February 3, 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 05000282/2005011;
05000306/2005011; PRELIMINARY WHITE FINDING

Dear Mr. Palmisano:

On December 31, 2005, 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 January 5, 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.

This report documents a finding that appears to have a low to moderate safety significance. The finding, as described in Section 4OA5.1 of this report, relates to the establishment of a non-conservative emergency action level classification process, as contained in Prairie Island Emergency Plan Annex A, that potentially would not have resulted in the licensee staff declaring a Site Area Emergency under certain flooding conditions. The finding did not present an immediate safety concern since the climatic conditions necessary to cause high river levels were extremely rare and had not occurred during the life of the plant. The finding was assessed using the Emergency Preparedness Significance Determination Process and was preliminarily determined to be White, i.e., a finding with some increased importance to safety, which may require additional NRC inspection.

The finding was also determined to be an apparent violation of NRC requirements. Specifically, the apparent violation involved the failure to maintain in effect emergency plans that meet the requirements contained in 10 CFR 50.54(q) and the risk-significant planning standard 10 CFR 50.47(b)(4). The apparent violation of NRC requirements is being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. The current Enforcement Policy is on the NRC website at: http://www.nrc.gov/reading-rm/adams.html.

In accordance with Inspection Manual Chapter (IMC) 0609, we intend to complete our evaluations using the best available information and issue our final determination of safety significance within 90 days of this letter.

The significance determination process encourages an open dialogue between the staff and the licensee, however, the dialogue should not impact the timeliness of the staff's final determination. Before we make a final decision on this matter, we are providing you an opportunity to present to the NRC your perspectives on the facts and assumptions used by the NRC to arrive at the finding and its significance at a Regulatory Conference or by a written submittal. If you choose to request a Regulatory Conference, it should be held within 30 days of the receipt of this letter and we encourage you to submit supporting documentation at least 1 week prior to the conference in an effort to make the conference more efficient and effective. If a Regulatory Conference is held, it will be open for public observation. If you decide to submit only a written response, such submittal should be sent to the NRC within 30 days of the receipt of this letter.

Please contact Kenneth Riemer of the Division of Reactor Safety, Plant Support Branch, at (630) 829-9757 within 10 business days of your receipt of this letter to notify the NRC of your intentions. If we have not heard from you within 10 days, we will continue with our significance determinations and enforcement decisions and you will be advised by separate correspondence of the results of our deliberations on these matters.

Since the NRC has not made final determinations in this matter, no Notices of Violation are being issued for this inspection finding at this time. In addition, please be advised that the number and characterization of the apparent violation described in the enclosed inspection report may change as a result of further NRC review.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), which is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA by K. Steven West for/

Mark A. Satorius, Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000282/2005011; 05000306/2005011
w/Attachment: Supplemental Information

See Attached Distribution

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Enclosure: Inspection Report 05000282/2005011; 05000306/2005011
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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:	05000282/2005011; 05000306/2005011
Licensee:	Nuclear Management Company, LLC
Facility:	Prairie Island Nuclear Generating Plant, Units 1 and 2
Location:	Welch, MN 55089
Dates:	October 1 through December 31, 2005
Inspectors:	J. Adams, Senior Resident Inspector D. Karjala, Resident Inspector C. Phillips, Senior Operations Engineer C. Zoia, Operations Engineer M. Mitchell, Radiation Specialist R. Jickling, Emergency Preparedness Analyst
Approved by:	R. Skokowski, Chief Branch 3 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000282/2005011, 05000306/2005011; 10/01/05 - 12/31/05; Prairie Island Nuclear Generating Plant, Units 1 and 2; Emergency Preparedness.

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. One finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 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

Cornerstone: Emergency Preparedness

- Preliminary White: The inspectors identified an apparent violation having preliminarily low to moderate safety significance for a failure to maintain in effect emergency plans that meet 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 (EAL) classification process, as contained in Prairie Island Emergency Plan Annex A, Condition 19, "Natural Events," would potentially 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 off-site power source to both the Unit 1 and 2 safety-related and non-safety-related 4 kilovolt buses had limiting elevations below 698 feet above mean sea level (MSL). The Updated Safety Analysis Report (USAR), Section 2.4.3.5, "Floods," stated that the transformers will function when flooded to 698.0 feet above MSL. The entry conditions for the licensee's declaration of a Site Area Emergency at 698 feet above MSL were based on a river water level above which the functionality of site transformers can no longer be relied upon. The licensee initiated a corrective action to correct the USAR but failed to correct references to the 698 feet above MSL for the Site Area Emergency EAL in Prairie Island Emergency Plan Annex A, Condition 19, until this condition was identified by the inspectors. The licensee revised the EAL for a Site Area Emergency to an acceptable value of 695 feet above MSL and conducted a root cause evaluation to determine the causes that prevented timely correction following initial identification.

  The inspectors determined the finding to be more than minor since the finding was associated with the procedure quality attribute of the Emergency Preparedness Cornerstone and affected the cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. The finding significance was assessed using Inspection Manual Chapter (IMC) 0609, Appendix B, Emergency Preparedness SDP Sheet 1, "Failure To Comply," and the examples provided in Section 4.4. The inspectors concluded that the finding

was associated with an EAL process that would potentially not have resulted in the licensee staff declaring a Site Area Emergency under certain flooding conditions. The finding was determined preliminarily to be of low to moderate safety significance (White). Additionally, the inspectors concluded that the licensee's failure to implement corrective action to revise the applicable EAL with an acceptable value as a cross-cutting finding associated with problem identification and resolution. (Section 4OA5.1)

B. Licensee-Identified Violations

No findings of significance were identified.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near full power until December 5, 2005, when power was reduced to 98 percent to support installation of a new Emergency Response Computer System. Unit 1 was returned to full power on December 16, 2005, where it operated until December 28, 2005, when power was reduced to 93 percent to perform preventive maintenance on the 11 and 13 heater drain tank pumps. Unit 1 was restored to full power later that day where it operated through the remainder of the inspection period.

Unit 2 operated at or near full power until October 18, 2005, when power was reduced to 93 percent for heater drain pump motor preventive maintenance. The unit was returned to full power on October 19, 2005. Unit 2 operated at or near full power until November 19, 2005, when power was reduced to approximately 50 percent for turbine valve testing. The unit was returned to full power on November 20, 2005, where it operated through the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

On October 18, 2005, the inspectors completed one adverse weather inspection sample that assessed the licensee's preparation of risk-significant plant systems for the seasonal onset of cold weather. The inspectors selected the Unit 1 and Unit 2 condensate storage tanks; the safety-related diesel generators D1, D2, D5, and D6; and the safety-related cooling water system components located outside the turbine and auxiliary buildings. The inspectors completed in-plant system walkdowns and conducted in-office reviews of 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 (CAPs) and work orders (WOs) to verify that the licensee had entered problems identified with cold weather operations into the corrective action system and were taking the appropriate corrective and compensatory actions. The documents reviewed by the inspectors are listed in the Attachment.

b. Findings

No findings of significance were identified. However, an issue related to cold weather preparation is described in Section 1R16 of this report.

1R04 Equipment Alignment (71111.04)

.1 Partial 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 mitigating systems equipment during times when the trains were of increased importance due to the redundant trains or other related equipment being unavailable. 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 station corrective action procedures.

The inspectors utilized the valve and electric breaker checklists 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 WOs and CAPs associated with the operable 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 Updated Safety Analysis Report (USAR) to determine the functional requirements of the systems.

The inspectors verified the alignment of the following trains:

- D5 diesel generator during the unavailability of the D6 diesel generator for preventive maintenance on October 12, 2005;
- D2 diesel generator and safety-related bus 16 following the failure of the bus 15 load sequencer on November 2, 2005; and
- 11 turbine-driven auxiliary feedwater pump during the unavailability of the 12 auxiliary feedwater pump on November 15, 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.

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, their potential to impact equipment that 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 station corrective action procedures.

The following nine fire areas were inspected by in-plant walkdowns supporting the completion of nine fire protection zone walkdown samples on October 5, 2005:

- Fire Area 3, 121 Control Room Special Ventilation System Room;
- Fire Area 10, Train A Event Monitoring Equipment Room;
- Fire Area 16, Train B Event Monitoring Equipment Room;
- Fire Area 58, Auxiliary Building Ground Floor Unit 1;
- Fire Area 69, Turbine Building Ground Floor and Mezzanine Floor Unit 1;
- Fire Area 70, Turbine Building Ground Floor and Mezzanine Floor Unit 2;
- Fire Area 73, Auxiliary Building Ground Floor Unit 2;
- Fire Area 92, 122 Control Room Special Ventilation System Room; and
- Fire Area 127, 480 Volt Bus 211/212 Room.

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

On October 19, 2005, the inspectors conducted an in-plant walkdown of the Unit 1 and Unit 2 cooling water pump rooms in the screenhouse completing one internal flood protection inspection sample. This area contains safety-related and risk-significant equipment associated with Unit 1 and Unit 2, including both trains of the safety-related cooling water pumps. The inspectors conducted in-office reviews of applicable sections of the USAR, design bases documents, and plant procedures associated with internal flooding of the screenhouse. The inspectors verified by in-plant 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 was no accumulation of loose materials that could plug critical drain paths.

