



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION III  
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October 23, 2009

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**SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2, NRC  
INTEGRATED INSPECTION REPORT 05000282/2009004; 05000306/2009004**

Dear Mr. Schimmel:

On September 30, 2009, 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 October 1, 2009, with you and other members of your staff.

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

Based on the results of this inspection, one NRC-identified and two self-revealed findings of very low safety significance were identified. Three of the findings involved violations of NRC requirements. However, because of their very low safety significance, and because the issues were entered into your corrective action program, the NRC is treating the issues as Non-Cited Violations (NCVs) in accordance with Section VI.A.1 of the NRC Enforcement Policy.

If you contest the subject or severity of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Prairie Island Nuclear Generating Plant. In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Prairie Island Nuclear Generating Plant. The information that you provide will be considered in accordance with Inspection Manual Chapter 0305.



U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-282; 50-306; 72-010  
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Report No: 05000282/2009004; 05000306/2009004

Licensee: Northern States Power Company, Minnesota

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

Location: Welch, MN

Dates: July 1 through September 30, 2009

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Enclosure

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## SUMMARY OF FINDINGS

IR 05000282/2009004, 05000306/2009004; 07/01/2009 – 09/30/2009; Prairie Island Nuclear Generating Plant, Units 1 and 2; Inservice Inspection, Refueling and Outage, and Event Followup.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors in the areas of Inservice Inspection and Operator Requalification. Three Green findings were identified by the inspectors. Three findings were considered Non-Cited Violations of NRC regulations. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process (SDP)." Cross-cutting aspects were determined using IMC 0305, "Operating Reactor Assessment Program." 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 4, dated December 2006.

### A. NRC-Identified and Self-Revealed Findings

#### **Cornerstone: Mitigating Systems**

- Green. On September 16, 2009, the inspectors identified a finding of very low safety significance and a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to have adequate work instructions associated with weld repairs on the 11 component cooling water heat exchanger. Specifically, the licensee failed to include the applicable American Society of Mechanical Engineers Code, Section XI, post weld acceptance criteria into Work Instruction 100611. As a corrective action, the licensee performed an inservice Code VT-2 visual examination to confirm that the heat exchanger was not leaking from the weld repair areas.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to have adequate work instructions could become a more significant safety concern. Specifically, the failure to include a pressure test and Code VT-2 visual examination could result in undetected heat exchanger leakage affecting the operability of an inservice component cooling water train. This finding was of very low safety significance because it was a design or qualification deficiency, confirmed to not result in loss of operability or functionality. The inspectors determined this finding had a cross-cutting aspect in the area of Human Performance, adequacy of procedures, because the licensee failed to ensure that the work instruction for the weld repair on the 11 component cooling water heat exchanger was complete and up to date with the applicable Code requirements (H.2(c)). (Section 1R08.1)

- Green. A self-revealed finding of very low safety significance and a Non-Cited Violation of 10 CFR 50.65(a)(4) was identified on September 14, 2009, due to the licensee's failure to perform an adequate risk assessment prior to performing troubleshooting activities on radiation monitor 1RE-12. The failure to perform the adequate risk assessment resulted in the performance of maintenance activities which resulted in rendering the 14 instrument inverter unavailable and changed the Unit 1 Shutdown Safety Assessment risk for 120 Volt instrument power from Green to Yellow (a higher risk condition). Corrective actions for this issue included restoring the 14 instrument

inverter to an available status and reinforcing identification of critical steps and risk management to maintenance and operations personnel.

This finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone. In addition, the finding impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was of very low safety significance, because although the finding failed to meet Step III.A.(2) of Checklist 2 to Inspection Manual Chapter 0609, Appendix G, Attachment 1 (since the work activity had significant potential to impact operability of the power supply), the finding did not meet the criteria for findings that required a quantitative assessment. The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, work planning, because the licensee failed to plan and coordinate this work activity consistent with nuclear safety (H.3(a)). Specifically, the licensee failed to incorporate risk insights, job site conditions, risk to other plant components, and the need for compensatory measures into the work plan. (Section 1R20.1)

- **Green.** A self-revealed finding of very low safety significance and a Non-Cited Violation of Technical Specification 5.4.1 was identified on April 5, 2009, due to the failure to ensure that maintenance affecting the performance of the D1 emergency diesel generator was properly preplanned and performed in accordance with instructions, procedures and drawings appropriate to the circumstance. Specifically, the work instructions used to perform maintenance on the generator bearing oil sight glass in January 2009 failed to include directions to install the sight glass o-rings. The failure to install the o-rings led to a sight glass failure and the unplanned inoperability of the D1 emergency diesel generator. Corrective actions for this issue included replacing the sight glass and revising the model work order instructions to include the o-ring installation.

The inspectors determined that this finding was more than minor because it was associated with the equipment performance and procedure quality attributes of the Mitigating Systems cornerstone. In addition, this finding impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function for greater than the Technical Specification allowed outage time, was not an actual loss of safety function of one or more non-Technical Specification trains of equipment designated as risk-significant per 10 CFR 50.65 for greater than 24 hours, and did not screen as a potentially significant seismic, flooding, or severe weather issue. No cross-cutting aspect was identified. (Section 4OA3.1)

## **B. Licensee-Identified Violations**

No violations of significance were identified.

## **REPORT DETAILS**

### **Summary of Plant Status**

Unit 1 operated at or near full power levels until September 7, 2009, when reactor power was slowly reduced to perform safety valve testing in preparation for a scheduled refueling outage. Refueling outage 1R26 began on September 11, 2009. Unit 1 remained in the refueling outage at the conclusion of the inspection period.

Unit 2 operated at or near full power levels until September 21, 2009, when operations personnel lowered reactor power to 98.5 percent in response to a boric acid integrator failure. Unit 2 returned to full power on September 30, 2009.

### **1. REACTOR SAFETY**

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

#### **1R04 Equipment Alignment (71111.04)**

##### **.1 Quarterly Partial System Walkdowns**

##### **a. Inspection Scope**

The inspectors performed a partial system walkdown of the following risk-significant systems:

- 122 Safeguards Chilled Water System and
- D1 emergency diesel generator.

The inspectors selected these systems based on their risk significance relative to the Reactor Safety cornerstones at the time they were inspected. The inspectors attempted to identify any discrepancies that could impact the function of the system, and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, system diagrams, Updated Safety Analysis Report (USAR), Technical Specification (TS) requirements, outstanding work orders (WOs), corrective action documents, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have rendered the system incapable of performing its intended function. The inspectors also walked down accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program (CAP) with the appropriate significance characterization. Documents reviewed are listed in the Attachment.

These activities constituted two partial system walkdown samples as defined in Inspection Procedure (IP) 71111.04-05.

b. Findings

No findings of significance were identified.

.2 System Walkdown Associated with Temporary Instruction 2515/177, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems"

a. Inspection Scope

On September 16 and 22, 2009, the inspectors conducted refueling outage walkdowns of portions of the safety injection system (including multiple trains and locations inside containment) in sufficient detail to reasonably assure the acceptability of the licensee's walkdowns (Temporary Instruction (TI) 2515/177, Section 04.02.d).

In addition, the inspectors verified that the licensee had isometric drawings that described the safety injection system's configuration and had acceptably confirmed the accuracy of the drawings (TI 2515/177, Section 04.02.a). The inspectors verified the following related to the isometric drawings:

- High point vents were identified;
- High points that do not have vents were acceptably recognizable;
- Other areas where gas can accumulate and potentially impact subject system operability, such as at orifices in horizontal pipes, isolated branch lines, heat exchangers, improperly sloped piping, and under closed valves, were acceptably described in the drawings or in referenced documentation;
- Horizontal pipe centerline elevation deviations and pipe slopes in nominally horizontal lines that exceed specified criteria were identified;
- All pipes and fittings were clearly shown; and
- The drawings were up to date with respect to recent hardware changes and that any discrepancies between as-built configurations and the drawings were documented and entered into the CAP for resolution.

The inspectors verified that Piping and Instrumentation Diagrams accurately described the subject systems, that they were up to date with respect to recent hardware changes, and that any discrepancies between as-built configurations, the isometric drawings, and the Piping and Instrumentation Diagrams were documented and entered into the CAP for resolution (TI 2515/177, Section 04.02.b).

Documents reviewed are listed in the Attachment to this report.

This inspection effort counted towards the completion of TI 2515/177 which will be closed in a later inspection report. This activity also constituted two partial system walkdown samples as defined in IP 71111.04-05.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on the availability, accessibility, and condition of firefighting equipment in the following risk-significant plant areas:

- Unit 2 Rod Drive Room Lights Out Test;
- 480 Volt Bus 211 and 212 Room (Zone 97-11);
- Unit 1 Turbine Building Ground and Mezzanine Floors (Zones 3, 4, 15, & 107);
- Unit 2 Turbine Building Ground and Mezzanine Floors (Zones 36, 37, & 44);
- Unit 1 Bus 15 and 16 Switchgear Rooms (Zone 11); and
- Unit 1 Bus 111 and 121 Switchgear Rooms (Zone 43).

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded, or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan. The inspectors selected fire areas based on their overall contribution to internal fire risk as documented in the plant's Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could initiate or mitigate a plant transient, or their impact on the licensee's ability to respond to a security event. Using the documents listed in the Attachment, the inspectors verified that fire hoses and extinguishers were in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also verified that minor issues identified during the inspection were entered into the licensee's CAP. Documents reviewed are listed in the Attachment to this report.

These activities constituted six quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings of significance were identified.

1R08 Inservice Inspection Activities (71111.08P)

From September 14 through 23, 2009, the inspectors conducted a review of the implementation of the licensee's Inservice Inspection (ISI) Program for monitoring

degradation of the Unit 1 reactor coolant system, steam generator tubes, emergency feedwater systems, risk significant piping and components, and containment systems.

The inspections described in Sections 1R08.1 through 1R08.5 below count as one inspection sample as defined by IP 71111.08–05.

.1 Piping Systems ISI

a. Inspection Scope

The inspectors observed the following nondestructive examinations (NDEs) required by the American Society of Mechanical Engineers (ASME) Code, Section XI, and/or 10 CFR 50.55a, to evaluate compliance with the ASME Code, Section XI, applicable ASME Code Case and Section V requirements and if any indications were detected, to determine if these were dispositioned in accordance with the ASME Code or an NRC approved alternative requirement:

- Ultrasonic examination of the pipe-to-elbow welds W4, W5, W13 and W14 on the pressurizer spray line;
- Magnetic particle examination of the seismic restraint integral attachment weld for hanger H-1/1A on the A feedwater line 12 inch diameter header; and
- Bare metal visual examination of the 36 bottom mounted instrument line penetrations (Inconel weldments) on the lower reactor vessel head.

