because it did not result in an unmonitored discharge nor were any effluent dose limits approached.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Anderson, Radiation Protection Manager
T. Bacon, Operations Training Supervisor
N. Bibus, Plant Engineering Supervisor
S. Brown, Site Engineering Director
J. Callahan, Emergency Planning Manager
C. Chovan, Production Planning Manager
L. Clewett, Business and Support Manager
F. Forrest, Operations Manager
P. Huffman, Plant Manager
J. Lash, Training Manager
k. Ludwig, Maintenance Manager
S. McCall, Engineering Programs Manager
S. Northard, Nuclear Safety Assurance Manager
T. Palmisano, Site Vice President
M. Runion, Engineering Plant and Systems Manager

Nuclear Regulatory Commission

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000282/2006002-01 05000306/2006002-01	URI	Evaluation of Expired Sealant Performance for Flood Protection
05000282/2006002-02 05000306/2006002-02	URI	Licensee Continuing Onsite Tritium Well Sample Results Assessment (Section 2PS1.1)

Closed

05000306/2005011-02	URI	Unit 1 Diesel Generator Operation During Cold Weather
05000282/2005004-02	URI	Inadequate Design Control Causes Single Failure
05000282/2005011-03 05000306/2005011-03	AV	Degraded Risk Significant Planning Standard

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 or 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.

1R04 Equipment Alignment

D2 Diesel Generator

Integrated Checklist C1.1.20.7-5; D2 Diesel Generator Valve Status; Revision 20
Integrated Checklist C1.1.20.7-6; D2 Diesel Generator Auxiliaries and Local Panels and Switches; Revision 10
Integrated Checklist C1.1.20.7-7; D2 Diesel Generator Main Control Room Switch and Indicating Light Status; Revision 13
Integrated Checklist C1.1.20.7-8; D2 Diesel Generator Circuit Breakers and Panel Switches; Revision 16
CAP 043678; Control Room Operator Aid Book Not In Agreement with the On-Line List
Condition Evaluation 008541; Control Room Operator Aid Book Not In Agreement with the On-Line List

D5 Diesel Generator

Integrated Checklist C1.1.20.7-9; D5 Diesel Generator Valve Status; Revision 11
Integrated Checklist C1.1.20.7-10; D5 Diesel Generator Auxiliaries and Local Panels and Switches; Revision 9
Integrated Checklist C1.1.20.7-11; D5 Diesel Generator Main Control Room Switch and Indicating Light Status
Integrated Checklist C1.1.20.7-12; D5 Diesel Generator Circuit Breakers and Panel Switches; Revision 9

121 Control Room Special Ventilation

Integrated Checklist C1.1.37-1[2]; Ventilation Systems; Revision 14
System Pre-Start Checklist C37.11-1; Chilled Water Safeguards System; Revision 17
Operating Procedure C37.11; Chilled Water System Operation; Revision 19
CAP 01017534; Unable to Unplug CL-20-44

Unit 1 Auxiliary Feedwater Complete System Walkdown

System Pre-Start Checklist C28-2; Auxiliary Feedwater System Unit 1; Revision 44
Drawing NF-39222; Flow Diagram Unit 1 Feedwater System; Revision BA
WO 088959; MS-31998 Diagnostic and Repack
WO 088083; Replace Packing on 11 Turbine-Driven Auxiliary Feedwater Pump Discharge Valve
WO 074716; Oil Leak on the 12 Motor-Driven Auxiliary Feedwater Pump Lube Oil Pump
WO 0100533; 11 Turbine-Driven Auxiliary Feedwater Pump Steam Block Valve Leak-By
WO 0100207; AF-16-02 Auxiliary Feedwater to 12 Steam Generator Check Valve Has Leak-By

CAP 01013051; Found 3-Inch Bolt on the Floor of the 11 Turbine-Driven Auxiliary Feedwater Pump Room

1R05 Fire Protection

Plant Safety Procedure F5, Appendix A; Fire Strategies for Fire Areas 25, 31, 32, 41A, 41B, 81, 113, 115, and 117

Plant Safety Procedure F5, Appendix F, Revision 20; Fire Hazard Analysis for Fire Areas 25, 31, 32, 41A, 41B, 81, 113, 115, and 117