The inspectors reviewed CAPs associated with a flood protection issue to verify that the licensee was identifying issues at an appropriate threshold, entering them into their corrective action program, and implementing appropriate corrective actions in

accordance with station corrective action procedures. The documents reviewed by the inspectors are listed in the Attachment.

b. Findings

No findings of significance were identified. However, an issue related to flood protection is described in Sections 4OA2.1 and 4OA5.1 of this report.

1R11 Licensed Operator Requalification (71111.11)

.1 Facility Operating History

a. Inspection Scope

The inspectors reviewed the plant's operating history from September 2003 through September 2005 to assess whether the Licensed Operator Requalification Training (LORT) program had addressed operator performance deficiencies noted at the plant.

b. Findings

No findings of significance were identified.

.2 Licensee Requalification Examinations

a. Inspection Scope

The inspectors performed a biennial inspection of the licensee's LORT program. The inspectors reviewed the current year requalification biennial written examination and annual operating test material, to be administered the week of the inspection, to evaluate general quality, construction, and difficulty level. The operating portion of the examination was inspected during the period of October 2 through October 7, 2005. The operating examination material consisted of two dynamic simulator scenarios and six job performance measures (JPMs). The biennial written examination was administered on October 6, 2005, and consisted of 30 open reference, multiple choice questions. The inspectors reviewed the methodology for developing the examinations, including the LORT program 2-year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The inspectors reviewed the licensee's program and assessed the level of examination material duplication during the current year annual examinations. The inspectors also interviewed members of the licensee's management, operations and training staff, and discussed various aspects of the examination development.

b. Findings

No findings of significance were identified.

.3 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed administration of the requalification operating test to assess the licensee's effectiveness in conducting the test and to assess the facility evaluators' ability to determine adequate performance using objective, measurable performance standards. The inspectors evaluated, in parallel with the facility evaluators, the performance of ten licensed operators for two operating shift crews during two dynamic simulator scenarios. Each crew consisted of three senior reactor operators and three reactor operators. In addition, the inspectors observed licensee evaluators administer JPMs to selected licensed operators. The inspectors also observed training staff personnel administer the operating test, including pre-examination briefings, observations of operator performance, and individual and crew evaluations after the dynamic simulator scenarios.

b. Findings

No findings of significance were identified.

.4 Examination Security

a. Inspection Scope

The inspectors observed and reviewed the licensee's overall licensed operator requalification examination security program related to examination physical security (e.g., access restrictions and simulator considerations) and integrity (e.g., predictability and bias). The inspectors also reviewed the facility licensee's examination security procedure, any corrective actions related to past or present examination security problems at the facility, and the implementation of security and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the examination process.

b. Findings

No findings of significance were identified.

.5 Licensee Training Feedback System

a. Inspection Scope

The inspectors assessed the methods and effectiveness of the licensee's processes for revising and maintaining its LORT program up to date, including the use of feedback from plant events and industry experience information. The inspectors interviewed licensee personnel (operators, instructors, and management) and reviewed applicable procedures. In addition, the inspectors reviewed the licensee's quality assurance oversight activities, including licensee training department self-assessment reports. The inspectors evaluated the licensee's ability to assess the effectiveness of its LORT program and their ability to implement appropriate corrective actions.

b. Findings

No findings of significance were identified.

.6 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of remedial training conducted since the previous annual requalification examinations. The inspectors reviewed the remedial training documentation for two individuals that demonstrated unsatisfactory performance during the current biennial written examination and the subsequent post-remedial re-examination administered in the previous weeks. The inspectors also reviewed the remedial training packages for two crews that demonstrated unsatisfactory performance during the current annual dynamic simulator operating test. The inspectors reviewed the training package to ensure that performance and knowledge weaknesses identified during the annual examination were adequately addressed. The inspectors also reviewed remedial training procedures and records to ensure that the subsequent re-evaluation was properly completed prior to returning the individuals and crews to licensed duties.

b. Findings

No findings of significance were identified.

.7 Conformance with Operator License Condition

a. Inspection Scope

The inspectors evaluated facility and individual operator license conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the licensee's program for maintaining active operator licenses to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the licensee's procedural compliance and the process for tracking on-shift hours for licensed operators. The inspectors also conducted reviews to verify that proficiency watch-standing hours were credited to the correct control room positions in accordance with Technical Specifications (TS). The inspectors reviewed 11 licensed operator medical records to ensure compliance with 10 CFR 55.21 and 55.25, and medical standards delineated in American National Standard Institute/American Nuclear Society (ANSI/ANS) 3.4. In addition, the inspectors reviewed the licensee's LORT program to assess compliance with the requalification program requirements prescribed by 10 CFR 55.59(c).

b. Findings

No findings of significance were identified.

.8 Conformance with Simulator Requirements

a. Inspection Scope

The inspectors assessed the adequacy of the licensee's simulator for use in operator licensing examinations and for satisfying experience requirements as prescribed in 10 CFR 55.46, "Simulation Facilities." The inspectors reviewed a sample of simulator performance test records (i.e., transient tests, malfunction tests, and reactor core performance tests), simulator work order records, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy process to ensure that simulator fidelity was being maintained. This was accomplished by reviewing discrepancies noted during the inspection to ensure that they were entered into the licensee's corrective action system and by an evaluation to verify that the licensee adequately captured simulator problems and that corrective actions were performed and completed in a timely fashion commensurate with the safety significance of the item (prioritization scheme). Open simulator discrepancies were reviewed for importance relative to impact on 10 CFR 55.45 and 55.59 operator actions as well as nuclear and thermal hydraulic operating characteristics. Closed simulator discrepancies were reviewed for the last 12 months for timeliness of resolution. The inspectors reviewed the licensee's recent simulator core performance testing to assess that the simulator adequately replicates the actual reactor plant core's performance characteristics. The inspectors also conducted interviews with the licensee's simulator configuration control personnel and completed the NRC Inspection Procedure 71111.11, Appendix C, checklist to evaluate whether or not the licensee's plant-referenced simulator was operating adequately as required by 10 CFR 55.46(c) and (d). The licensee has used the simulation facility to meet the experience requirements in 10 CFR 55.31(a)(5) for two recently licensed operators.

b. Findings

Introduction: The inspectors identified three issues that were unresolved at the end of the inspection period. The inspectors identified that the documentation of the licensee's testing of the simulator core modeling and simulator fidelity did not appear to comply with ANSI/ANS 3.5-1985 at the time the simulator was used to meet experience requirements for two applicants that took the most recent initial licensing examination conducted in August 2005. The inspectors found no documentation of testing adequate to support the use of the simulator for experience requirements prior to October 1, 2005. The review of the documentation completed on October 1, 2005, has led to questions about the acceptability of the completed test data. In addition, a licensee corrective action program document called into question the testing adequacy of the simulator to be used in requalification training since November 2004. These issues were considered an unresolved item pending further review.

Description: In order to apply for an operator's license an individual must have completed five significant reactivity manipulations per 10 CFR 55.31. The applicant may use the facility licensee's simulator to perform the reactivity manipulations as long as the simulator meets specific testing and documentation requirements per 10 CFR 55.46. The requirements for this testing and documentation were listed in detail in

ANSI/ANS 3.5-1985, "Nuclear Power Plant Simulators for Use in Operator Training." In accordance with 10 CFR 55.46(c)(2)(I), if the plant-referenced simulator was used to meet experience requirements for applicants for operator and senior operator licenses, it must utilize models relating to nuclear and thermal-hydraulic characteristics that replicate the most recent core load in the nuclear power reference plant for which a license was being sought. The licensee took credit for reactivity manipulations on the simulator for two operator license applicants who took the August 2005 initial license examination. The inspectors found no documentation that the licensee had conducted the required core performance testing on the simulator for the most recent core load prior to October 1, 2005.

The acceptability of the current testing completed October 1, 2005, is also being reviewed. It was not apparent from the test documents that: (1) the Prairie Island plant referenced simulator utilized models relating to nuclear and thermal-hydraulic characteristic that replicate the most recent core load in the nuclear power reference plant for which a license is being sought; and (2) that simulator fidelity has been demonstrated so that significant control manipulations are completed without procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence.

In addition, the inspectors reviewed CAP 043655, dated July 29, 2005, which stated that Transient Performance Test 2.1.4, "Core Performance Testing," Revision 2, conducted on November 4, 2004, had steps which were not signed off or marked as not applicable. The CAP also stated that important data for Transient Performance Test 2.2.9, "Unisolable Main Steam Line Break," Revision (unspecified), was missing such that it was not possible to determine if the test results were acceptable. What this means is that at the time the license applications were submitted, not only was the testing required to use the simulator for reactivity manipulations not documented but the available test documentation that would allow the use of the simulator for any purpose may have been incomplete.