During nondestructive surface and volumetric examinations performed since the previous refueling outage, the licensee had not identified any recordable indications. Therefore, no NRC review was completed for this inspection procedure attribute.

The inspectors reviewed the following pressure boundary welds completed for Unit 1 risk significant systems to determine if the licensee applied the pre-service NDEs and acceptance criteria required by the construction Code, ASME Code, Section XI, and NRC approved Code Cases. Additionally, the inspectors reviewed the welding procedure specification and supporting weld procedure qualification records to determine if the weld procedures were qualified in accordance with the requirements of the ASME Code, Section IX.

- Repair welds completed on the interior surfaces of the river water side of the 11 component cooling (CC) heat exchanger (HX).

b. Findings

Introduction: The inspectors identified a finding of very low safety significance and a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, for the licensee's failure to have adequate work instructions associated with weld repairs on the 11 CC HX. Specifically, the licensee failed to include the applicable ASME Code, Section XI post weld acceptance criteria.

Description: On February 28, 2008, under WO 100611 the licensee completed repair welds on eight areas of internal erosion/corrosion identified on the river water side shell and divider plate of the 11 CC HX. The licensee performed sandblasting to remove surface rust and clean the repair areas to bright metal, prior to performing weld buildup

type repairs to this HX. The 11 CC HX was constructed to meet the 1968 Edition of the ASME Code, Section III, Class C vessel requirements, and the weld repairs were required to meet the 1998 Edition, 2000 Addenda of the ASME Code, Section XI requirements.

On September 16, 2009, the inspectors identified that WO 100611 did not include the ASME Code, Section XI post weld acceptance criteria for the repair areas completed on the 11 CC HX shell. Specifically, the ASME Code, Section XI, Article IWA-4540, "Pressure Testing of Class 1, 2, and 3 Items," required a system hydrostatic test or leakage test with a VT-2 visual examination to confirm the absence of leakage following welded repairs unless exemption criteria were met. To exempt from the post weld repair pressure testing for the CC HX, the remaining shell wall thickness of the repaired area after metal removal was required to be at least 90 percent of the minimum design wall thickness. However, the licensee failed to require a measurement of the remaining shell wall thickness of the repaired areas prior to performing the weld repairs. Because WO 0100611 did not require measurements to ensure that 90 percent of the minimum design wall thickness was maintained, a Code pressure test and Code VT-2 visual examination should have been specified for the post weld repair acceptance of this HX.

The licensee staff and inspectors reviewed pictures taken of the pre-repaired cavities on the 11 CC HX shell. Based on this review, the licensee staff concluded that an adequate minimum wall thickness was likely maintained to have met the Code pressure test exemption criteria. However, the pictures alone were not sufficient for licensee's Code qualified NDE staff to positively conclude that the repaired areas did not intrude on Code minimum design wall thickness. Therefore, the licensee performed an in-service visual VT-2 examination on the 11 CC HX at the repaired areas. The licensee confirmed that the heat exchanger shell was not leaking after completing the examination. The licensee initiated CAP 01198068 to document this issue and assigned actions to review the work packages for the remaining Unit 1 and Unit 2 CC HXs that had undergone similar types of repairs. Without NRC intervention, the inspectors believed that the Code weld repair acceptance test requirements would not likely have been applied during future similar repairs implemented on the CC HXs. On September 22, 2009, the inspectors examined each of the Unit 1 and Unit 2 CC HXs and did not identify any evidence of leakage.

Analysis: The inspectors determined that the failure to have a work instruction that included the applicable ASME Code, Section XI post weld acceptance criteria for the 11 CC HX was a performance deficiency that impacted the Mitigating Systems cornerstone.

The inspectors determined that this finding was more than minor because if left uncorrected, the failure to have adequate work instructions could become a more significant safety concern. Specifically, the failure to include a pressure test and Code VT-2 visual examination could result in undetected HX leakage affecting the operability of an inservice CC water train. The inspectors completed a significance determination in accordance with Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Mitigating System cornerstone. Based on this screening, the finding was determined to be of very low safety significance because it was a design or qualification deficiency, confirmed to not result in loss of operability or functionality. The inspector determined that this finding had a cross-cutting aspect in the area of Human

Performance, adequacy of procedures, because the licensee failed to ensure that the work instruction for the weld repair on the 11 CC HX was complete and up to date with the applicable Code requirements (H.2(c)).

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," requires, in part, that activities affecting quality be performed in accordance with instructions, procedures, and drawings appropriate to the circumstance. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

Contrary to this requirement, on February 28, 2008, following weld repairs on the 11 CC HX, the licensee failed to provide appropriate acceptance criteria in WO 100611 for determining that an important activity (weld repair) had been satisfactorily accomplished. Specifically, WO 100611 did not specify a post weld repair pressure test with VT-2 visual examination and/or lacked instructions for measurement of the pre-repaired wall thickness as specified in ASME Code, Section XI, Article IWA 4540, "Pressure Testing of Class 1, 2 and 3 Items." Failure to implement an adequate procedure for this repair activity is an example of a violation of 10 CFR Part 50, Appendix B, Criterion V. Because this violation was of very low safety-significance, was not repetitive or willful, and it was entered into the corrective action program (CAP 1198068), this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 05000282/2009004-01)**

.2 Reactor Pressure Vessel Upper Head Penetration Inspection Activities

a. Inspection Scope

For the replaced Unit 1 vessel head (replaced in April of 2006), no examinations (visual or non-visual) were required this outage pursuant to 10 CFR 50.55a(g)(6)(ii)(D) requirements. Therefore, no examination was conducted by the licensee and no NRC review was completed for this inspection procedure attribute.

b. Findings

No findings of significance were identified.

.3 Boric Acid Corrosion Control

a. Inspection Scope

On September 13, 2009, the inspectors observed the licensee staff performing visual examinations of the Unit 1 reactor coolant and emergency core cooling systems within containment to determine if these visual examinations focused on locations where boric acid leaks could cause degradation of safety significant components.

The inspectors reviewed the following licensee evaluations of reactor coolant system components with boric acid deposits to determine if degraded components were documented in the corrective action system. The inspectors also evaluated corrective actions for any degraded reactor coolant system components to determine if they met the ASME Code, Section XI.

- Form PINGP 1507 No. 2008-353, 22 Accumulator Test Line Before Check Isolation;
- Form PINGP 1507 No. 2009-057, 21/22 Residual Heat Removal HX Flow Element; and
- Form PINGP 1507 No. 2009-017, Body-to-Bonnet Leak VL-365-13.

The inspectors reviewed the following corrective actions related to evidence of boric acid leakage to determine if the corrective actions completed were consistent with the requirements of the ASME Code, Section XI, and 10 CFR Part 50, Appendix B, Criterion XVI.

- CAP 1151391, Pressurizer Level Transmitter Isolation Valve 2LT-428; and
- CAP 1182162, 21 Safety Injection Pump.

b. Findings

No findings of significance were identified.

.4 Steam Generator Tube Inspection Activities

a. Inspection Scope

The Unit 1 steam generators (SGs) were replaced in 2004, and no examinations were required during the current refueling outage pursuant to TS requirement 5.5.8, "Steam Generator Program." Therefore, the licensee did not conduct SG tube examinations and only a portion of the NRC inspection procedure could be completed for this review area. Specifically, from September 14–23, 2009, the inspectors performed an on-site review of documentation related to the SG ISI program to determine if:

- the size of SG tube flaws/degradation predicted by the licensee's Operational Assessment would remain within structural integrity limits until the next scheduled tube inspection (e.g., until the end of the next operating cycle); and
- primary-to-secondary leakage (e.g., SG tube leakage) was below 3 gallons-per-day or the detection threshold during the previous operating cycle.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors performed a review of ISI/SG related problems entered into the licensee's corrective action program and conducted interviews with licensee staff to determine if:

- the licensee had established an appropriate threshold for identifying ISI/SG related problems;

- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and
- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

The inspectors performed these reviews to evaluate compliance with 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requirements. The corrective action documents reviewed by the inspectors are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

On July 14, 2009, the inspectors observed a crew of licensed operators in the simulator during licensed operator requalification examinations to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;
- crew's clarity and formality of communications;
- ability to take timely actions in the conservative direction;
- prioritization, interpretation, and verification of annunciator alarms;
- correct use and implementation of abnormal and emergency procedures;
- control board manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications.

The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator requalification program sample as defined in IP 71111.11.

b. Findings

No findings of significance were identified.

.2 Facility Operating History (71111.11B)

Completion of Sections .2 through .9 constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11B.

a. Inspection Scope

The inspectors reviewed the plant's operating history from July 1, 2007, through July 31, 2009, to identify operating experience that was expected to be addressed by the Licensed Operator Requalification Training (LORT) program. The inspector verified that the identified operating experience had been addressed by the facility licensee in accordance with the station's approved Systems Approach to Training (SAT) program to satisfy the requirements of 10 CFR 55.59(c). The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.3 Licensee Requalification Examinations

a. Inspection Scope

The inspectors performed an inspection of the licensee's LORT test/examination program for compliance with the station's SAT program which would satisfy the requirements of 10 CFR 55.59(c)(4). The reviewed operating examination material consisted of six operating tests, each containing approximately two dynamic simulator scenarios and approximately six job performance measures. The written examinations reviewed consisted of four written examinations, consisting of approximately 30 questions for each examination. The inspectors reviewed the annual requalification operating test and biennial written examination material to evaluate general quality, construction, and difficulty level. The inspectors assessed the level of examination material duplication from week-to-week during the current year operating test. The examiners assessed the amount of written examination material duplication from week-to-week for the written examination administered in 2009. 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 documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.4 Licensee Administration of Requalification Examinations

a. Inspection Scope

The inspectors observed the administration of a requalification operating test to assess the licensee's effectiveness in conducting the test to ensure compliance with 10 CRF 55.59(c)(4). The inspectors evaluated the performance of one crew in parallel with the facility evaluators during two dynamic simulator scenarios and evaluated various licensed crew members concurrently with facility evaluators during the administration of several job performance measures. The inspectors assessed the facility evaluators' ability to determine adequate crew and individual performance using objective, measurable standards. The inspectors observed the training staff personnel administer