IPEEE NSPLMI-96001, Appendix B; Internal Fires Analysis; Revision 2

CAP 01010751; Fire Watch in the Safety Injection Pump Area Identified that CAP 025815 was Inappropriately Closed Without Complete Evaluation of Potential Discrepancies

1R06 Flood Protection Measures

Abnormal Operating Procedure AB-4; Flood; Revision 28

Surveillance Procedure 1293; Inspection of Flood Control Measure; Revision 13; performed February 7 through February 17, 2006

Fleet Procedure FP-SC-PE-05; Shelf Life Program; Revision 0

CAP 01012782; Leather glove found in Safeguards Cooling Water Pump Area

CAP 01011939 Yellow Slippery When Wet Found in Screenhouse Vital Area

CAP 01021256; Deck-O-Seal Sealant Found with Questionable Shelf Life

CAP 01022931; Re-Order of Sealant Not Completed

1R11 Licensed Operator Requalification Program - Quarterly Simulator Observation

Simulator Evaluation Guide P9160S-001, ATT SQ53; Revision 0

5AWI 3.15.0; Plant Operation; Revision 17

1R12 Maintenance Rule Implementation

Air Compressors

Maintenance Rule System Specific Basis Document, Station and Instrument Air; Revision 11

121 Air Compressor Troubleshooting Support/Refute Matrix; January 4, 2006

122 Air Compressor Troubleshooting Support/Refute Matrix; January 4, 2006

Containment Spray

Maintenance Rule A(1) Action Plan; Containment Spray System

Root Cause Evaluation Report 01011427; 21 CS Pump into Maintenance Rule a(1)

CAP 01011427; Develop an a(1) Action Plan for the CS System

1R13 Maintenance Risk Assessments and Emergent Work Control

Procedure H24.1; Assessment and Management of Risk Associated with Maintenance Activities; Revision 9

Unit 1 Configuration Risk Assessment for January 18, 2006

Operations Log Entries for January 18, 2006

Unit 2 Configuration Risk Assessment for February 5, 2006

Operations Log Entries for February 5, 2006

Unit 1 Configuration Risk Assessment for February 13, 2006
Operations Log Entries for February 13, 2006
Unit 1 Configuration Risk Assessment for March 12, 2006
Operation Log Entries for March 12, 2006
CAP 01013116; Delay in Restoring Work Orders 00100621 and 00100622

1R14 Non-Routine Evolutions

Failure of the 21 Main Feedwater Pump Recirculation Valve
Operating Logs for February 3, 2006
Emergency Response Computer System Trend of Unit 2 Generator Gross Megawatts
Emergency Response Computer System Trend of Unit 2 Power for the Thermal Power Monitor Calculation
Emergency Response Computer System Trend of Unit 2 Loop A Feedwater Header Pressure
Emergency Response Computer System Trend of Unit 2 Loop A Steam Generator Narrow Range Level
Emergency Response Computer System Trend of Unit 2 Loop A Feedwater Flow
Emergency Response Computer System Trend of Unit 2 Loop B Steam Generator Narrow Range Level
CAP 01013448; 21 Feedwater Recirculation Valve Failed Open

Unit 2 Shutdown and Cooldown

Operating Procedure 2C1.3; Unit 2 Shutdown; Revision 55
Operating Procedure 2C1.4; Unit 2 Power Operation; Revision 37
Operating Procedure 2C15; Residual Heat Removal System Unit 2; Revision 33
Operating Procedure 2C14; Component Cooling Water System Unit 2; Revision 25
CAP 01013524; 2FR-475 Steam Flow/Feed Flow Recorder Stayed at 100% Power Value
CAP 01013526; 2FI-495 21 Steam Generator Flow Indicator Failed Downscale
CAP 01013527; Left Stop Valve Dual Indication and Downstream Pressure Indicates Valve Open
Operating Logs for February 4 and 5, 2006