These issues were considered to be of very low safety significance, because currently there appeared to be no actual impact on plant operation. However, these issues have important regulatory significance because the license applications stated that the applicants met all the required prerequisites for taking the initial license examination under sworn statement and could have potentially affected NRC licensing actions.

The following issues need to be resolved: (1) was testing necessary to demonstrate that the licensee could take credit for reactivity manipulations performed on the simulator performed prior to the initial license examination in August 2005; (2) was the testing completed on the simulator after the initial license examinations in August 2005 adequate to satisfy the experience requirements of 10 CFR 55.31; and (3) did the testing performed on the simulator prior to the initial license examination in November 2004 demonstrate that the simulator was acceptable for use in requalification training. These issues are considered an Unresolved Item (URI 05000282/2005011-01; 05000306/2005011-01) pending further review of licensee's simulator performance testing data and other applicable documents requested.

.9 Biennial Written Examination and Annual Operating Test Results

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the comprehensive biennial written tests, the annual job performance measure operating tests, and the annual simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during calender year 2005. The overall results were compared with the significance determination process in accordance with IMC 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process." Year 2005 was the second year of the licensee's 24-month training program. This represented one sample.

b. Findings

No findings of significance were identified.

.10 Quarterly Observation of Licensed Operator Requalification Simulator Training

a. Inspection Scope

On October 26, 2005, 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:

- 4 kilovolt (kV) bus load sequencers; and
- cooling tower transformer CT-1 failure.

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 electrical equipment problems for 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 actions were commensurate with the 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 five planned maintenance activities and three maintenance activities that involved emergent equipment failures with the following combinations of equipment unavailability completing eight risk assessment and emergent work control inspection samples:

- the planned unavailability of the D1 diesel generator, 12 motor-driven cooling water pump, 121 control room special ventilation system, and one of two cooling water supply valves to the instrument air compressors on October 3, 2005;

- the planned unavailability of the D6 diesel generator concurrent with the emergent unavailability of the 12 diesel-driven cooling water pump, 122 instrument air dryer, and one of two cooling water supply valves to the instrument air compressors on October 11, 2005;

- the planned unavailability of the 123 instrument air compressor concurrent with the planned unavailability of one of two cooling water supply valves to the instrument air compressors and the Red Rock and Byron 345 kV transmission lines on October 27, 2005;

- the planned unavailability of the 122 instrument air compressor, D1 diesel generator, one of two cooling water supply valves to the instrument air compressors, and the Byron transmission line on October 31, 2005;

- the emergent failure of the bus 15 load sequencer that resulted in the unavailability of the D1 diesel generator concurrent with the planned unavailability of the 122 instrument air compressor, one of two cooling water supply valves to the instrument air compressors, and the Byron transmission line on November 1, 2005;

- the planned unavailability of the 121 instrument air dryer, the 22 containment spray pump, one of two cooling water supply valves to the instrument air compressors, and the 21 cooling water pump on November 10, 2005;

- the planned unavailability of the 22 diesel-driven cooling water pump, 12 motor- driven auxiliary feedwater pump suction pressure switch (PS-17776), 11 charging pump, D2 diesel generator, 122 instrument air dryer, and one of two cooling water supply valves to the instrument air compressors on November 15, 2005; and

- the identification of emergent conditions associated with the 21 auxiliary feedwater pump concurrent with the planned unavailability of 121 safeguards traveling screen, 12 cooling water strainer, 21 charging pump, 12 containment spray pump and one of two cooling water supply valves to the instrument air compressors on November 30, 2005.

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 and 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)

a. Inspection Scope

On December 9, 2005, the inspectors conducted in-plant and in-office reviews of operator performance following a momentary signal spike in the Unit 1 blue channel of pressurizer level. The pressurizer instrument signal spike resulted in isolation of letdown and de-energizing pressurizer heaters. The review constituted one inspection procedure sample. The pressurizer level indication spike resulted from installation of a computer circuit card in a remote multiplexing unit during the replacement of the Emergency Response Computer System. The inspectors reviewed operator logs, plant computer data, strip charts, CAPs, and the prompt investigation report to determine what occurred, how the operators responded, and if the response was 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 five operability evaluations completing five 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 mitigating systems 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:

- prompt operability evaluation of the manual disconnect for the “C” phase of unit auxiliary transformer 1RY documented in CAP 01000623 on November 1, 2005;
- prompt operability evaluation of the 12 containment spray pump documented in CAP 01004143 on November 23, 2005;
- prompt operability evaluation for lower than expected suction pressure on the 21 auxiliary feedwater pump as documented in CAP 01005609 on December 1, 2005;
- operability recommendation (OPR) 01002789-1 for an issue associated with the safety-related qualification of auxiliary feedwater components installed as part of Prairie Island Modification 04AF01 on December 2, 2005; and

C OPR 01007270 for a minor jacket water leak on the D2 diesel generator number six cylinder.

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.

1R16 Operator Workarounds (OWAs) (71111.16)

.1 Quarterly OWA Review

a. Inspection Scope

The inspectors conducted in-plant walkdowns and in-office reviews of documentation associated with one licensee identified OWA and one inspector identified condition previously unevaluated as an OWA by the licensee, completing two OWA inspection samples. The inspections were associated with the following conditions.

The first sample reviewed repetitive performance problems associated with the steam exclusion system. The steam exclusion system is a mitigating system that ensures operability of safety-related equipment following a high energy line break event. The OWA was associated with dual indication (i.e., simultaneous indication that damper position is both open and closed) on turbine building steam exclusion damper position resulted during routine testing. The existence of a dual indication required local operator actions to verify damper closure.

The second OWA sample was associated with an inspector-identified 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 inspectors evaluated if the operator's ability to implement abnormal and emergency operating procedures was affected by the OWA. The inspectors also reviewed OWAs 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

Description: During the inspectors performance of the adverse weather inspection to assess the licensee's preparation of risk important systems for cold weather operation, the inspectors identified an unevaluated OWA associated with the Unit 1 diesel generator ventilation system operation. Specifically, Normal Operating Procedure 1C20.7, "D1/D2 Diesel Generator," Revision 22, Section 5.3.6.D.2 (for D1 diesel generator) and 5.4.6.D.2 (for D2 diesel generator) directed operators to stop the ventilation system by placing the control switch in the pullout position during periods of continuous engine operation during extremely cold weather. Additionally, the procedure specifies that an operator return and start the ventilation system for 5 to 10 minutes each hour. Procedure 1C20.7 states that these actions are necessary to prevent freezing of the diesel generator gauge board.

The inspectors reviewed the licensee's listing of known OWAs and noted that this OWA had not been previously identified or evaluated in accordance with Administrative Work Instruction 5AWI 3.10.8 "Equipment Problem Resolution Process," Revision 7. The inspectors communicated their concerns associated with this equipment condition to the licensee. In response, the licensee entered the condition into their corrective action program with CAP 01007904.

The inspectors reviewed the current procedural guidance associated with the operation of the Unit 1 diesel generator ventilation system comparing the condition to the inspectible criteria contained in NRC Inspection Procedure 71111.16. The inspectors review of this condition concluded the following:

- the condition potentially required a change from longstanding operational practices;
- the condition required operation of system or component in a manner that is different from similar systems specifically D1 and D2 diesel generators during non-cold weather conditions;
- the condition created the potential for the compensatory action to be performed on equipment or under conditions for which it is not appropriate, specifically engine operability with the ventilation shutdown during engine operation;
- the condition has the potential to impair access to required indications if the gauge board freezes, and increase dependence on oral communications to cycle the ventilation system; and
- the condition may require the use of equipment and interfaces that had not been designed with consideration of the task being performed.

The significance of this potential finding cannot be adequately assessed until the five criteria listed above have been fully assessed by the inspectors. Before this action can be completed, the inspectors need to review the licensee evaluation of the OWA. The

licensee expects to complete this evaluation in January 2006. This item is considered an Unresolved Item (URI 05000282/2005011-02) pending further review of the licensee's OWA evaluation.

.2 Cumulative Effects of OWAs

a. Inspection Scope

On October 25, 2005, the inspectors performed an in-office review of the cumulative effect of all OWAs identified as of September 2005 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 inspection effort completed one operator workaround inspection sample. The inspectors used related abnormal and emergency operating procedures as well as the documents listed in the Attachment to evaluate the list of OWAs.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed permanent changes to the plant's instrument air system completing one permanent plant modification inspection sample. Specifically, the licensee performed the on-line replacement of the 122 instrument air dryer with a similar unit of greater capacity.

The inspectors performed an in-office review of the design change package for Plant Modification 05SA02. This review included the design description, 10 CFR 50.59 evaluation screening, vendor information, system isolation, work plan, and post-modification testing. The inspectors reviewed affected parameters to verify that design and/or licensing bases and the performance capability of risk-significant structures, systems or components were not degraded through the change. The inspectors reviewed emergency/abnormal procedures, key safety functions, and the operators' ability to respond to a loss of key safety function; verified that the change to the new instrument air dryer design did not result in adverse system performance; discussed the modification with the responsible design engineer and plant operators; and conducted in-plant observations during the installation, testing, and operation of the new instrument air dryer.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors performed six assessments of post-maintenance testing completing six 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 this inspection 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:

- 12 diesel-driven cooling water pump following repair to the gear oil cooler on October 13, 2005;
- 121 auxiliary building special ventilation system following charcoal filter sampling on October 27, 2005;
- bus 15 load sequencer following troubleshooting and repair on November 3, 2005;
- 22 diesel-driven cooling water pump following planned maintenance on November 18, 2005;
- 12 containment spray pump following repair to a valve on November 30, 2005; and
- D2 diesel generator following 18-month preventive maintenance on December 16, 2005.