the operating test, including conducting pre-examination briefings, evaluations of operator performance, and individual and crew evaluations upon completion of the operating test. The inspectors evaluated the ability of the simulator to support the examinations. A specific evaluation of simulator performance was conducted and documented in the section below titled, "Conformance with Simulator Requirements Specified in 10 CFR 55.46." The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.5 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) to verify compliance with 10 CFR 55.49, "Integrity of Examinations and Tests." The inspectors also reviewed the facility licensee's examination security procedure and the implementation of security and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the examination process. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.6 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 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. This evaluation was performed to verify compliance with 10 CFR 55.59(c) and the licensee's SAT program. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.7 Licensee Remedial Training Program

a. Inspection Scope

The inspectors assessed the adequacy and effectiveness of the remedial training conducted since the previous biennial requalification examinations and the training from the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans. This evaluation was performed in accordance with 10 CFR 55.59(c) and with respect to the licensee's SAT program. The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.8 Conformance with Operator License Conditions

a. Inspection Scope

The inspectors reviewed the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators and which control room positions were granted watch-standing credit for maintaining active operator licenses. The inspectors reviewed the facility licensee's LORT program to assess compliance with the requalification program requirements as described by 10 CFR 55.59(c). Additionally, medical records for twelve licensed operators were reviewed for compliance with 10 CFR 55.53(l). The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.9 Conformance with Simulator Requirements Specified in 10 CFR 55.46

a. Inspection Scope

The inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements as prescribed in 10 CFR 55.46, "Simulation Facilities." The inspectors also reviewed a sample of simulator performance test records (i.e., transient tests, malfunction tests, steady state tests, and core performance tests), simulator discrepancies, 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 maintained. Open simulator discrepancies were reviewed for importance relative to the impact on 10 CFR 55.45 and 55.59 operator actions as well as on nuclear and thermal hydraulic operating characteristics. The

inspectors conducted interviews with members of the licensee's simulator staff about the configuration control process and completed the IP 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 documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.10 Annual Operating Test Results (71111.11B)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the biennial written examination, the individual Job Performance Measure operating tests, and the simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee from July 27, 2009, through September 4, 2009, as part of the licensee's operator licensing requalification cycle. These results were compared to the thresholds established in IMC 0609, Appendix I, "Licensed Operator Requalification Significance Determination Process (SDP)." The evaluations were also performed to determine if the licensee effectively implemented operator requalification guidelines established in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," and IP 71111.11, "Licensed Operator Requalification Program." The documents reviewed during this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations (71111.12Q)

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems:

- steam exclusion system;
- safeguards chilled water system; and
- cooling water system.

The inspectors reviewed events such as where ineffective maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- implementing appropriate work practices;
- identifying and addressing common cause failures;
- scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;

- characterizing system reliability issues for performance;
- charging unavailability for performance;
- trending key parameters for condition monitoring;
- ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- verifying appropriate performance criteria for structures, systems, and components/functions classified as (a)(2) or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system. In addition, the inspectors verified maintenance effectiveness issues were entered into the CAP with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constituted three quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

No findings of significance were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Planned maintenance on the 121 and 125 air compressors and emergent work on the Blue Lake 345 kilovolt line;
- Planned maintenance on Bus 25 and severe weather; and
- Planned maintenance on the 22 component cooling water pump.

These activities were selected based on their potential risk significance relative to the Reactor Safety cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met. Documents reviewed during this inspection are listed in the Attachment.

These maintenance risk assessments and emergent work control activities constituted three samples as defined in IP 71111.13-05.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Safety-related Westinghouse HFB breakers exceed 20 year qualified life;
- Common mode failure of D2 emergency diesel generator due to D1 emergency diesel generator heat exchanger issues;
- Inoperability of 12 diesel-driven cooling water pump due to bio-fouling; and
- Inoperability of D2 emergency diesel generator due to coolant leak.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and USAR to the licensee's evaluations, to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations. Additionally, the inspectors also reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted four samples as defined in IP 71111.15-05

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

.1 Temporary Plant Modifications

a. Inspection Scope

The inspectors reviewed the following temporary modifications:

- Engineering Change 10362 – Disable Manual Operator for CV-39412; and
- Engineering Change 14665 – Modify Turbine Building Roll-Up Doors to Prevent Cold Air Infiltration.

The inspectors compared the temporary configuration changes and associated 10 CFR 50.59 screening and evaluation information against the design basis, the USAR, and the TS, as applicable, to verify that the modification did not affect the operability or availability of the affected systems. The inspectors also compared the licensee's information to operating experience information to ensure that lessons learned from other utilities had been incorporated into the licensee's decision to implement the temporary modification. The inspectors, as applicable, performed field verifications to ensure that the modifications were installed as directed; the modifications operated as expected; modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. Lastly, the inspectors discussed the temporary modification with operations, engineering, and training personnel to ensure that the individuals were aware of how extended operation with the temporary modification in place could impact overall plant performance. Documents reviewed during this inspection are listed in the Attachment to this document.

This inspection constituted two temporary modification samples as defined in IP 71111.18-05.

b. Findings

No findings of significance were identified.

.2 Permanent Plant Modifications

a. Inspection Scope

The following engineering design package was reviewed and selected aspects were discussed with engineering personnel:

- Engineering Change 13312 – Turbine-Driven Auxiliary Feedwater Pump Insulation Change.

This document and related documentation were reviewed for adequacy of the associated 10 CFR 50.59 safety evaluation screening, consideration of design parameters, implementation of the modification, post-modification testing, and relevant procedures, design, and licensing documents were properly updated. The modification installed a new type of insulation on the 11 turbine-driven auxiliary feedwater pump to ensure that bearing temperatures were minimized during pump operation. Documents reviewed in the course of this inspection are listed in the Attachment to this document.

This inspection constituted one permanent plant modification sample as defined in IP 71111.18-05.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the following post-maintenance activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- WO 368994 and WO 387309 – Adjust D2 Governor to Prevent Frequency Oscillations;
- WO 384013 – Replace the 121 Station Air Compressor Relief Valve CL-58-2;
- WO 379937 – Replace Lubricating Oil on 22 Component Cooling Water Pump; and
- WO 389838 – Replace Bus 25 Relay.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against TS, the USAR, 10 CFR Part 50 requirements, licensee procedures, and various NRC generic communications to ensure that the test results adequately ensured that the equipment met the licensing basis and design requirements. In addition, the inspectors reviewed corrective action documents associated with post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

This inspection constituted four post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings of significance were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for the Unit 1 refueling outage (RFO), that began on September 11, 2009, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance

of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below.

- Licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment out of service;
- Installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- Controls over the status and configuration of electrical systems to ensure that TS and OSP requirements were met, and controls over switchyard activities;
- Monitoring of decay heat removal processes, systems, and components;
- Controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- Reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- Controls over activities that could affect reactivity;
- Refueling activities, including fuel handling and sipping to detect fuel assembly leakage; and
- Licensee identification and resolution of problems related to RFO activities.

Documents reviewed during the inspection are listed in the Attachment to this report.

This inspection will not be counted as an inspection sample until the licensee's refueling outage activities have concluded.

b. Findings

Inadequate Risk Assessment Leads to Instrument Inverter Inoperability and Unavailability

Introduction: A self-revealed Green finding and a NCV of 10 CFR Part 50.65(a)(4) was identified on September 14, 2009, due to the licensee's failure to perform an adequate risk assessment prior to performing troubleshooting activities on radiation monitor 1RE-12. The inadequate risk assessment led to performing troubleshooting steps which rendered the 14 instrument inverter inoperable and unavailable. In addition, the unavailability of the 14 instrument inverter resulted in changing the Unit 1 Shutdown Safety Assessment risk for the 120 Volt instrument power section from Green to Yellow (an increase in risk).

Description: On September 14, 2009, maintenance personnel were performing troubleshooting activities on radiation monitor 1RE-12. As part of the troubleshooting efforts, maintenance personnel were directed to use a volt meter to check the electrical signal coming from the radiation monitor's detector. While performing this check, the meter's test lead inadvertently contacted the radiation monitor's power supply. The contact between the test lead and the power supply created a momentary power spike that resulted in the 14 instrument inverter transferring to its alternate power supply. Operations personnel immediately entered Abnormal Operating Procedure 1C20.8 AOP1, "Abnormal Operation/Instrument AC [Alternating Current] Inverters," to restore the 14 instrument inverter to its normal power supply. Operations personnel also performed a shutdown safety assessment review and determined that the 120 Volt

instrument power section of the Unit 1 Shutdown Safety Assessment had changed from Green to Yellow due to the 14 instrument inverter being supplied by its alternate power source.

The licensee conducted a human performance investigation and determined that the following factors contributed to this event:

- Weak planning and preparation;
- Poor pre-job briefing; and
- Failure to recognize error-likely situations.

Although the risk associated with the troubleshooting activities was believed to be low due to the radiation monitor being out of service, the licensee found that their risk assessment was faulty because it evaluated the risk of the entire troubleshooting activity rather than looking at the risk of the individual pieces. Had the risk of the individual troubleshooting pieces been assessed, the specific troubleshooting step that led to rendering the instrument inverter unavailable would not have been performed. The pre-job brief for the troubleshooting activity also failed to discuss the potential risk to the plant. Lastly, maintenance personnel failed to stop and reassess the situation when they encountered awkward body positioning while checking the electrical signal.

Analysis: The inspectors reviewed Flow Chart 1 of Inspection Procedure 71111.13, "Maintenance Risk Assessment and Emergent Work Control," and determined that the failure to perform an adequate risk assessment prior to performing troubleshooting on radiation monitor 1RE-12 was a performance deficiency, because key shutdown safety functions were not maintained during the maintenance. This finding impacted the Mitigating Systems cornerstone and required evaluation using the SDP. The inspectors determined that this finding was more than minor because it was associated with the equipment performance attribute of the Mitigating Systems cornerstone and impacted the cornerstone objective of ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. The inspectors used Attachment 1, Checklist 2 of IMC 0609, "Significance Determination Process," Appendix G, "Shutdown Operations Significance Determination Process," and determined that the licensee did not comply with Step III.A.(2) of the checklist which stated that the licensee must assess work activities to ensure that activities did not have a significant potential to affect existing operable power supplies. The inspectors determined that this finding was of very low safety significance (Green) because it did not meet the requirements of a finding that needed a quantitative assessment for phase 2 or 3 as described on page G1-8 of Attachment 1. The inspectors determined that this finding had a cross-cutting aspect in the area of Human Performance, Work Planning, because the licensee failed to plan and coordinate this work activity consistent with nuclear safety. Specifically, the licensee failed to incorporate risk insights, job site conditions, risk to other plant components, and the need for compensatory actions (H.3(a)).