1R15 Operability Evaluations

D1 and D2 Cold Weather Operation OPR

OPR 01008542; Continuous Operation of D1 and D2 During Cold Weather; Revision 0
OPR 01008542; Continuous Operation of D1 and D2 During Cold Weather; Revision 1
Engineering Calculation ENG-ME-026; Emergency Diesel Generator Ventilation Testing/Analysis; Revision C
Operating Procedure C18.1; Engineering Safeguards Equipment Support Systems; Revision 19
Operating Procedure 1C20.7; D1/D2 Diesel Generators; Revision 22
CAP 01008542; Request OPR Associated with CAP 01008485
CAP 01008542; Continuous Operation of D1 and D2 During Cold Weather
CAP 01007904; Evaluate Continuous Operation of D1 and D2 in Cold Weather as an Operator Workaround

Prompt Operability Evaluation D2 Fuel Oil Leak

CAP 01010676; Fuel Oil Leak Causes Entry Into Abnormal Operating Procedure D14.3 AOP1
Sharepoint Attachment to CAP 01010676

1R11 and 2R11 OPR

OPR 01011307; Filter Paper Drive Speed Twice What Is Specified in Technical Manual;
Revision 0

USAR Section 7.5.2; Containment Radiation Monitors; Revision 28

CAP 01011307; Filter Paper Drive Speed Twice What Is Specified in Technical Manual

Auxiliary Feedwater Pumps

OPR 01009304; Steam Generator Blowdown Valves Not Maintained as Safety-Related

CAP 01009304; Steam Generator Blowdown Valves Not Maintained as Safety-Related

Steam Generator Blowdown Upgraded to Safety-Related

OPR 01011774; Steam Generator Blowdown System Change to Safety-Related; Revision 0

CAP01011774; Steam Generator Blowdown System Change to Safety-Related

D1 Diesel Generator Jacket Water Leak OPR

OPR 01020661; D1 Diesel Generator Jacket Water Leak OPR; Revision 0

Operating Instruction 06-35; Instruction for the Filling of the Jacket Water Expansion Tank
Remote Alarm Response Procedure C55300-0203; Jacket Coolant Level Low Expansion
Tank; Revision 7

Temporary Change Notice TCN-008A to Remote Alarm Response Procedure C55300-0203;
Jacket Coolant Level Low Expansion Tank; Revision 7

Remote Alarm Response Procedure C55300-0204; Jacket Coolant Pressure Low; Revision 6

Remote Alarm Response Procedure C55300-0301; Jacket Coolant Temperature High;
Revision 6

CAP 01020661; D1 Diesel Generator Jacket Water Leak

Operating Logs for March 27, 2006

1R19 Post-Maintenance Testing

D6 Diesel Generator

SP 2307; D6 Diesel Generator 6-Month Fast Start Test; Revision 23

SP 2335; D6 Diesel Generator 18-Month 24-Hour Load Test; Revision 11

122 Control Room Air Handler and Chiller

WO 00109479; 122 Control Room Air Handler Annual Inspection

WO 00109480; 122 Control Room Chiller Inspection

D2 Outside Air Damper

SP 1307; D2 Diesel Generator 6-Month Fast Start Test; Revision 29

WO 00265122-02; Post-Maintenance Test

Operating Procedure 1C37.10; D1/D2 Diesel Generator Room Cooling System; Revision 5

CAP 01018372; CD-34049 122 Diesel Generator Outside Air Damper Did Not Open

14 Containment Fan Cooling Unit Tube Leak Repair

WO 00091187, Task 4; Repair Cooling Water Leaks on 14 Containment Fan Cooling Unit Maintenance Operating Procedure 1M-ZC-174-013; 14 FCU Isolation and Restoration; Revision 1

CAP 01020709; Increasing Level on 14 FCU Condensate Collecting Pot

1R20 Refueling and Other Outage Activities

SP 2705; Post Outage Containment Close-Out Inspection; Revision 29

Unit 2 Shutdown Safety Assessments for February 7 through February 17, 2006

Operating Procedure 2C1.3; Unit 2 Shutdown; Revision 55

Operating Procedure 2C1.4; Unit 2 Power Operation; Revision 37

Operating Procedure 2C15; Residual Heat Removal System Unit 2; Revision 33

Operating Procedure 2C14; Component Cooling Water System Unit 2; Revision 25

CAP 01013524; 2FR-475 Steam Flow/Feed Flow Recorder Stayed at 100 percent Power Value

CAP 01013526; 2FI-495 21 Steam Generator Flow Indicator Failed Downscale

CAP 01013527; Left Stop Valve Dual Indication and Downstream Pressure Indicates Valve Open