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 station 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.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

During this inspection period, the inspectors completed five surveillance inspection samples. Observation of Surveillance Procedure (SP) 1305 completed the quarterly inservice testing inspection requirement of a risk-significant pump or valve. Observation of SP 1001A completed the requirement to observe two reactor coolant system leak rate calculations per year. The inspectors selected the following surveillance testing activities:

- SP 2307, D6 Diesel Generator 6-Month Fast Start Test, Revision 23, on October 13, 2005;
- SP 1305, D2 Diesel Generator Monthly Slow Start Test, Revision 33, on October 17, 2005;
- SP 2334, D5 Diesel Generator 18-Month 24-Hour Load Test, Revision 9, on October 24, 2005;
- SP 1732, Spent Fuel Pool Evacuation Drill, on November 22, 2005; and
- SP 1001A, Reactor Coolant System Leakage Test Manual Method, Revision 9, on December 12, 2005.

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 performed an in-plant walkdown and conducted an in-office review of documentation associated with temporary modification 05T196 completing one temporary modification inspection sample. Temporary modification 05T196 installed scaffold and temporary lead shielding around residual heat removal piping to reduce radiation levels in the containment spray rooms. 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 station corrective action.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

A preliminary White finding and associated apparent violation have been documented in Section 4OA5.1 of this report. This finding resulted from a degraded risk-significant planning standard. Additionally, the finding has aspects associated with the cross-cutting area of problem identification and resolution with additional documentation provided in Section 4OA2.1 of this report.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed a screening review of Revisions 32 and 33 of the Prairie Island Emergency Plan to determine whether the changes made in Revisions 32 and 33 decreased the effectiveness of the licensee's emergency planning. This screening review of Revisions 32 and 33 did not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection to ensure that the emergency plan continues to meet NRC regulations. These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS2 Radioactive Material Processing and Transportation (71122.02)

.1 Radioactive Waste System Inspection Planning

a. Inspection Scope

The inspectors reviewed the liquid and solid radioactive waste system description in the USAR for information on the types and amounts of radioactive waste (radwaste) generated and disposed. The inspectors reviewed the scope of the licensee's audit program with regard to radioactive material processing and transportation programs to verify that it met the requirements of 10 CFR 20.1101. This review represented one sample.

b. Findings

No findings of significance were identified.

.2 Walkdown of Radioactive Waste Systems

a. Inspection Scope

The inspectors reviewed the liquid and solid radioactive waste system description in the USAR and the most recent information regarding the types and amounts of radioactive waste generated and disposed. The inspectors performed walkdowns of the liquid and solid radwaste processing systems to verify that the systems agreed with the descriptions in the USAR and the Process Control Program and to assess the material condition and operability of the systems. The inspectors reviewed changes to the waste processing system to verify the changes were reviewed and documented in accordance with 10 CFR 50.59 and to assess the impact of the changes on radiation dose to members of the public.

The inspectors reviewed the current processes for transferring waste resins into transportation containers to determine if appropriate waste stream mixing and/or sampling procedures were utilized. The inspectors also reviewed the methodologies for waste concentration averaging to determine if representative samples of the waste product were provided for the purposes of waste classification in accordance with 10 CFR 61.55. During this inspection, the licensee was not conducting waste processing. This review represented one sample.

b. Findings

No findings of significance were identified.

.3 Waste Characterization and Classification

a. Inspection Scope

The inspectors reviewed the licensee's radiochemical sample analysis results for each of the licensee's waste streams including dry active waste, resins, and filters. The inspectors also reviewed the licensee's use of scaling factors to quantify difficult-to-measure radionuclides (e.g., pure alpha or beta emitting radionuclides). The reviews were conducted to verify that the licensee's program assured compliance with 10 CFR 61.55 and 10 CFR 61.56, as required by Appendix G of 10 CFR Part 20. The inspectors also reviewed the licensee's waste characterization and classification program to ensure that the waste stream composition data accounted for changing operational parameters and thus remained valid between the annual sample analysis updates. This review represented one sample.

b. Findings

No findings of significance were identified.

.4 Shipment Preparation

a. Inspection Scope

The inspectors reviewed shipment packaging, surveying, labeling, marking, placarding, vehicle checks, emergency instructions, disposal manifest, shipping papers provided to the driver, and licensee verification of shipment readiness for a dry active waste shipment. The inspectors verified that receiving licensee was authorized to receive the shipment packages. The inspectors reviewed the licensee's procedures for loading and closure. The inspectors observed radiation worker practices to verify that the workers had adequate skills to accomplish each task and to determine if the shippers were knowledgeable of the shipping regulations and whether shipping personnel demonstrate adequate skills to accomplish the package preparation requirements for public transport with respect to NRC Bulletin 79-19 and 49 CFR Part 172, Subpart H. The inspectors reviewed the training records provided to personnel responsible for the conduct of radioactive waste processing and radioactive shipment preparation activities. The review was conducted to verify that the licensee's training program provided training consistent with NRC and Department of Transportation requirements. This review represented one sample.

b. Findings

No findings of significance were identified.

.5 Shipping Records

a. Inspection Scope

The inspectors reviewed seven non-excepted package shipment manifests completed in years 2004 and 2005 to verify compliance with NRC and Department of Transportation requirements (i.e., 10 CFR Parts 20 and 71, and 49 CFR Parts 172 and 173). The inspectors reviewed current package preparation or shipping underway during the inspection. This review represented one sample.

b. Findings

No findings of significance were identified.

.6 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed condition reports, audits, and self-assessments that addressed radioactive waste and radioactive materials shipping program deficiencies since the last inspection, to verify that the licensee had effectively implemented the corrective action program and that problems were identified, characterized, prioritized, and corrected. The inspectors also verified that the licensee's self-assessment program 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 material and shipping programs 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 corrective action system(s); and
- implementation/consideration of risk-significant operational experience feedback.

This review represented one sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Cornerstones: Public Radiation Safety

.1 Radiation Safety Strategic Area

a. Inspection Scope

The inspectors reviewed the licensee submittals for one performance indicator (PI). The inspectors used PI guidance and definitions contained in Nuclear Energy Institute (NEI) Document 99-02, Revision 3, "Regulatory Assessment Performance Indicator Guideline," to verify the accuracy of the PI data. As part of the inspection, the documents listed in Appendix 1 were utilized to evaluate the accuracy of PI data. The inspectors' review included, but was not limited to, conditions and data from logs, licensee event reports, condition reports, and calculations for each PI specified.

Radiological Environmental TS/Off-site Dose Calculation Manual Radiological Effluent Occurrence Performance Indicator for the period of January 2004 through August 2005 was reviewed. This review represented one sample.

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

On October 19, 2005, inspectors conducted a routine review of the licensee's identification and resolution of problems as related to the inspectible area of flood protection (see Section 1R06). The inspectors selected an adverse condition that the licensee identified and entered into their corrective action program on July 23, 2004, with CAP 037654.

The licensee's CAP 037654 documented a condition identified by the licensee in a non-corrective action program evaluation Other (OTH) 032582. The purpose of evaluation

OTH 032582 was to verify river level correlations to support the upgrade of the Prairie Island Emergency Action Levels (EALs). The licensee completed the evaluation on June 5, 2004, and concluded that some of the plant transformers may fail (due to an external flooding event) before reaching the USAR referenced flood level of 698 feet above mean sea level (MSL). Specifically, USAR, Section 2.4.3.5, "Floods," stated, in part, that the transformers will function when flooded to 698.0 feet. The entry into a Site Area Emergency at 698 feet above MSL is based on a river water level above which the functionality of site transformers can no longer be relied upon (i.e., availability of off-site power is no longer assured due to the interaction of flood waters with the site transformers).

Licensee emergency preparedness personnel reviewed evaluation OTH 032582 results and concluded additional assessment was necessary to determine: (1) the river water level at which the site would enter a Site Area Emergency, and (2) the actual MSL elevation at which site transformers that provide off-site power to the Prairie Island Nuclear Generating Plant would no longer remain functional. The licensee performed condition evaluation (CE) 005659 to evaluate the condition described in CAP 037654. The licensee's CE 005659 was completed on August 25, 2004, and concluded that transformers associated with each off-site power source to both the Unit 1 and 2 safety-related and non-safety-related 4 kV buses had limiting elevations below 698 feet above MSL. Specifically, the buses' limiting elevations ranged between 696.2 and 697.7 feet above MSL.