Enforcement: Part 50.65(a)(4) to 10 CFR states that the licensee shall assess and manage the increase in risk that may result from proposed maintenance activities prior to performing the maintenance activities. Contrary to the above, on September 14, 2009, the licensee failed to properly assess and manage the increase in risk associated with performing troubleshooting (a maintenance activity) on radiation monitor 1RE-12. As a result, the 14 instrument inverter was unnecessarily rendered inoperable and unavailable during this troubleshooting activity. The unavailability of the 14 inverter

resulted in changing the color of the Unit 1 Shutdown Safety Assessment for the 120 Volt instrument power section from Green to Yellow. Because this finding was of very low safety significance, and because it was entered into licensee's CAP as CAP 1197714, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy (**NCV 05000282/2009004-02**). Corrective actions for this issue included restoring normal power to the 14 instrument inverter, improved identification of required troubleshooting steps, and reinforcing risk management to operations and maintenance personnel.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

The inspectors reviewed the test results for the following activities to determine whether risk-significant systems and equipment were capable of performing their intended safety function and to verify testing was conducted in accordance with applicable procedural and TS requirements:

- SP 2095 and SP 2219 - Bus 26 Load Sequencer Test and Undervoltage Relay Test;
- SP 1130A - Train A Containment Vacuum Breakers Quarterly Test;
- SP 2089A - Train A Residual Heat Removal Pump and Suction Valve from the Refueling Water Storage Tank Quarterly Test (inservice testing); and
- SP 1106B - 12 Diesel-Driven Cooling Water Pump Monthly Test.

The inspectors observed in plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur;
- were the effects of the testing adequately addressed by control room personnel or engineers prior to the commencement of the testing;
- were acceptance criteria clearly stated, demonstrate operational readiness, and consistent with the system design basis;
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the 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 frequencies met TS requirements to demonstrate operability and reliability; 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 and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing;
- where applicable for inservice testing activities, testing was performed in accordance with the applicable version of Section XI, ASME 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 the system or component was declared inoperable;
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high-resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- 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 and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted three routine surveillance testing samples and one inservice testing sample as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings of significance were identified.

**Cornerstone: Emergency Preparedness**

1EP2 Alert and Notification System Evaluation (71114.02)

.1 Alert and Notification System Evaluation

a. Inspection Scope

The inspectors reviewed documents and conducted discussions with Emergency Preparedness (EP) staff and management regarding the operation, maintenance, and periodic testing of the Alert and Notification System (ANS) in the Prairie Island Nuclear Generating Plant's plume pathway Emergency Planning Zone. The inspectors reviewed monthly trend reports and the daily and monthly operability records from April 2007 through June 2009. Information gathered during document reviews and interviews was used to determine whether the ANS equipment was maintained and tested in accordance with Emergency Plan commitments and procedures. Additionally, the inspectors observed a siren test to evaluate procedure usage and interaction between licensee staff and county officials. Documents reviewed are listed in the Attachment to this report.

This alert and notification system inspection constituted one sample as defined in IP 71114.02-05.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization Augmentation Testing (71114.03)

.1 Emergency Response Organization Augmentation Testing

a. Inspection Scope

The inspectors reviewed and discussed with plant EP management and staff the emergency plan commitments and procedures that addressed the primary and alternate methods of initiating an Emergency Response Organization (ERO) activation to augment the on shift ERO as well as the provisions for maintaining the station's ERO qualification and team lists. The inspectors reviewed reports and a sample of corrective action program records of unannounced off-hour augmentation tests and pager test, which were conducted between April 2007 and April 2009, to determine the adequacy of the drill critiques and associated corrective actions. The inspectors also reviewed a sample of the EP training records of approximately 51 ERO personnel, who were assigned to key and support positions, to determine the status of their training as it related to their assigned ERO positions. Documents reviewed are listed in the Attachment to this report.

This emergency response organization augmentation testing inspection constituted one sample as defined in IP 71114.03-05.

b. Findings

(1) Testing ERO Callout and Augmentation Process Potential Performance Deficiency

Introduction: The inspectors identified an unresolved item (URI) concerning the licensee's process for testing its capability to callout the ERO to ensure timely augmentation of response capabilities is available. Specifically, during the review of the April 2007 through April 2009 off-hours, unannounced callout tests, the inspectors could not adequately verify that the test results supported the emergency plan commitment to have the capability for additional personnel within 30 and 60 minutes of notification.

Description: The inspectors reviewed a sampling of records for emergency organization augmentation response tests. The purpose of these tests was to determine the number of ERO personnel who would be available and the time required to respond to the plant. The inspectors noted for the successful tests, results indicated a number of 30-minute response personnel would take 30 minutes to arrive. Thirty minutes to arrive plus any delays in the callout process could challenge the 30-minute response time requirement. Prairie Island's approved emergency plan for ERO augmentation requires response times of 30 and 60 minutes from the time of notification. The guidance in NUREG 0654 states the licensee must be able to augment on-shift capabilities within a short period after declaration of an emergency. The licensee entered this issue into its corrective action program as CAP 01189478. Pending NRC staff's review if there is a performance deficiency, this issue was considered an Unresolved Item (**URI 05000282/2009004-03; 05000306/2009004-03**).

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

##### .1 Emergency Action Level and Emergency Plan Changes

###### a. Inspection Scope

The inspectors conducted a screening review of revisions made to the emergency action levels (EALs) and bases to determine whether the changes identified in the revisions may have reduced the effectiveness of the emergency plan. The screening review does not constitute approval of the changes; therefore, the changes are subject to future NRC inspection to ensure the emergency plan continues to meet NRC regulations. Documents reviewed are listed in the Attachment to this report.

This emergency action level and emergency plan changes inspection constituted one sample as defined in IP 71114.04-05.

###### b. Findings

##### (1) Potential Non-Compliance for EALs RA1.1 and RA1.2

Introduction: During an operating experience evaluation, the licensee identified a potential issue with EALs RA1.1 and RA1.2 which may not be in compliance with regulatory requirements. Specifically, the licensee observed that the NRC notified the Kewaunee Nuclear Power Plant in September 2008 of a preliminary inspection finding for EAL threshold values which exceeded the associated radiological effluent monitor ranges.

Description: The licensee identified in CAP 01159643, dated November 18, 2008, that EALs RA1.1 and RA1.2 may not be in compliance with regulatory requirements. The CAP further indicated that in April 2006, the licensee identified EALs RA1.1 and RA1.2 threshold values of 200 times of the Offsite Dose Assessment Manual limits which will exceed the ranges of radiation monitors R18, R25, and R31. Corrective actions were recommended in CAP 01159643 on December 17, 2008, to change the EAL threshold values to fall within the range of the detectors. In June of 2009, the licensee changed the EAL threshold values and implemented Revision 3 of its EALs to correct this issue. Pending further review of this issue by NRC staff to determine if the issue constitutes a violation, this issue was considered an Unresolved Item (**URI 05000282/2009004-04; 05000306/2009004-04**).

#### 1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05)

##### .1 Correction of Emergency Preparedness Weaknesses and Deficiencies

###### a. Inspection Scope

The inspectors reviewed a sample of Nuclear Oversight staff's 2008 and 2009 audits of the Prairie Island Nuclear Generating Plant's emergency preparedness program to determine that the independent assessments met the requirements of 10 CFR 50.54(t). The inspectors also reviewed critique reports and samples of corrective action program records associated with the 2008 biennial exercise, as well as various EP drills conducted in 2007, 2008, and 2009, in order to determine whether the licensee fulfilled

drill commitments and to evaluate the licensee's efforts to identify and resolve identified issues. The inspectors reviewed a sample of EP items and corrective actions related to the facility's EP program and activities to determine whether corrective actions were completed in accordance with the site's corrective action program. The inspectors conducted tours of the emergency response facilities to evaluate the material condition and readiness of the facilities and equipment. Documents reviewed are listed in the Attachment to this report.

This correction of emergency preparedness weaknesses and deficiencies inspection constituted one sample as defined in IP 71114.05-05.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES**

4OA1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index – Emergency AC Power System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI) - Emergency AC Power System performance indicator (PI) for Units 1 and 2 for the period from the third quarter of 2008 through the second quarter of 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, MSPI derivation reports, CAPs, event reports and NRC integrated inspection reports for the period discussed above to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's CAP database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI emergency AC power system samples as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.2 Mitigating Systems Performance Index - High Pressure Injection Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - High Pressure Injection Systems performance indicator for Units 1 and 2 for the period from the third quarter of 2008 through the second quarter of 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, CAPs, MSPI derivation reports, event reports and NRC integrated inspection reports for the period discussed above to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's CAP database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI high pressure injection system samples as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.3 Mitigating Systems Performance Index - Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Heat Removal System performance indicator for Units 1 and 2 for the period from the third quarter of 2008 through the second quarter of 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's operator narrative logs, CAPs, event reports, MSPI derivation reports, and NRC integrated inspection reports for the period discussed above to validate the accuracy of the submittals. The inspectors reviewed the MSPI component risk coefficient to determine if it had changed by more than 25 percent in value since the previous inspection, and if so, that the change was in accordance with applicable NEI guidance. The inspectors also reviewed the licensee's CAP database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two MSPI heat removal system samples as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.4 Drill/Exercise Performance

a. Inspection Scope

The inspectors sampled licensee submittals for the Drill/Exercise Performance (DEP) performance indicator for the period from the third quarter 2008 through the first quarter 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the DEP indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; assessments of PI opportunities during predesignated control room simulator training sessions, performance during the 2008 biennial exercise, and performance during other drills. Specific documents reviewed are described in the Attachment to this report.

This inspection constitutes one drill/exercise performance sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.5 Emergency Response Organization Drill Participation

a. Inspection Scope

The inspectors sampled licensee submittals for the ERO Drill Participation PI for the period from the third quarter 2008 through the first quarter 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI; performance during the 2008 biennial exercise and other drills; and revisions of the roster of personnel assigned to key emergency response organization positions. Specific documents reviewed are described in the Attachment to this report.

This inspection constitutes one ERO drill participation sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.6 Alert and Notification System

a. Inspection Scope

The inspectors sampled licensee submittals for the Alert and Notification System PI for the period from the third quarter 2008 through the first quarter 2009. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, were used. The inspectors reviewed the licensee's records associated with the PI to verify that the licensee accurately reported the indicator in accordance with relevant procedures and the NEI guidance. Specifically, the inspectors reviewed licensee records and processes including procedural guidance on assessing opportunities for the PI and results of periodic ANS operability tests. Specific documents reviewed are described in the Attachment to this report.