Operating Logs for February 4 and 5, 2006

1R22 Surveillance Testing

SP 1102

Operating Logs, dated October 13, 2005

CAP 01000971; SP 1118 Not Done Within 1 Hour as Required By Technical Specifications

SP 1002A

CAP 01013345; 1TC-404R Found Out-of-Tolerance During SP 1002A

SP 2101 and SP 2103

CAP 01014039; D6 Engine 2 Piston B8 Has Combustion Bowl Crack

SP1295

Temporary Change Notice to SP 1295; Revision 36; dated March 18, 2005

CAP 01014590; Preventive Maintenance Procedure Guidance Differs from Vendor Guidance

1R23 Temporary Modifications

Engineering Change 621; Install Blank Flange for 11 FCU Face; January 7, 2006

Prairie Island Nuclear Generating Plant Calculation ENG-ME-648; 11 Containment Fan Coil Unit Analysis with One Coil Blanked; January 16, 2006

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

Offsite Dose Calculation Manual; Revision 19

USAR; Section 7; Revision 28

2004 Annual Radioactive Effluent Report and ODCM; dated May 16, 2004

2005 Tritium Ground Water Sampling Results; dated January 11, 2006

Observation Report 2004-002-6-022; Nuclear Oversight Observation Report Radioactive Waste Processing Assessment; dated June 25, 2004
 Observation Report 2005-002-6-019; Nuclear Oversight Observation Report REMP Annual Assessment; dated June 17, 2004
 CAP 00730187; Inadvertent Boration of Unit 2 Reactor Coolant System; dated July 8, 2004
 CAP 0078591; Control of Containment Openings During Outage; dated December 10, 2004
 CAP 00851081; Determine if a Release Rate Calculation is Required After Initial Containment Release; dated May 28, 2005
 CAP 00857852; Effluent Composite Sample Results Elevated; dated July 19, 2005
 CAP 00876712; 124/126 Waste Gas Decay Tank Pressure Decreasing; dated August 13, 2005
 CAP 00880560; ODCM Quarterly Composite Sample Lost; dated August 26, 2005
 CAP 01000875; Niobium-95, Mis-Quantified, Due to Software Issue; dated October 13, 2005
 CAP 01015585; Loss of Waste Gas Inventory; dated February 20, 2006
 CAP 01018821; Discharge Pipe Extension and Leak Detection in the USAR; dated March 16, 2006
 CAP 040479; Missed 12 Hour Sample Requirement for R-21 Out of Service; dated January 8, 2005
 1783.2B; NMC Radiation Monitor Electronic Calibration Train B; Revision 0
 1783.1A; Westinghouse Radiation Monitor Electronic Calibration Train A; Revision 1
 SP 1140.1; 121 Spent Fuel Pool Special and In-Service Purge Ventilation System Filter Removal Efficiency Test; Revision 16
 SP 1055.2; 122 Control Room Clean Up Ventilation System Filter Removal Efficiency Test; Revision 13
 SP1055.2; 122 Control Room Clean Up Ventilation System Filter Removal Efficiency Test; Revision 15
 SP 1176A; Auxiliary Building Special Ventilation Train A Flow Verification; Revision 3
 SP 1080.2; 12 Shield Building Ventilation Filter Removal Efficiency Test; Revision 15
 SP 1081.1; 121 Auxiliary Building Special Ventilation Filter Removal Efficiency Test; Revision 13
 SP 1184A; Spent Fuel Pool Special Ventilation Train A Flow; Revision 2
 SP 1185B; Control Room Clean Up Ventilation Train B Flow Verification; Revision 3
 SP 1186B; Shield Building Ventilation Train B Flow Verification; Revision 0
 SP 2080.2; 22 Shield Building Ventilation Filter Removal Efficiency Test; Revision 11
 SP 2186B; Shield Building Ventilation Train B Flow Verification; Revision 1
 QF-406; Snap-Shot Report Chemistry; dated February 20, 2006