The inspectors noted only one corrective action taken to address the non-conservative Site Area Emergency EAL for flooding. The licensee initiated a corrective action to correct USAR Section 2.4.3.5 which was completed on December 6, 2004. However, the inspectors were unable to identify any other corrective actions that were either taken or planned during their October 2005 review of the licensee's resolution of this adverse condition. After further review of corrective action program documentation and discussion with licensee staff, the inspectors concluded that no action had been taken by the licensee to correct the current Site Area Emergency EAL contained in the Prairie Island Emergency Plan Annex A, Condition 19, "Natural Events," Revision 32, or references to the 698 foot elevation contained in Abnormal Normal Operating Procedure AB-4, "Flood," Revision 26. The inspectors concluded that the licensee's failure to take corrective action to revise these documents with conservative values was a performance deficiency associated with the cross-cutting area of problem identification and resolution. Details associated with the analysis of significance and enforcement of this issue are contained in Section 4OA5.1 of this report.

The licensee entered the inspectors' concerns into their corrective action program under CAP 01001641 and performed root cause evaluation (RCE) 01001641. On November 4, 2005, the licensee implemented corrective actions and made revisions to the current Site Area Emergency EAL contained in the Emergency Plan Annex A, Condition 19, and Abnormal Normal Operating Procedure AB-4, with a conservative river level of 695 feet above MSL.

.2 Annual Problem Identification and Resolution Sample

a. Inspection Scope

During the week of October 31, 2005, the inspectors selected a corrective action program issue for detailed review completing one problem identification and resolution annual inspection sample. The inspectors selected a self-revealing issue associated with the termination of a surveillance test on diesel generator D5 due to high crankcase pressure. This condition was entered into the licensee's corrective action program with CAP 041730.

The inspectors conducted a review of RCE 000199 and other related corrective action program documents in order to assess the effectiveness of the licensee's efforts to correct the identified problem. The inspectors placed particular attention on the review of the licensee's corrective actions taken to address the noted deficiencies and the effectiveness of those actions. 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. The inspectors noted that the root cause evaluation report identified that one of the root cause methods used was change analysis. Change analysis should evaluate the impact from all changes and differences. The report discussed differences between diesel generators D5 and D6, but did not include analysis of potential differences between engine 1 and engine 2 on D5. Nor did the report include analysis of potential differences in operating profiles between Prairie Island and Calvert Cliffs, which has the same model of diesel generators. Additional discussions with root cause team members identified that those differences were evaluated even though they were not documented in the report. The licensee added discussion on change analysis to the report.

.3 Semi-Annual Problem Identification and Resolution Trend Review

a. Inspection Scope

The inspectors performed a semi-annual review of the licensee corrective action program to identify trends that could indicate the existence of a more significant safety issue as required by Inspection Procedure 71152, "Identification and Resolution of Problems." This inspection effort completed the required semi-annual trending inspection and was not counted as an annual inspection sample. The effectiveness of the licensee corrective action program was assessed by comparing trends identified by the licensee with those issues identified by the NRC during the conduct of routine plant status and baseline inspections. Inspectors reviewed CAPs initiated during the period from June 1 through December 1, 2005. The inspectors utilized Pareto analysis and the symptom classification technique to evaluate the CAP data base to select areas for detailed review. The areas selected for detailed review included the Corrective Action

Program, the Emergency Preparedness (EP) program, human performance, and the radiation protection program. Inspectors also performed a key word search of the CAP data base for issues related to engineering calculations and ventilation dampers. The inspectors performed the inspection by in-office review of licensee corrective action program and other reports, including the following:

- trend reports;
- performance indicators;
- equipment problem lists;
- rework reports;
- system health reports;
- program health reports; and
- maintenance rule reports.

b. Findings and Observations

No findings of significance were identified. The inspectors identified that the primary method used by the licensee to identify potential adverse trends is the Department Roll Up Meeting (DRUM). The inspectors identified that the licensee identified potential adverse trends and entered them into the corrective action program for all of the areas selected for detailed review except the EP program. Inspectors noted that the CAPs initiated for EP issues indicated potential adverse trends in staff augmentation, drill/exercise performance failures, and siren activation failures. Following the NRC review and questioning by the inspectors, the licensee initiated CAPs to address these three issues. NMC Fleet Procedure FP-PA-ARP-01, “CAP Action Request Process,” requires that a CAP shall be generated for the identification of potential adverse trends. Licensee staff informed the inspectors that they were aware of the three potential adverse trends and developed recovery plans but failed to generate CAPs because of a lack of awareness of the CAP procedure requirements. The licensee entered their failure to enter identified trends into their corrective action program with CAP 01009420. The inspectors determined that failing to enter potential adverse trends into the corrective action program was not a violation of NRC regulatory requirements.

.4 Biennial Sample Review of the Licensed Operator Training Program

a. Inspection Scope

The inspectors reviewed licensee self-assessments and 11 corrective action documents written to document deficiencies identified in the licensed operator training program. The licensee’s self-assessments included a review of the licensed operator training program completed approximately a month prior to this inspection activity. The self-assessments and corrective action documents were reviewed to ensure that the full extent of the issues was identified, an appropriate evaluation was performed, the condition report was appropriately prioritized, and that actions were planned or in-progress to resolve the issues.

b. Findings

No findings of significance were identified.

4OA3 Event Followup (71153)

.1 (Closed) Licensee Event Report (LER) 05000306/2005-002-01: Unit 2 Shutdown Required by TSs Due to an Inoperable Emergency Diesel Generator.

On April 11, 2005, the Unit 2 diesel generator D5 was removed from service during a monthly slow start surveillance test. The test was halted on indications of high crankcase pressure on engine 2. Technical Specifications 3.8.1, Required Action B.4, required returning the inoperable diesel generator to an operable status within 7 days. The licensee's assessment of the scope of work to return the engine to an operable status indicated that the repairs could not be completed within the 7-day allowed outage time. Unit 2 was shut down on April 14, 2005. The licensee entered the failure of the engine into their corrective action program with CAP 041730 and 041810. Additionally, the licensee completed RCE 000199 of the diesel failure. Corrective actions included the rebuild of both engines 1 and 2 and vendor evaluation of removed pistons and cylinder liners. D5 was returned an operable status on April 25, 2005. A review of the D5 failure and RCE 000199 by inspectors did not identify any performance deficiencies and therefore no findings. This LER met the requirements of 10 CFR 50.73 and is closed.

4OA5 Other Activities

.1 Degraded Risk-Significant Planning Standard

a. Inspection Scope

The inspectors reviewed CAP 037654 associated with a flood protection issue to verify that the licensee was identifying issues at an appropriate threshold, entering them into their corrective action program, and implementing appropriate corrective actions in accordance with station corrective action procedures (see Sections 1R06). Upon further review of the licensee's corrective action associated with the identified potential that some of the plant transformers may fail before reaching the USAR referenced flood level, the inspectors assessed the completeness of the licensee's corrective actions (see Sections 4OA2.1) and their regulatory compliance associated with the maintenance of the Prairie Island Emergency Plan and currently approved EAL scheme.

b. Findings

Introduction: A preliminary White finding and an associated apparent violation were identified for a failure to comply with 10 CFR 50.54(q) and risk-significant planning standard (RSPS) 10 CFR 50.47(b)(4). Specifically, the establishment of a non-conservative EAL classification process, as contained in Prairie Island Emergency Plan Annex A, Condition 19, "Natural Events," would potentially not have resulted in the licensee staff declaring a required Site Area Emergency under certain flooding conditions.

Description: On October 19, 2005, the resident inspectors conducted a routine review of the licensee's identification and resolution of problems as related to the area of flood

protection. The inspectors selected an adverse condition that the licensee identified and entered into their corrective action program on July 23, 2004, with CAP 037654.

The licensee's CAP 037654 documented a condition identified by the licensee in a non-corrective action program evaluation OTH 032582. The purpose of evaluation OTH 032582 was to verify river level correlations to support the upgrade of the Prairie Island EALs. The licensee completed the evaluation on June 5, 2004, and concluded that some of the plant transformers may fail (due to an external flooding event) before reaching the USAR referenced flood level of 698 feet above MSL. Specifically, USAR, Section 2.4.3.5, "Floods," stated, in part, that the transformers will function when flooded to 698.0 feet. The entry into a Site Area Emergency at 698 feet above MSL is based on a river water level above which the functionality of site transformers can no longer be relied upon (i.e., availability of off-site power is no longer assured due to the interaction of flood waters with the site transformers).

Licensee emergency preparedness personnel reviewed evaluation OTH 032582 results and concluded additional assessment was necessary to determine: (1) the river water level at which the site would enter a Site Area Emergency, and (2) the actual MSL elevation at which site transformers that provide off-site power to the Prairie Island Nuclear Generating Plant would no longer remain functional. The licensee performed CE 005659 to evaluate the condition described in CAP 037654. CE 005659 was completed on August 25, 2004, and concluded that transformers associated with each off-site power sources to both the Unit 1 and 2 safety-related and non-safety-related 4 kV buses had limiting elevations below 698 feet above MSL. Specifically, the buses' limiting elevations ranged between 696.2 and 697.7 feet above MSL (0.3 to 1.8 feet less than the Site Area Emergency EAL entry criteria).