This inspection constitutes one alert and notification system sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

**Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection**

.1 Routine Review of Items Entered into the Corrective Action Program

a. Inspection Scope

As part of the various baseline inspection procedures 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 CAP at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Attributes reviewed included: the complete and accurate identification of the problem; that timeliness was commensurate with the safety significance; that evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's CAP as a result of the inspectors' observations are included in the attached List of Documents Reviewed.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

b. Findings

No findings of significance were identified.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This review was accomplished through inspection of the station's daily CAP reports.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

b. Findings

No findings of significance were identified.

.3 Annual Sample: Review of Operator Workarounds

a. Inspection Scope

The inspectors evaluated the licensee's implementation of their process used to identify, document, track, and resolve operational challenges. Inspection activities included, but were not limited to, a review of the cumulative effects of the operator workarounds (OWAs) on system availability and the potential for improper operation of the system, for potential impacts on multiple systems, and on the ability of operators to respond to plant transients or accidents.

The inspectors performed a review of the cumulative effects of OWAs. The documents listed in the Attachment were reviewed to accomplish the objectives of the inspection procedure. The inspectors reviewed both current and historical operational challenge records to determine whether the licensee was identifying operator challenges at an appropriate threshold, had entered them into their CAP, and proposed or implemented appropriate and timely corrective actions which addressed each issue. Reviews were conducted to determine if any operator challenge could increase the possibility of an Initiating Event, if the challenge was contrary to training, required a change from long-standing operational practices, or created the potential for inappropriate compensatory actions. Additionally, all temporary modifications were reviewed to identify any potential effect on the functionality of Mitigating Systems, impaired access to equipment, or required equipment uses for which the equipment was not designed. Daily plant and equipment status logs were also assessed to identify any potential sources of unidentified operator workarounds.

This review constituted one operator workaround annual inspection sample as defined in IP 71152-05.

b. Findings

No findings of significance were identified.

.4 Selected Issue Follow-Up Inspection: Review of Operations Department Standards and Performance

a. Inspection Scope

During the week of July 13, 2009, the inspectors reviewed licensee actions to improve the Operations department's standards and performance. The inspectors reviewed NRC inspection reports to determine the details surrounding operational issues identified since early 2008. The inspectors reviewed licensee corrective action documents to identify potential trends that had not been documented in an inspection report. During discussions with the Operations Manager, the inspectors learned about and were provided a copy of the plan put in place to improve operator performance. Lastly, the inspectors conducted a multi-day observation of licensed and non-licensed operators (both inside and outside of the control room) to determine the effectiveness of the improvement plan and adherence to procedures.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Observations and Findings

The inspectors determined that adherence to procedures and operational standards had improved since May 2009 due to the improved use of human performance error reduction tools, the marking of critical procedures steps, and increased emphasis on procedure use and adherence during all operational activities. However, operations personnel continued to be challenged by the poor control room material condition and weaknesses in work control/work management.

During a July 2009 Problem Identification and Resolution Inspection, the inspection team attempted to count the number of work request tags present in the control room. The team stopped counting when it reached 89 stickers. The number of work control stickers exceeded the licensee's goal of less than 37 operator burdens (or stickers). The inspectors performed a review of the aggregate impact of the operator burdens and found no issues. However, the inspectors were concerned about the overall population of control room equipment that required repair. The licensee planned to resolve several of the equipment issues during the Unit 1 refueling outage. The licensee had also developed an additional plan to lower the overall number of operator burdens.

While observing a crew briefing on July 15, 2009, the inspectors became aware of three instances of work control weaknesses which caused unnecessary burdens on the shift supervisors. Specifically, the work control process failed to identify the need to prop open a fire door during a cation resin sluice. The failure to identify the door issue in advance of the work activity resulted in the shift supervisor had to take time to determine whether any additional actions needed to be performed prior to allowing the resin sluice to commence. In addition, a preventive maintenance procedure performed on multiple doors within the plant failed to contain information regarding what to do, or who to call, if problems were identified during the performance of the preventive maintenance. As a

result, the shift supervisor was left to identify the actions required to be taken if problems were found during the preventive maintenance activity. The licensee identified several deficient doors during the preventive maintenance activity. In each case, the inspectors reviewed licensee documents and ensured that the appropriate actions were taken.

No findings of significance were identified.

.5 Selected Issue Follow-Up Inspection: Review of Corrective Actions for Increased Area Temperatures Around Motor Control Center 1K2

a. Inspection Scope

The inspectors performed a plant tour, reviewed corrective action documents, and discussed the issue noted above with operations, engineering, and maintenance personnel to determine whether corrective actions proposed in 2008 would prevent rendering motor control center (MCC) 1K2 inoperable during the summer of 2009. Documents reviewed during this inspection are included in the Attachment.

This review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Observations and Findings

During the week of June 22, 2009, outside air temperatures around the Prairie Island Nuclear Generating Plant had been greater than 90 degrees for an extended period. The inspectors recalled that a similar condition has resulted in operations personnel questioning the operability of MCC 1K2 (a safety-related MCC) on July 2, 2008.

On June 23, 2009, the inspectors completed an inspection of the area around MCC 1K2 (695-foot elevation of the Unit 1 auxiliary building). The inspectors noted that the ambient air temperature near the MCC seemed higher than normal. However, the inspectors were unable to locate any thermometers to determine the actual air temperature.

Following the 2008 issue, the inspectors discussed the possibility of high air temperatures near MCC 1K2 with the Unit 1 licensed operators and the shift supervisor. The inspectors were informed that calibrated thermometer would be installed near the MCC prior to the summer 2009 to monitor the ambient air temperature at the location and the operator rounds sheets would be revised so that the MCC temperatures were trended. However, these actions were not completed.

The control room operators performed a review of the hand held computer information and determined that the information had not been revised to allow tracking of the actual air temperature near MCC 1K2. Based upon this information, the control room operators contacted maintenance personnel to determine the actual air temperature near the MCC. Approximately 2 hours later, operations personnel obtained a calibrated thermometer and determined that the ambient air temperature near MCC 1K2 was 100 degrees Fahrenheit (within four degrees of the procedural limit). The inspectors concluded that without the NRC's intervention, MCC 1K2 could have been unknowingly inoperable for an extended period of time.

The inspectors reviewed the licensee's 2008 apparent cause evaluation associated with CAP 1142946, "Area Temperatures Around MCC 1K2 High." The inspectors found that the apparent cause report was overly focused on the fact that temporary equipment (that had the potential to generate heat) had been brought into the area near the MCC and that many area coolers were degraded or non-functional. As a result, the licensee developed corrective actions to ensure that the temporary equipment was removed and to return some of the area coolers to service. No actions were put into place to allow operations personnel to continually assess operability of the MCC through the use of a calibrated thermometer and the performance of daily rounds.

The licensee initiated CAP 1186686 to document concerns identified by the inspectors on June 23, 2009. Corrective actions included installing a temporary thermometer to determine the ambient air temperature near the MCC, submitting a procedure change request to revise the information contained in the hand held computers used during daily rounds, and validating that the ventilation system was properly balanced.

No findings of significance or NRC violations were identified because the ambient air temperatures near MCC 1K2 was below the 104 degree procedural limitation after thermometer installation.

#### 40A3 Follow-Up of Events and Notices of Enforcement Discretion (71153)

##### .1 Leaking Oil Sight Glass Leads to Emergency Diesel Generator Inoperability

###### a. Inspection Scope

On April 5, 2009, a self-revealed oil leak was discovered on the generator bearing oil sight glass for the D1 emergency diesel generator (EDG). The inspectors reviewed the operations log entries, corrective action documents, the maintenance history, and discussed this issue with operations, maintenance, and work control personnel to determine the cause of the leakage and the licensee's corrective actions. Documents reviewed in this inspection are listed in the Attachment.

This event follow-up review constituted one sample as defined in IP 71153-05.

###### b. Findings

Introduction: A self-revealed Green finding and a NCV of TS 5.4.1 were identified on April 5, 2009, due to the licensee's failure to ensure that maintenance which affected the performance of the D1 EDG was properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstance. Specifically, the WO instructions used to perform maintenance on the generator bearing oil sight glass in January 2009 failed to include instructions to install the sight glass o-rings. The failure to install the o-rings led to a failure of the sight glass and the unplanned inoperability of the D1 EDG.

Description: At 2:10 p.m. on April 5, 2009, operations personnel discovered that there was no visible oil in the generator bearing sight glass for the D1 EDG and that the sight glass was cracked. The operators added 1.25 liters of oil to the 1.75 liter oil reservoir and observed an oil leak of approximately 18 drops per minute from the sight glass. Using this leak rate, the licensee calculated that the bearing reservoir would be empty in

approximately 3 hours. The licensee also contacted the vendor regarding the oil leak. The vendor stated that the EDG could run for 30 minutes without the generator bearing being lubricated. Based upon this information, and information in the vendor manual that stated that oil could not be added while the EDG was running, operations personnel declared the EDG inoperable since it was unable to perform its safety function for the required mission time.

The inspectors reviewed the licensee's apparent cause report and the maintenance history for the sight glass. In January 2009, the licensee performed generator bearing sight glass maintenance to address a leak identified in 2007. Two months later, operations personnel initiated a CAP and a work request after identifying that the sight glass was exhibiting a slow leak. Operations personnel also tightened the sight glass 1.5 flats in an effort to stop the leak. This was unsuccessful. During repairs to the generator bearing sight glass in April 2009, the licensee found that maintenance personnel had failed to install the sight glass o-rings during the January 2009 completion of WO 323595. The inspectors reviewed WO 323595 and determined that the WO failed to include specific instructions regarding the o-ring installation. The failure to install the o-rings resulted in cracking of the sight glass, and the oil leak, due to the direct contact between the sight glass' glass tube and the brass fittings. This contact was likely exacerbated when operations personnel tightened the sight glass in March 2009.