40A1 Performance Indicator Verification

Calculated Performance Indicator Data for the Unit 1 and Unit 2 Reactor Scrams for the 2nd Quarter 2004, 3rd Quarter 2004, 4th Quarter 2004, 1st Quarter 2005, and the 2nd Quarter 2005, 3rd Quarter 2005, and 4th Quarter 2005
 Calculated Performance Indicator Data for the Unit 1 and Unit 2 Reactor Scrams with Loss of Normal Heat Removal for the 2nd Quarter 2004, 3rd Quarter 2004, 4th Quarter 2004, 1st Quarter 2005, and the 2nd Quarter 2005, 3rd Quarter 2005, and 4th Quarter 2005
 Unit 1 Operating Logs from April 1, 2004, through December 31, 2005
 Unit 2 Operating Logs from April 1, 2004, through December 31, 2005
 Plant Procedure H33.1; Performance Indicator Reporting Instructions; Revision 5
 Plant Procedure H33; Performance Indicator Reporting; Revision 5

CAP 040989; Need to Determine if Pinhole Leak in Containment Fan Cooling Unit Results in a Loss of Safety Function
CAP 041859; NRC Monthly Operating Report Error in Reactor Hours Critical for February and March

4OA2 Identification and Resolution of Problems

Annual Sample

CAP 01013473; D6 Experienced High Crankcase Pressure
Root Cause Evaluation 01013473; D6 High Crankcase Pressure Resulting in Unit 2 Shutdown

Review of Corrective Action Aspects of the Maintenance of Emergency Action Levels for the External Flooding Event

Automated Engineering Services Corporation Evaluation; Transformer External Flood Elevation at Elevation 698; dated February 19, 2006
CAP 01001641; Potential Error in Flooding Level for Declaring Site Area Emergency
Root Cause Evaluation 01001641; Potential Error in Flooding Level for Declaring Site Area Emergency

4OA5 Other Activities

Degraded Risk-Significant Planning Standard Follow Up and Resolution

Automated Engineering Services Corporation Evaluation; Transformer External Flood Elevation At Elevation 698; dated February 19, 2006

Implementation of TI 2515/165 - Operational Readiness of Offsite Power and Impact on Plant Risk

TI 2515/165; Operational Readiness of Offsite Power and Impact on Plant Risk; dated March 3, 2006
Operating Procedure C20.3; Electrical Power System Security Analysis; Revision 3
Abnormal Operating Procedure C20.3 AOP1; Evaluating System Operating Conditions When Security Analysis is Out of Service; Revision 6
Procedure H24; Maintenance Rule Program; Revision 9
Procedure H24.1; Assessment and Management of Risk Associated with Maintenance Activities; Revision 9
Procedure H24.1; Appendix A; Phase 1 Risk Assessment; Revision 1

Unit 1 Diesel Generator OWA

5AWI 3.10.8; Equipment Problem Resolution Process; Revision 7
Design Basis Document DBD SYS-38; Emergency Diesel Generator System; Revision 2
CAP 01007439; Evaluate 1C20.7 Steps 5.3.6.D.1 and 5.4.6.D.1 for Workarounds
CAP 01007904; Evaluate Operation of D1/D2 in Cold Weather as OWA
CAP 01008485; Continuous Operation of D1/D2 During Cold Weather Operation
CAP 01008542; Request an OPR Associated with CAP 1008485
OPR 01008542; Continuous Operation of D1 and D2 During Cold Weather; Revision 0
OPR 01008542; Continuous Operation of D1 and D2 During Cold Weather; Revision 1
Operating Procedure C18.1; Engineering Safeguards Equipment Support Systems; Revision 19
Operating Procedure 1C20.7; D1/D2 Diesel Generators; Revision 22

Validation of 1C20.7; Continuous Operation of D1/D2 During Cold Weather Operation
Operator Time Validation to Perform Actions; dated February 20, 2006

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
AWI	Administrative Work Instruction
CAP	Corrective Action Program/Corrective Action Program Action Request
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
EA	Enforcement Action
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
NCV	Non-Cited Violation
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OPR	Operability Recommendation
OWA	Operator Workaround
PARS	Publicly Available Records
RETS	Radiological Effluent Technical Standards
SDP	Significance Determination Process
SP	Surveillance Procedure
TI	Temporary Instruction
TS	Technical Specifications
URI	Unresolved Item
USAR	Updated Safety Analysis Report
WO	Work Order