The inspectors noted only one corrective action taken to address the non-conservative Site Area Emergency EAL for flooding. The licensee initiated a corrective action to correct USAR Section 2.4.3.5 which was completed on December 6, 2004. USAR Input Item 04-036 implemented the change to the USAR which now states, in part, that the transformers are protected from floods to 695.0 feet (above MSL). The inspectors were unable to identify any other corrective actions that were either taken or planned during their October 2005 review of the licensee's resolution of this adverse condition.

The inspectors expressed concerns to the licensee that no corrective actions were taken to change the current Site Area Emergency EAL contained in the Prairie Island Emergency Plan Annex A, Condition 19, "Natural Events," Revision 32, or references to the 698 foot elevation contained in Abnormal Normal Operating Procedure AB-4, "Flood," Revision 26, and NEI 99-01, Revision 4, EAL submittal. The licensee entered the inspectors' concerns into their corrective action program under CAP 01001641 and performed RCE 01001641. On November 4, 2005, in actions related to CAP 01001641, the licensee issued revisions to the current Site Area Emergency EAL contained in the Emergency Plan Annex A, Condition 19, "Natural Events," and Abnormal Normal Operating Procedure AB-4, "Flood," to align the documents with the technical bases documented in the USAR, Section 2.4.3.5, "Floods," revised on December 6, 2004. The licensee changed the specified level from 698 feet to 695 feet above MSL.

Analysis: The inspectors determined the licensee's failure to correct the non-conservative Site Area Emergency EAL associated with Emergency Plan Annex A, Condition 19, "Natural Events," Revision 32 was a performance deficiency. The basis for the inspectors determination was the information and conclusions presented in CE 005659 on August 25, 2004, where the deficient condition was identified by the licensee but not corrected.

The inspectors concluded that traditional enforcement was not appropriate for this issue because the issue did not have any actual safety consequences or potential for impacting the NRC's regulatory function, and was not the result of any willful violation of NRC requirements or Prairie Island procedures. The inspectors determined that the issue was associated with the procedure quality attribute of the Emergency Preparedness cornerstone and affected the cornerstone objective of implementing adequate measures to protect the health and safety of the public in the event of a radiological emergency. Therefore, the finding was determined to be more than minor.

The finding was determined to be associated with a failure to comply, and its significance was assessed using IMC 0609, Appendix B, "Emergency Preparedness Significance Determination Process," dated March 6, 2003. Using the Emergency Preparedness SDP Sheet 1, "Failure To Comply," the inspectors determined that the failure to comply with a RSPS did not result in a lost RSPS but only a degraded RSPS. Therefore, this issue warrants a finding but does not rise to the level of a Yellow finding. Based on the examples provided in Section 4.4 of IMC 0609, Appendix B, the finding was associated with an EAL process that would not declare a Site Area Emergency that should be declared. Therefore, the finding was determined preliminarily to be of low to moderate safety significance (White).

The licensee identified and confirmed, through additional engineering analysis, the adverse condition, and made appropriate changes to the USAR but failed to change the other references to the non-conservative river level contained in the emergency plan and abnormal operating procedures. As such, the inspectors concluded that the licensee's failure to take complete corrective action to revise all applicable documents with conservative values was a cross-cutting issue associated with problem identification and resolution (corrective actions) (see Section 4OA2.1).

Enforcement: As stated in 10 CFR 50.54(q), a licensee shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b). As stated in 10 CFR 50.47(b)(4), a standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determination of minimum initial offsite response measures. The Emergency Plan Annex A for the Prairie Island Nuclear Generating Plant delineates the standard emergency classification and action level scheme in use by the licensee (in accordance with 10 CFR 50.47(b)(4)). The Prairie Island Emergency Plan Annex A, Condition 19, "Natural Events," required declaration of a Site Area Emergency at 698 feet above MSL, which was based on a river water level above which the functionality of site transformers could no longer be relied upon.

Contrary to the above, Emergency Plan Annex A included EAL 19H (Natural Events) was not based upon facility system parameters; specifically, the EAL contained a non-conservative threshold value that would potentially not have resulted in the licensee staff declaring a required Site Area Emergency under certain flooding conditions. On August 25, 2004, the licensee completed a condition evaluation, that was reviewed and approved, that contained a conclusion that should have resulted in appropriate corrective actions to establish an accurate and conservative EAL for the Site Area Emergency for flooding. As such, the inadequate and non-conservative EAL scheme that existed for the period from August 26, 2004, through November 4, 2005, could potentially delay taking the minimum initial offsite response measures for the general public as directed by State and local response plans because these response plans rely on correct information provided by the facility licensee. This is considered an Apparent Violation (AV 05000282/2005011-03; 05000306/2005011-03).

This finding did not present an immediate safety concern since the combination of climatic conditions (i.e., heavy rains accompanied with rapid snow melt) necessary to cause high river levels are extremely rare and have not been experienced in the life of the plant.

.2 Review of Institute of Nuclear Power Operations Report

The inspectors completed a review of the final report of the Institute of Nuclear Power Operations, August 2005 Evaluation, dated November 9, 2005.

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 January 5, 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

Interim exits were conducted for:

- Public Radiation Safety inspection with Mr. R. Graham, Director of Site Operations, on October 7, 2005.
- Biennial Licensed Operator Requalification Program Inspection with Mr. J. Sorensen and Mr. R. Graham on October 7, 2005.
- Review of final examination results with Mr. T. McDonald, Licensed Operator Requalification Training Supervisor, on November 22, 2005.
- Emergency Preparedness inspection with Mr. John Callahan by telephone call on December 21, 2005.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee
J. Anderson, Radiation Protection Manager
T. Bacon, Operations Training Supervisor
J. Callahan, Emergency Planning Manager
R. Graham, Director of Site Operations
W. Godes, General Supervisor Fleet Simulators
D. Herling, Operations Manager
P. Huffman, Plant Manager
J. Lash, Training Manager
k. Ludwig, Maintenance Manager
S. McCall, Site Engineering Director
S. Northard, Business Support Manager
T. Palmisano, Site Vice President
M. Runion, Engineering Plant & Systems Manager
J. Sorensen, Vice President Training
J. Wells, Performance Manager

Nuclear Regulatory Commission
R. Alexander, Emergency Response Coordination
K. Riemer, Chief, Plant Support Branch

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000282/2005011-01; 05000306/2005011-01	URI	Use of Plant Simulator for Initial License Training
05000282/2005011-02;	URI	Unit 1 Diesel Generator Operation During Cold Weather
05000282/2005011-03; 05000306/2005011-03	AV	Degraded Risk-Significant Planning Standard

Closed

05000306/2005002-01;	LER	Unit 2 Shutdown Required by TSs Due to an Inoperable Emergency Diesel Generator

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.

1R01 Adverse Weather

Operating Procedure 1C20.7; D1/D2 Diesel Generators; Revision 22
Operating Procedure 2C20.7; D5/D6 Diesel Generators; Revision 25
Operating Procedure C18.1; Engineered Safeguards Equipment Support Systems; Revision 19
Design Bases Document SYS 38A; Emergency diesel Generator System; Revision 2
System Prestart Checklist C28-11; Condensate Storage Tank Winter Operation; Revision 9
Operating Procedure C28.6; Condensate Storage Tank Freeze Protection System: Revision 12
Operating Procedure C37.8; Screenhouse Safeguard Equipment Cooling; Revision 8
System Prestart Checklist C37.8-1; Screenhouse Safeguard Ventilation System; Revision 5
Periodic Test Procedure TP 1637; Winter Plant Operation; Revision 36
CAP 01003117; Outside Ambient Air Temperature and HVAC System Capabilities
CAP 01003136; May Exceed Design Bases Document SYS-38A Ambient Air Temperature Ranges
CAP 043554; Broken Cooling Fan on 10 Bank Transformer
CE 008469; Broken Cooling Fan on 10 Bank Transformer
OTH 038968; Develop Recovery Plan for EM&P Resources Scheduling for the Remainder of 2005
CE 01003117; Outside Ambient Air Temperature and HVAC System Capabilities

1R04 Equipment Alignment

D5 Diesel Generator
Integrated Checklist C1.1.20.7-9; D5 Diesel Generator Valve Status; Revision 10
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; Revision 5
Integrated Checklist C1.1.20.7-12; D5 Diesel Generator Circuit Breakers and Panel Switches; Revision 9

D2 Diesel Generator
Integrated Checklist C1.1.20.5-1; Unit 1 4.16 kV System Switches and Indication Checklist; Revision 25
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 Room Cooling Local Panels; Revision 10
Integrated Checklist C1.1.20.7-7; Diesel Generator D2 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 039294; Cooling Water System Cross-Tied to Fire Protection System
CE 006351; Cooling Water System Cross-Tied to Fire Protection System
Corrective Action 009952; Cooling Water System Cross-Tied to Fire Protection System