Analysis: The inspectors determined that the failure to properly pre-plan and perform generator bearing oil sight glass maintenance with instructions, procedures, and drawings appropriate to the circumstance was a performance deficiency that required evaluation using the SDP. As part of this evaluation, the inspectors assumed an exposure time of less than 3 days because the generator bearing oil sight glass level was checked for adequacy once per day. This finding impacted the Mitigating Systems cornerstone. The inspectors determined that this finding was more than minor because it was associated with the equipment performance and procedure quality attributes of the Mitigating Systems cornerstone. In addition, this finding impacted the cornerstone objective of ensuring the availability, reliability, and capability of systems that responded to initiating events to prevent undesirable consequences. This finding was determined to be of very low safety significance because it was not a design deficiency, did not result in a loss of system safety function for greater than its TS allowed outage time, was not an actual loss of safety function for one or more non-TS trains of equipment for greater than 24 hours, and did not screen as a potentially significant seismic, flooding, or severe weather issue. No cross-cutting area was identified.

Enforcement: Technical Specification 5.4.1 requires that written procedures be established, implemented, and maintained covering the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.

Regulatory Guide 1.33, Revision 2, Appendix A, February 1978, Section 9, requires that maintenance that can affect the performance of safety-related equipment be properly pre-planned and performed in accordance with written procedures, documented instructions, and drawings appropriate to the circumstance.

Contrary to the above, on January 20, 2009, the licensee failed to properly pre-plan and perform maintenance on the generator bearing oil sight glass for the D1 EDG in accordance with documented instructions appropriate to the circumstance. Specifically, WO 323295 failed to include instructions that directed the re-installation of the generator

bearing oil sight glass o-rings. As a result, a leak developed and the generator bearing oil sight glass failed rendering the D1 EDG inoperable. Because this finding was of very low safety significance, and because it was entered into licensee's CAP as CAP 1176859, this violation is being treated as an NCV consistent with Section VI.A of the Enforcement Policy (**NCV 05000282/2009004-05**). Corrective actions for this issue included replacing the sight glass and revising the generator sight glass model WO to ensure that instructions regarding the o-ring installation were included.

#### 4OA5 Other Activities

.1 (Open) NRC TI 2515/177, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems (NRC Generic Letter 2008-01)"

As documented in Section 1R04, the inspectors confirmed the acceptability of the described licensee's actions. This inspection effort counts towards the completion of TI 2515/177 which will be closed in a later inspection report.

.2 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

.3 (Closed) NRC TI 2515/175 "Emergency Response Organization, Drill/Exercise Performance Indicator, Program Review"

The inspectors performed TI 2515/175, ensured the completeness of the TI's Attachment 1 and then forwarded the data to NRC Headquarters.

#### 4OA6 Management Meetings

.1 Exit Meeting Summary

On October 1, 2009, the inspectors presented the inspection results to M. Schimmel and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary. A follow-up exit with L. Sueper was conducted October 23, 2009 to present additional information.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The results of the licensed operator requalification training program inspection with Mr. M. Wadley, on August 10, 2009;
- The licensed operator requalification training biennial written examination and annual operating test results with the Licensed Operator Requalification Lead Instructor, Mr. T. Ouret, on September 9, 2009;
- The results of the inservice inspection with Site Vice-President, Mr. M. Schimmel, on September 23, 2009; and
- Emergency preparedness inspection interim exit with Mr. M. Wadley conducted at the site on July 17, 2009. A final emergency preparedness inspection exit meeting was conducted by telephone with Mr. K. Peterson on September 29, 2009.

The inspectors confirmed that none of the potential report input discussed was considered proprietary. Proprietary material received during the inspection was returned to the licensee.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

M. Schimmel, Site Vice President  
B. Sawatzke, Director Site Operations  
K. Ryan, Plant Manager  
M. Agen, Emergency Preparedness Coordinator  
J. Anderson, Regulatory Affairs Manager  
T. Blake, Corporate Emergency Preparedness Manager  
G. Buckley, Emergency Preparedness Coordinator  
L. Clewett, Business Support Manager  
R. Clow, Program Engineering  
M. Davis, Regulatory Compliance Analyst  
K. DeFusco, Emergency Preparedness Manager  
B. Flynn, Safety and Human Performance Manager  
A. Haas, Emergency Preparedness Coordinator  
R. Hite, Radiation Protection and Chemistry Manager  
D. Kettering, Site Engineering Director  
M. Klee, Emergency Preparedness Coordinator  
J. Lash, Operations Manager  
R. Madjerich, Production Planning Manager  
K. Mews, Regulatory Affairs  
J. Muth, Nuclear Oversight Manager  
J. Nemcek, Emergency Preparedness Coordinator  
S. Northard, Performance Improvement Manager  
T. Ouret, Supervisor, Requalification Training  
J. Peterson, Medical Services  
K. Peterson, Acting Business Support Manager  
M. Pfeffer, Emergency Preparedness Instructor  
D. Potter, Fleet ISI Supervisor  
G. Salamon, Director of Nuclear Licensing and Regulatory Services  
M. Schmidt, Maintenance Manager  
J. Sorensen, General Manager, Nuclear Training – Xcel Corporate  
J. Sternisha, Training Manager  
J. Wren, NDE Level III, Program Engineering

#### Nuclear Regulatory Commission

J. Giessner, Reactor Projects Branch 4 Chief  
T. Wengert, Office of Nuclear Reactor Regulation Project Manager

## LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

### Opened

05000282/2009004-01	NCV	Inadequate Work Instruction for Weld Repairs on the 11 Component Cooling Heat Exchanger (Section 1R08.1)
05000282/2009004-02	NCV	Failure to Perform Adequate Risk Assessment Prior to Performing Troubleshooting Activities Renders Instrument Inverter Unavailable and Causes Unplanned Shutdown Safety Color Change (Section 1R20.1)
05000282/2009004-03; 05000306/2009004-03	URI	Potential Testing Emergency Response Organization Callout and Augmentation Process Performance Deficiency (Section 1EP3)
05000282/2009004-04; 05000306/2009004-04	URI	Potential Non-Compliance for Emergency Action Levels RA1.1 and RA1.2 (Section 1EP4)
05000282/2009004-05	NCV	Failure to Have Work Instructions Appropriate to the Circumstance for Performing Maintenance on the Generator Bearing Oil Sight Glass for the D1 Emergency Diesel Generator (Section 4OA3.1)

### Closed

05000282/2009004-01	NCV	Inadequate Work Instruction for Weld Repairs on the 11 Component Cooling Heat Exchanger (Section 1R08.1)
05000282/2009004-02	NCV	Failure to Perform Adequate Risk Assessment Prior to Performing Troubleshooting Activities Renders Instrument Inverter Unavailable and Causes Unplanned Shutdown Safety Color Change (Section 1R20.1)
05000282/2009004-05	NCV	Failure to Have Work Instructions Appropriate to the Circumstance for Performing Maintenance on the Generator Bearing Oil Sight Glass for the D1 Emergency Diesel Generator (Section 4OA3.1)

### Discussed

2515/177	TI	Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems
05000282/2009004-03; 05000306/2009004-03	URI	Potential Testing Emergency Response Organization Callout and Augmentation Process Performance Deficiency (Section 1EP3)
05000282/2009004-04; 05000306/2009004-04	URI	Potential Non-Compliance for Emergency Action Levels RA1.1 and RA1.2 (Section 1EP4)

## LIST OF DOCUMENTS REVIEWED

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

### 1R04 Equipment Alignment

- Procedure C37.11; Chilled Water Safeguard System Operation; Revision 21
- Procedure C37.11-1; Chilled Water Safeguards System; Revision 18
- Checklist C1.1.20.7-1; D1 Diesel Generator Valve Status; Revision 20
- Isometric Drawing H-HIAW-106-316; Reactor Building Piping RHR, SI and Reactor Coolant Lines 10, 100, 102; Revision A
- Piping and Instrumentation Diagram X-HIAW-1-44; Flow Diagram Unit 1 Safety Injection System; Revision T
- Drawing XH-106-317; Safety Injection Lines Train B; Revision unknown
- Drawing XH-106-4163; Safety Injection System Accumulator Test Lines Train B; Revision 6
- Drawing XH-106-4164; Safety Injection Line Train B; Revision 4
- Drawing XH-106-4165; Safety Injection Lines Train B; Revision 6

### 1R05 Fire Protection

- Safe Shutdown Analysis
- Fire Hazards Analysis
- Procedure F5, Appendix A; Fire Plan Maps; Various Revisions
- WO 383871; Perform Lights Out Test in Unit 2 Rod Drive Room; September 25, 2009
- F5 Appendix D; Impact of Fire Outside Control/Relay Room Zone 97 (Fire Areas 97-130); Revision TCN 025A

### 1R08 Inservice Inspection

- Procedure H2; Boric Acid Corrosion Control Program; Revision 14
- SP 1405; Unit 1 Mid-Cycle and Refueling Outage Boric Acid Corrosion Examinations Inside Containment; Revision 3
- SP 1392; Unit 1 Insulated Bolted Connection Inspection; Revision 7
- CAP 01199111; Reactor Vessel Bottom Head Inspection, Not Performed per Commitment; September 22, 2009
- CAP 01199098; No PINGP 1507 Form Completed in 1R24 for RV Bottom Head; September 22, 2009
- CAP 01199089; Update Written Practice to Reflect Borated Water Training; September 22, 2009
- CAP 01198385; NRC Identified Possible Missing Pipe Restraint; September 18, 2009
- CAP 01198068; Prior to Approving Work to Restore Eroded Areas in the 11 HX; September 16, 2009
- CAP 01195963; ECT Calibration Standard Drawing Error; September 1, 2009.
- CAP 01167225; Missing Insulation and Rust on CC Inlet to 22 CC HX; January 29, 2009
- CAP 01152093; 2-RRCH-264 Double Spring Hanger Out of Tolerance; September 25, 2008
- CAP 01152070; 2-RCVH-1384, Double Spring Hanger Binding; September 25, 2008
- CAP 01151962; Pinhole Leak at Weld on Pipe 8-2CL-25; September 24, 2008