11 TDAFW Pump
System Prestart Checklist C28-2; Auxiliary Feedwater System Unit 1; Revision 44

1R05 Fire Protection
Plant Safety Procedure F5, Appendix A; Fire Strategies for Fire Areas 3, 10, 16, 58, 69, 70, 73, 92, and 127
Plant Safety Procedure F5, Appendix F, Revision 20; Fire Hazard Analysis for Fire Areas 3, 10, 16, 58, 69, 70, 73, 92, and 127
Individual Plant Examination of External Events NSPLMI-96001, Appendix B; Internal Fires Analysis; Revision 2
Combustion Source Use Permits for WO 0501392; issued September 26, 2005 and October 12, 2005
CAP 01002463; Housekeeping in 695 Auxiliary Building
CAP 043627; Dry Pipe Deluge Valve Internally Mucked Up
CE 008520; Dry Pipe Deluge Valve Internally Mucked Up

1R06 Flood Protection Measures (Internal)
PINGP [Prairie Island Nuclear Generating Plant] Procedure H36; Plant Flooding; Revision 0
5AWI 8.9.0; Internal Flooding Drainage Control; Revision 2
CAP 037654; Some Transformers May Fail Before USAR Flood Level of 698 Feet

1R11 Licensed Operator Requalification Program

Biennial Requalification
11 Licensed Operator Medical Records
CAP 037957; Possible Error in Operator License Renewal Application
CAP 026171; Notification of the NRC of a Licensed Operator's Change in Medical Status Condition
15 Senior Reactor Operator and 15 Reactor Operator Written Questions for the Biennial Comprehensive Written Examination
IR 05000282/2004007; 05000306/2004007
IR 05000282/2004003; 05000306/2004003
IR 05000282/2005003; 05000306/2005003
IR 05000282/2005004; 05000306/2005004
IR 05000282/2005005; 05000306/2005005
FP-T-SAT-71; NRC Exam Security Requirements; Revision 0
2 Simulator Crew Evaluation Reports

10 Job Performance Measures
Section Work Instruction O-43; Operator Qualification Program; Revision 5

Quarterly Simulator Observation
Simulator Evaluation Guide P9160S-002, ATT EVAL 06; Revision 0
Simulator Evaluation Guide P9160S-002, ATT EVAL 33; Revision 0
5AWI 3.15.0; Plant Operation; Revision 17

1R12 Maintenance Rule Implementation

4 kV Bus Load Sequencers
Maintenance Rule System Specific Basis Document; System EA, 4.16 kV AC Electrical; Revision 11
CAP 016653; Evaluation and Trending of B25 Load Sequencer Test Failure
CAP 023440; SP 2094 Bus 25 Load Sequencer Test
CAP 039978; Bus 26 Sequencer Failed
CAP 039043; Received Annunciators 47024-0801 and 47024-1001 on Bus 15 Sequencer
CAP 039982; During Performance of SP 1094, Bus 15 Load Sequencer Test
CAP 01002508; Bus 15 Load Sequencer Push Button Test Errors
CAP 01003863; Maintenance History Review of Load Sequencers with NRC

Transformer CT-1 Failure
Maintenance Rule System Specific Basis Document for the Cooling Tower Substation and the Plant Substation
Maintenance Rule Evaluation 000486; CT-1 Locked Out and Caused a Site Transient
CAP 044032; CT-1 Locked Out and Caused a Site Transient
CAP 044147; CT-1 Transformer Lockout Causes Unplanned Limiting Condition for Operation Entry
CAP 044324; Troubling Process is Not Always Effective for Some Equipment

1R13 Maintenance Risk Assessments and Emergent Work Control

Diesel Generator D6, 2 Diesel-Driven Cooling Water Pump, 122 Instrument Air Dryer

Unit 1 Risk Assessment for October 3, 2005
Operator Logs for October 3, 2005
Temporary Change Notice 2005-1061 and 2005-1078
Risk Assessment for the Proposed Work for Week of 5502A
CAP 042559; Loss of Train B Cooling Water Would Result in Loss of All Instrument and Service Air

Unit 1 Risk Assessment for October 11, 2005
Operator Log Entries for October 11, 2005
Procedure H24.1; Assessment and Management of Risk Associated with Maintenance Activities; Revision 9
Risk Assessment for Proposed Work for Week of 5503B
CAP 01003450; Emergent Work Affecting Scheduled Work in 2 Weeks

123 Instrument Air Compressor, Red Rock and Byron 345 kV Transmission Lines
Unit 1 and 2 Risk Assessment for October 27, 2005
Operator Log Entries for October 27, 2005
Risk Assessment for Proposed Work for Week of 5505A

122 Instrument Air Dryer, D1 Diesel Generator, Byron Line
Operator Log Entries for October 31, 2005
Risk Assessment for Proposed Work for Week of 5506A
CAP 038651; Conflict with D6 Availability with One Radiator Fan Out-of-Service

Emergent Failure of the Bus 15 Load Sequencer
Operator Log Entries for November 1, 2005
Revised Risk Assessment for Proposed Work for Week of 5506A
CAP 040962; Inconsistent Limiting Condition for Operation Implementation for Bus Sequencer Failures

121 Instrument Air Dryer, 22 CS Pump, and 21 Cooling Water Pump
Unit 1 and 2 Risk Assessment for November 10, 2005
Operator Log Entries for November 10, 2005
High Level Summary Schedule for Work Week 5507B

November 15 Risk Assessment
Operator Log Entries for November 15, 2005
Risk Assessment for Proposed Work for Week of 5508B
CAP 01003985; Probabilistic Risk Assessment Not Correct at 6:30 Meeting

Emergent Problem Associated with 21 Auxiliary Feedwater Pump
Risk Assessment for Proposed Work for Week of 0548
Operator Log Entries for November 30, 2005
CAP 01005609; 21 Auxiliary Feedwater Pump Suction Pressure Reads 19.5' All Others Read 22'
CAP 041096; Procedure H24.1 May Need Procedure Change Request to Clarify Actions Taken for Orange Probabilistic Risk Assessment Condition.

1R14 Nonroutine Evolutions

CAP 01006756; Unit 1 Letdown Isolated Due to Blue Channel Level Spike
Prompt Investigation Report; Unexpected Letdown Isolation; December 7, 2005
Operator Logs; December 7, 2005

1R15 Operability Evaluations

Manual Disconnect for “C” Phase of Unit Auxiliary Transformer 1RY
AR 01000623;1RY 4 kV Disconnect Phase C May Not Be Fully Engaged
WO 0509630; Re-Close 1RY Phase C Disconnect
Abnormal Operating Procedure 1C20.7 AOP2; Bus 15 Load Sequencer Out of Service; Revision 8
AR 01007275; Inadequate Operability Determination Basis

12 Containment Spray Pump
CAP 01004143; SP 1090B Unable to Complete Due to Leakage at CS-14
Operator Logs for November 17, 2005
SP 1090B; 12 Containment Spray Pump Quarterly Test; Revision 9

21 Auxiliary Feedwater Pump Suction Pressure
CAP 01005609; 21 Auxiliary Feedwater Pump Suction Pressure Reads 19.5' and the Other Auxiliary Feedwater Pumps Read 22'
Prairie Island Tank Book; Condensate Storage Tank Section; Revision 6
Prairie Island TSs; Section 3.7.6 Condensate Storage Tanks; Amendment Number 158 (Unit 1) and 149 (Unit 2)
CAP 039493; Supplier Nonconformance - ABB Breaker Secondary Latch Bar Assembly
CAP 039503; Secondary Latch Bar Assembly Modification Identified by Supplier Quality Assurance

Safety-Related Qualification of Auxiliary Feedwater Components
OPR 01002789-1; Safety-Related Qualification of Auxiliary Feedwater Components
CAP 043994; Palisades Concern with High Ambient Temperature Operations May Be at Prairie Island

D2 Diesel Generator Number Six Cylinder Jacket Water Leak
OPR 01007270; D2 Diesel Generator Jacket Water Leak on the Number Six Cylinder
CAP 040478; CAP Returned to the Senior Reactor Operator Queue for Operability Determination

1R16 OWAs

Quarterly Operator Workaround Samples
Prairie Island Operator Workaround List dated October 14, 2005
Prairie Island USAR; Appendix I; Postulated Pipe Failure Analysis Outside Containment; Revision 22
Annunciator Response Procedure C47022; Annunciator 47022-0103; Revision 42
Annunciator Response Procedure C47022; Annunciator 47022-0104; Revision 42
Plant Safety Procedure F9; High Energy Line Break; Revision 8
CAP 043550; Dual Light Indication on Turbine Building Steam Exclusion

Semi-Annual Cumulative Effect of Operator Workarounds Sample
Prairie Island Operator Workaround List dated October 14, 2005
Operator Workaround Aggregate Impact Assessment; September 2005
CAP 043523; 121 Control Room Chiller Purge Problem

1R17 Permanent Plant Modifications
Design Description Form for Modification 05SA02; Revision 0
Design Bases Document SYS-34; Station and Instrument Air System
50.59 Screening 2486; Plant Modification 05SA02; Revision 0
WO 0509636; Install 122 Instrument Air Dryer
CAP 041462; Bypassed Quality Control Hold Points for Anchor Bolt Installation

1R19 Post-Maintenance Testing

12 Diesel-Driven Cooling Water Pump
WO 0509617; Correct Oil Leak at Upper Oil Line on 12 DDCLP Gear Oil Cooler
Operating Procedure C35; Cooling Water System; Revision 59
CAP 01000971; SP 1118 Not Done Within 1 Hour Required By Tech Specs

121 Auxiliary Building Special Ventilation System
WO 0506326; Auxiliary Building Special Ventilation Filter Removal
SP 1081.1; 121 Aux Building Special Ventilation Filter Removal Efficiency Test; Revision 14
SP 1074A; Train A Auxiliary Building Special Vent System Quarterly Test; Revision 5

Bus 15 Load Sequencer
WO 0509835; Investigate and Repair Bus 15 Load Sequencer Error 501
CAP 01002508; Bus 15 Load Sequencer Push Button Test Errors
CAP 01002823; During Troubleshooting WO 0509835 Received Multiple 103 Error
CAP 01002851; Error 103 Occurred During Operability Testing for Bus 15
SP 1094; Bus 15 Load Sequencer Test; Revision 15

22 Diesel-Driven Cooling Water Pump
WO 0503019; 22 Diesel-Driven Cooling Water Pump Inspection
SP 1106B; 22 Diesel-Driven Cooling Water Pump Monthly Test; Revision 64
CAP 01004174; Oil Leak from Telltale on 22 Diesel-Driven Cooling Water Pump Fuel Transfer Pump
CAP 01004225; 22 Diesel-Driven Cooling Water Pump Fuel Oil Pump Seal Telltale Installed Incorrectly
Preventive Maintenance Procedure PM 3002-2-22; 22 Diesel-Driven Cooling Water Pump Inspection; Revision 26

12 Containment Spray Pump
SP 1090B; 12 Containment Spray Pump Quarterly Test; Revision 9
CAP 01004143; SP 1090B Unable to Complete Due to Leakage at CS-14 Vent

D2 Diesel Generator
SP 1307; D2 Diesel Generator 6-Month Fast Start Test; Revision 29
SP 1335; D2 Diesel Generator 18-Month 5-Minute Load Test; Revision 8
CAP 01007274; Metal Slivers Found in the Lube Oil Filter Housing for D2

1R22 Surveillance Testing

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

SP 1305
SP 1305; D2 Diesel Generator Monthly Slow Start Test; Revision 33
Procedure H10.1; American Society of Mechanical Engineers Inservice Testing Program; Revision 17

CAP 043273; Non-Conservative Acceptance Criteria for Turbine Driven Auxiliary Feedwater Pump Full Flow Test

SP 2334
SP 2334; D5 Diesel Generator 18-Month 24-Hour Load Test; Revision 9
CAP 044275; D5 and D6 Diesel Generator Vibration Vendor Guidance

SP 1732
SP 1732, Spent Fuel Pool Evacuation Drill; Revision 8
CAP 042654; 50.59 Screening 1748 Found to be in Error
USAR 7.5.3.2.2; New Fuel Pit Criticality Monitor ®-28); Revision 26

SP 1001A
SP 1001A; Reactor Coolant System Leakage Test Manual Method; Revision 9
Coolant Leakage Detection System Performance at the Prairie Island Nuclear Generating Plant; dated March 31, 1976
CAP 042493; Review and Revise VT-2 Pressure Test Process for the Leakage Collection System
Basis for the Reactor Coolant System Leak Rate Correlation Contained in SP 1001A (2001A); dated December 12, 2005

1R23 Temporary Modifications

05T196
Modification Number 05T196; Scaffold Supporting Lead Shielding - Unit 1 & 2 Containment Spray Rooms
5AWI 6.3.3; Temporary Modifications; Revision 2
Procedure D80; Scaffold, Ladders and Cable Trays Platforms; Revision 19
CAP 01002647; NRC Resident Inspector's Comments on T-Mod 05T196

1EP4 Emergency Action Level and Emergency Plan Changes
Prairie Island Emergency Plan; Revisions 31, 32, and 33

2PS2 Radioactive Material Processing and Transportation
AR 1000566; NRC Inspection 2005-011 Observation on Spent Resin Tank; dated October 10, 2005
CAP 39286; 11 Steam Generator Blowdown Ion Exchange Resin Lacks Back Wash Screen; dated October 15, 2004
CAP 41219; Water Level in Auxiliary Drain Tank Monitor Tanks; dated March 4, 2005
CAP 42869; Procedural Violations for Documenting Filter Change-out of Unit 2 Cavity Filters; dated June 2, 2005
CAP 43530; Cleanliness of the Radioactive Waste Building; dated July 21, 2005
CAP 44088; Off-site Emergency Plan E-120 Radiation Meters Were Not Calibrated for Annual Calibration; dated August 24, 2005
CAP 44112; Revise Procedural Controls for Portable Trash Compactor Filter; dated August 25, 2005
CAP 44362; Determine Which Work Groups Need Department of Transportation HazMat Training; dated September 14, 2005

CE 007344; 10 CFR 50.75(g) Areas Along Turbine Building Landlocked Ditch; dated March 7, 2005
5AWI 13.1.0; Radioactive Material Packaging and Shipment; Revision 3
PINGP 11.4; Radioactive Material Shipment - Greater than Type A Quantities in Exclusive Use Vehicle to Barnwell using RWE Nukem Cask and High Integrity Container; Revision 22
PINGP D11.11; Radioactive Material Shipment - Low Specific Activity/Surface Contaminated Object/Limited Quantity Exclusive Use Vehicle to a Licensed Processing Facility; Revision 9
PINGP D11.13; Radioactive Material Shipment - Certified Containerized Waste to Envirocare of Utah; Revision 0
PINGP 11.14; Radioactive Material Shipment - Low Level Radioactive Waste to Bulk Waste Disposal Facility of Envirocare of Utah; Revision 0
PINGP D20.25; Sluicing Resin from 21 Steam Generator Blowdown Ion Exchange to Barrels; Revision 15
Radioactive Material Shipment Package 05-10 to Envirocare; dated March 4, 2005
Radioactive Material Shipment Package 05-13 to Aleron; dated March 15, 2005
Radioactive Material Shipment Package 05-32 to Envirocare; dated May 6, 2005
Radioactive Material Shipment Package 05-39 to Envirocare; dated June 1, 2005
Radioactive Material Shipment Package 05-52 to Barnwell; dated August 9, 2005
Radioactive Material Shipment Package 05-53 to Barnwell; dated August 24, 2005
Radioactive Material Shipment Package 05-58 to Race; dated September 20, 2005
2005-002-6-002, Nuclear Oversight Observation Report - Radiation Protection; dated June 21, 2005
2004-004-6-017; Nuclear Oversight Observation Report - Radiological Protection; dated December 17, 2004
Prairie Island Update Safety Analysis Report Section 9; Revision 27

4OA2 Identification and Resolution of Problems

Annual Sample - Diesel Generator D5 High Crankcase Pressure
CAP 041730; D5 Slow Start Surveillance Terminated Due to High Crankcase Pressure
RCE 000199; D5 Slow Start Surveillance Terminated Due to High Crankcase Pressure
FG-PA-RCE-01; Root Cause Evaluation Manual; Revision 7

Semi-Annual Trend Review
NMC Fleet Procedure FP-PA-ARP-01; CAP Action Request Process; Revision 9
CAP 01008374; EP Identified Adverse Trend, Augmentation Staffing
CAP 01008375; EP Identified Adverse Trend, Drill/Exercise Performance
CAP 01008376; EP Identified Adverse Trend, Siren Activation
CAP 01009221; Complete DRUM for 3rd, 4th Quarter for EP Department
CAP 01009420; EP Adverse Trends Not Entered into CAP System

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
ANSI/ANS	American National Standard Institute/American Nuclear Society
AR	Action Request
AV	Apparent Violation
AWI	Administrative Work Instruction
CAP	Corrective Action Program/Corrective Action Program Action Request
CE	Condition Evaluation
CFR	Code of Federal Regulations
DRP	Division of Reactor Projects
DRUM	Department Roll Up Meeting
EAL	Emergency Action Level
EP	Emergency Preparedness
IMC	Inspection Manual Chapter
IR	Inspection Report
JPM	Job Performance Measure
kV	Kilovolt
LER	Licensee Event Report
LORT	Licensed Operator Requalification Training
MSL	Mean Sea Level
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NMC	Nuclear Management Corporation, LLC
NRC	U.S. Nuclear Regulatory Commission
OPR	Operability Recommendation
OTH	Other
OWA	Operator Workaround
PARS	Publicly Available Records
PI	Performance Indicator
PINGP	Prairie Island Nuclear Generating Plant
RCE	Root Cause Evaluation
RSPS	Risk-Significant Planning Standard
SDP	Significance Determination Process
SP	Surveillance Procedure
TS	Technical Specifications
URI	Unresolved Item
USAR	Updated Safety Analysis Report
WO	Work Order