- CAP 01140763; FME Found in 12 RHR HX; June 12, 2008
- CAP 01128000; FME on Reactor Head Flange During Lift; March 24, 2008.
- AREVA 51-9075980-00; A CMOA Evaluation of Wear Scars at Prairie Island Unit 1 at EOC 24; April 24, 2008
- CAP 01151391, Pressurizer Level Transmitter Isolation Valve 2LT-428; September 20, 2008
- CAP 01182162, 21 Safety Injection Pump; May 14, 2009.
- Drawing 10021130; ASME/AVB Cal Std; Revision B
- Form PINGP 1507 No. 2008-353; 22 Accumulator Test Line Before Check Isolation; September 20, 2008
- Form PINGP 1507 No. 2009-057; 21/22 Residual Heat Removal HX Flow Element; July 20, 2009
- Form PINGP 1507 No. 2009-017; Body-to-Bonnet Leak VL-365-13; February 20, 2009
- Procedure FP-PE-NDE-402; Ultrasonic Examination of Austenitic Pipe Welds, Supplement 2; Revision 2
- Procedure FP-PE-NDE-520; Visual Examination for Leakage VT-2; Revision 3
- Procedure H2; Boric Acid Corrosion Control Program; Revision 14
- Procedure SWI NDE-VT-6.0; Visual Examination for Leakage on Reactor Vessel Penetrations (VT-2); Revision 0
- Procedure SP 1421; Reactor Vessel Head Bare Metal Visual Examination; Revision 0
- Procedure SWI NDE-MT-1; Dry Powder Magnetic Particle Examination; Revision 1
- Report BOP-PT-08-019; Liquid Penetrant Examination Welds 1,3,7,8; February 29, 2008
- Report BOP-PT-08-020; Liquid Penetrant Examination Weld 4; February 29, 2008
- Report BOP-PT-08-021; Liquid Penetrant Examination Weld 4R; February 29, 2008
- Report BOP-MT-08-015; Magnetic Particle Examination Welds 2 and 6; February 29, 2008
- Report 2008v138; Visual Examination of Pipe Hanger Support or Restraint (VT-3), Hanger H6; September 30, 2008
- Report 2009v035; Visual Examination for Leakage (VT-2), Bare Metal Visual on Bottom of Reactor Vessel; September 21, 2009
- Weld Control Record; Welds 1-8 11 CC HX; March 3, 2008
- Weld Procedure FP-PE-111-P1P1-GTSM-060; Groove Welds and Fillet Welds, P1-P1, GTAW/SMAW Without PWHT; Revision 2
- Weld Procedure FP-PE-111-P1P8-GTSM-061; Groove Welds and Fillet Welds, P1-P8, GTAW/SMAW Without PWHT; Revision 2
- Weld Procedure Qualification Record; PAL-SM-1-8; Revision 0
- Weld Procedure Qualification Record; PAL-GT-1-8; Revision 0
- Weld Procedure Qualification Record; DAEC-W-61; Revision 0
- Weld Procedure Qualification Record; NSP-PQR-1254/1255; Revision 0
- Weld Procedure Qualification Record; NSP-PWR-1256/1257; Revision 0
- Weld Procedure Qualification Record; WP-6; Revision 0
- Weld Procedure Qualification Record; GMP 102-311-GS-PQR; Revision 0
- Weld Procedure Qualification Record; SM-1-1(1); Revision 0
- WO 0100611-07-01; Welds 1-8 on 11 CC HX to Repair Shell Areas and Divider Plate Welds Caused by Erosion; February 28, 2008

#### 1R11 Licensed Operator Qualification Program

- Multiple Simulator Malfunction Tests; Various Dates
- Two-Year Plan; May 18, 2009
- 6-Year Plan; May 18, 2009
- Licensed Operator Requalification Training Program Description; Revision 0
- Remediation Training Form; Multiple; Various Dates

- Trainee Feedback Form; Multiple: Various Dates
- NRC IP-71111.11B Self-Assessment; 2009
- NRC Exam Security Requirements; Revision 1
- PINGP 910; NRC Licensed Duty Quarterly Report Tracking Report; Revision 1
- 3 Simulator Crew Evaluation Reports; Various Dates
- 12 Licensed Operator Medical Records; Various Dates
- 6 Simulator Scenarios for Annual License Examination Evaluation; Various Dates
- 30 Job Performance Measures; Various Dates
- 4 Written Examinations for Biennial License Examination; Various Dates

#### 1R12 Maintenance Effectiveness

- Operability Recommendations 1123494 and 1123496; Steam Exclusion Dampers Failed SP1112 Acceptance Criteria; January 15, 2008
- Work Order Search for Steam Exclusion System
- Maintenance Rule Evaluation 1123287-01; Steam Exclusion Damper CD-34188 Inoperable; no date provided
- CAP 1143615; Steam Exclusion Temperature Switch Out of Tolerance; July 9, 2008
- Maintenance Rule Evaluation 11436115; Steam Exclusion Switch Out of Tolerance; August 8, 2008
- Steam Exclusion Health and Status Report; July 30, 2009
- Procedure H24; Maintenance Rule Program; Revision 13
- Maintenance Rule Bases Document for the Steam Exclusion System
- Procedure H27; Control of Steam Exclusion Boundaries; Revision 9
- SP 1112; Steam Exclusion Monthly Damper Test; Revision 52
- CAP 1123287; CD-34188 Did Not Close Completely During SP 1112; January 9, 2009
- Safeguards Chilled Water System Health and Status Report; September 11, 2009
- Maintenance Rule a(1) Action Plan for Safeguards Chilled Water System; Revision 2; July 23, 2009
- Maintenance Rule a(1) Action Plan for Safeguards Chilled Water System; Revision 1; July 16, 2009
- Maintenance Rule a(1) Action Plan for Safeguards Chilled Water System; Revision 1; March 19, 2009
- CAP 1094049; 121 Control Room Chiller Tripped Upon Start Up; May 25, 2007
- CAP 1114161; 121 Control Room Chiller Tripped; October 6, 2007
- CAP 1156504; 122 Control Room Chiller Would Not Start After Cooling Water Pipe Replacement; October 22, 2008
- CAP 1139524; Unplanned Limiting Condition for Operation Due to 122 Control Room Chiller Failed; June 1, 2008
- WO 100446; Overhaul 121 Control Room Chiller; February 9, 2008
- Maintenance Rule System Specific Basis Document; Revision 13
- Cooling Water Health and Status Report; September 11, 2009
- Maintenance Rule A(1) Action Plan 121 MDCLP Unavailability Criteria Exceeded; September 24, 2009
- CAP 1099913; 12DDCLP Failed IST TDH; June 30, 2007
- CAP 1087705; 122 SFGDS Traveling Screen DPS is Reading Less Than 0; April 13, 2007
- CAP 1098368; Slow Rising DP on 121 Safeguards Traveling Screen; June 22, 2007
- CAP 1100108; Annubar Fouling Impacted 12 DDCLP Surveillance Testing; July 2, 2007
- CAP 1120099; 12 DDCLP Stopped Due to Low Bearing Flow; December 4, 2007
- CAP 1127443; 4" CL Supply Line to 11 TDAFWP Seen Moving Excessively; March 23, 2008
- CAP 1132080; Valve CL-95-1 Failed to Regulate Cooling Water Pressure; May 9, 2008

- CAP 1149823; Either Valve CL 95-1 or 2CL 95-1 Not Working; September 8, 2008
- CAP 1160408; Valve CL-136-2 Stuck in Mid-position While Performing SP 1846; November 25, 2008
- CAP 1194254; Generate an a(1) Action Plan; May 19, 2009
- CAP 1177795; Flat Spacer Installed at 121 Discharge; April 11, 2009
- CAP 1092073; Flow Instrumentation Must be Cleared Prior to Each Pump Test; May 10, 2007
- CAP 1198766; 12 DDCLP Right Angle Drive Gear Drive Cooler Flow Operability Review Revision 1; September 24, 2009
- CAP 1119560; 12 DDCLP Right Angle Lube Cooler Inlet Port Plugged; January 17, 2008
- CAP 1092073; Indication of Inadequate Flow to 12 DDCLP Gear Oil Cooler; March 25, 2008
- Drawing XH-106-315; Screenhouse Cooling Water A-7021; Revision 76
- Drawing X-HIAW-106-11138; Cooling Water; Revision C
- Drawing NF-39216-1; Flow Diagram Unit 1 & 2 Cooling Water- Screenhouse; Revision 77

### 1R13 Maintenance Risk Assessment and Emergent Work

- Operations Logs for 121 Spent Fuel Pool, Bus 25, and Severe Weather; July 21, 2009
- Work Week Daily Work Schedules
- Operator Logs
- Risk Assessments for Proposed Work Weeks; July 21, July 27 and September 3, 2009
- Operations Logs for 22 Component Cooling Water Pump; September 3, 2009

### 1R15 Operability Evaluations

- CAP 1192430; Safety-Related Westinghouse HFB Breakers Past 20 Year Life; August 05, 2009
- CAP 1190248; Inability to Perform MCC 1T1, 1T2 Preventive Maintenance Due to Parts; July 21, 2009
- CAP 1192614; Five Molded Case Circuit Breakers Past Their 125% Preventive Maintenance Due Date; August 6, 2009
- OPR 1192430; Related Westinghouse HFB Breakers Past 20 Year Life; August 9, 2009
- WO 338337; Cycle Breakers to Assist with Operability Recommendation
- PE MCC-W5; MCC Electrical Preventive Maintenance Westinghouse Five Star MCC's; Revision 9
- CAP 1072185; 22 DDCLP Gear Oil Cooler Debris Noted During Annual Preventive Maintenance; January 16, 2007
- CAP 1173205; 12 DDCLP Gear Oil Cooler Debris Noted During Annual Preventive Maintenance; March 16, 2009
- CAP 1195413; Low Flow on 12 DDCLP Gear Oil Cooler Ultrasonic (Zebra Mussel); August 27, 2009
- CAP 1195563; As Found Condition of 12 DDCLP Angle Drive Heat Exchanger; August 28, 2009
- CAP 1198766; 12 DDCLP Right Angle Gear Drive Cooler Flow; September 21, 2009
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- CAP 1196579; 22 DDCLP Right Angle Gear Drive Cooler Flow; September 4, 2009
- USAR Section 10; Plant Cooling Water System; Revision 30
- NF-39216-1; Flow Diagram Unit 1 & 2 Cooling Water – Screenhouse; Revision 77
- WO 308801-01; 12 Cooling Water Pump Gear Oil Cooler; Revision 0
- SP 1845; Test Three-Way Valve Actuation to Cooling Water Supply for 12 DDCLP Bearing Water; Revision 5

- CAP 1196214; NRC Questioned Rate of Fouling on 12 DDCLP and Past Response; September 2, 2009
- ENG-ME-604; Tube Plugging Limits for 12 DDCLP and 22 DDCLP Right Angle Drive Gear Oil Coolers; Revision 1
- XH-48-71; 12, 22, and 121 Cooling Water Pump Technical Manual; Revision 16
- CAP 1195812; Coolant Leak from Waterbox Jumper on D2; August 31, 2009
- Equipment Reliability Clock Evaluation for Coolant Leak from Waterbox Jumper on D2; AR 1195812; September 19, 2009
- MSPI Failure Determination for Coolant Leak from Waterbox Jumper on D2; AR 1195812; September 19, 2009
- MRE 1195812; Coolant Leak from Waterbox Jumper on D2; September 21, 2009
- SP 1106A; 12 Diesel Cooling Water Pump Monthly Test; Revision 75
- SP 1106B; 22 Diesel Cooling Water Monthly Test; Revision 73
- CAP 1200529; Configuration Difference Between Right Angle Drives; October 1, 2009
- CAP 1072185; 22 DDCLP Gear Oil Cooler Debris Noted During Annual PM; January 1, 2007

#### 1R18 Plant Modifications

- Operability Recommendation 1178236-04; No High Energy Line Break Flooding Calculation for the Turbine Building; April 24, 2009
- EC 14188; Effects of Flooding from a High Energy Line Break in Unit 1 or Unit 2 Turbine Building; September 2, 2009
- EC 14093; Time Critical Operator Actions Following a Turbine Building High Energy Line Break; no date provided
- CAP 1178236; No High Energy Line Break Flooding Calculation for Turbine Building; April 15, 2009
- CAP 1051409; CV-39412 Has Dual Indication When Closed; September 21, 2006
- CAP 1077015; CV-39412 11/13 Flow Control Unit Safeguards Chilled Water Control Valve Operational Readiness is Unknown; February 13, 2007
- CAP 1084078; Seismic Review of Old Engineering Change 1515 Needs Performed; March 26, 2007
- Procedure H10.1; ASME Inservice Testing Program; Revision 24
- Procedure H23.1; Air Operated Valve Program; Revision 4
- SP 1245A; 11/13 Fan Coil Unit Safeguards Chilled Water Valve Stroke Quarterly Test; Revision 9
- SP 1168.8B; Cooling Water to Unit 1 Fan Coil Units Pressure Test; Revision 0
- Procedure FP-E-MOD-03; Temporary Modifications; Revision
- Drawing NF-86172-3; Auxiliary Building and Containment Chilled Water System; Revision A
- Drawing NF-86186-3; Interlock Logic Diagram Containment and Auxiliary Building Chilled Water System; Revision J
- ENG-ME-021; Auxiliary Feed Water Pump Room Heat-Up Calculation; Revision 2

#### 1R19 Post Maintenance Testing

- SP 2218; Monthly 4KV Bus 25 Undervoltage Relay test; Revision 40
- WO 389838-03; SP 2218 – Monthly 4 KV Bus 25 Undervoltage Relay Test; September 9, 2009
- CAP 1196875; Incorrect Settings Discovered on Relay 27A-DV/Bus 25 Sequencer; September 8, 2009
- WO 384013-01; Replace ¾ x 1" Consolidated with ¾ x 1 ¼" Kunkle; Revision 0
- Equivalency Evaluation IEE 2007-081-00; Revision 0

- Procedure D44.2; Pressure Relief Valve Testing for Valves Not Governed by ASME OM-Code; Revision 7
- GMP INGE-002; Ingersoll Rand Instrument/Station Air Compressors 1000 Hour Inspection; Revision 0
- GMP INGE-003; Ingersoll Rand Instrument/Station Air Compressors 4000 Hour Inspection; Revision 1
- WO 379937; Perform Return To Service / Post Maintenance Testing for 22 Component Cooling Water Pump
- SP 2155B; Component Cooling Water Test Train B; Revision 17

#### 1R20 Refueling and Outage

- Procedure 1C1.3; Unit 1 Shutdown; Revision 64
- Procedure 1C1.4; Unit 1 Power Operation; Revision 49
- SP 1431; Main Stem Safety Valve Test (Power Operation); Revision 2
- WO 359818-01; SP 1431 – U1 Main Steam Safety Valve Test (Power Operation); September 17, 2009
- CAP 1197381; 1B Reheat Stop Valve Opened Slowly During SP 1036; September 12, 2009
- CAP 1197383; Unit 1 Turbine Did Not Automatically Go on the Turning Gear; September 12, 2009
- CAP 1197714; C20.8 AOP1 Entered: 14 Inverter Bypassed During 1R-12 Troubleshooting; September 14, 2009
- Department Clock Reset Sheet for CAP 1197714; September 16, 2009
- MSIP 7004; Unit 1 and 2 Reactor Vessel Head Removal Pre-Job Briefing; Revision 7
- Procedure D58.1.9; Unit 1 – Reactor Vessel Head Removal; Revision 17
- 2005-05621; Analysis Of Postulated Reactor Head Drop onto the Reactor Vessel Flange; Revision 3
- Procedure D58; Heavy Loads Program; Revision 33

#### 1R22 Surveillance Testing

- WO 368566; SP 2095 Bus 25 26 Load Sequencer Monthly Test; August 30, 2009
- WO 368568; SP 2219 Monthly 4KV Bus 26 Undervoltage Relay Test; August 30, 2009
- WO 369503; SP 1130A Train A Containment Vacuum Breakers Quarterly Tests; September 15, 2009
- WO 369531; SP 2089A Train A RHR Pump and Suction Valve from the RWST Quarterly Test; September 11, 2009
- SP 1106B; 22 Diesel-Driven Cooling Water Pump Monthly Test; Revision 73
- WO 383701; SP 1106B 22 DD Cooling Water Pump Monthly Test; September 11, 2009

#### 1EP2 Alert and Notification Evaluation

- Federal Emergency Management Agency Prairie Island Nuclear Generating Plant Public Alert and Notification System Upgrade Approval Letter; April 10, 2003
- Federal Emergency Management Agency Public Alerting and Notification System Approval Letter; October 1, 1985
- Prairie Island Nuclear Generating Plant Annual PANS Review Report; January 16, 2009
- SP 1397; Emergency Plan Fixed Siren Test; Revision 16
- PANS Fixed Siren Trend Reports; April 2007 - June 2009
- Direct Observation Siren Monitoring Results; April 2007 - June 2009
- CAP 01185483; Siren P14 Failure Results in Actuation; June 13, 2009

### 1EP3 Emergency Response Organization Augmentation Testing

- Section 5; Prairie Island Nuclear Generating Plant Emergency Plan; Organizational Control of Emergencies; Revision 40
- SP 1744; Semi-Annual Emergency Organization Augmentation Response Test; Revision 32
- Emergency Response Organization Off-hours, Unannounced, Augmentation Response Test Records; April 2007 - April 2009
- CAP 01189478; ERO Augmentation Test Methods in Question; July 15, 2009

### 1EP4 Emergency Action Level and Emergency Plan Changes

- F3-2.1; Emergency Action Level Technical Basis; Revision 3; June 5, 2009
- CAP 01159643; E-plan EALs RA1.1 and RA1.2 May Not Be in Compliance with Regulatory Requirements; November 18, 2008

### 1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

- Draft 2009 PING Pre-NRC Inspection Focused Self-Assessment Report; date pending
- Focused Self-Assessment - November 14 - 17, 2008 - Emergency Preparedness Excellence
- Focused Self-Assessment - June 9 - 13, 2008 - Evaluated Exercise Readiness
- NOS Observation Report 2008-01-018; Prairie Island Emergency Planning; March 28, 2008
- NOS Observation Report 2008-10-022; Emergency Planning - State and Local Interface Adequacy; March 28, 2008
- NOS Observation Report 2009-01-019; Emergency Preparedness; March 25, 2009
- NOS Observation Report 2009-01-020; Emergency Preparedness - DEP Classification; March 25, 2009
- NOS Observation Report 2009-01-024; Emergency Preparedness State and Local Interface; March 25, 2009
- Event Summary Report; August 3, 2008, Unusual Event; August 8, 2008
- 2009 Radiation Protection Specialist Emergency Health Physics Drill Critique Report; July 10, 2009
- April 14, 2009 - Emergency Preparedness Drill Critique Report; May 18, 2009
- February 10, 2009 - Emergency Preparedness Facility Drill Critique Report; March 3, 2009
- CAP 01181454; 1R-11 Filter Paper Not in Motion; May 8, 2009
- CAP 01181220; Drill ERO Performance Resulted in 7 Drill Objectives Not Met; May 7, 2009
- CAP 01181110; Sirens P20 and P40 Potential Failures During Test; May 6, 2009
- CAP 01179880; 2R-11 Spiking Alarms; April 28, 2009
- CAP 01178827; EP-DRUM-Continued Adverse Trend in MET Tower Reliability; April 20, 2009
- CAP 01178144; Drill Personnel Accountability Not Completed in 30 Minutes; April 14, 2009
- CAP 01178136; Drill OSC Failed to Meet Radiation Protection Minimum Staffing; April 14, 2009
- CAP 01173618; 1R-12 Failed Source Check During Check; March 18, 2009
- CAP 01146563; Conflicting EAL Wording May Result in Over Classification; August 5, 2008
- CAP 01146374; Unusual Event - Hydrazine Levels in Turbine Building; August 4, 2008
- CAP 01144612; Adverse Trend - Control Room Seismic Monitor Panel Alarm; July 18, 2008
- CAP 01145153; 2008 Exercise - TSC Engineering Responsibilities Problems; July 24, 2008
- CAP 01145149; 2008 Exercise - Core Damage Assessment Problems; July 24, 2008
- CAP 01143884; Unplanned Seismic Monitor System Health Alarm; July 11, 2008

#### 4OA1 Performance Indicator Verification

- Drill and Exercise Performance Indicator Records; July 2008 through March 2009
- Emergency Response Organization Drill and Exercise Participation Records; September 2008 through March 2009
- Prompt Alert and Notification System Trend Reports; July 2008 through March 2009
- CAP 01178133; DEP Failure during April 2009 Drill; April 14, 2009
- CAP 01168124; Sirens G15, P43, R14, and R16 Potential Failures; February 4, 2009
- CAP 01149899; Availability of SEC for LOR DEP Opportunity; September 8, 2008

#### 4OA3 Event Followup

- Apparent Cause Report 1176859-08; Failure of D1 Emergency Diesel Generator Sight Glass; no date provided
- WO 323295-01; Minor Oil Leak Found By Oil Sample Point 8351 on D1 Generator; January 20, 2009
- CAP 1176859; D1 Diesel Generator Inoperable Due to Leaking Generator Sight Glass; April 5, 2009
- WO 383104-01; D1 Generator Bearing Sight Glass Leak; April 5, 2009

## List of Acronyms Used

AC	Alternating Current
ADAMS	Agencywide Document Access Management System
ANS	Alert and Notification System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CC	Component Cooling
CFR	Code of Federal Regulations
DEP	Drill/Exercise Performance
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
ERO	Emergency Response Organization
HX	Heat Exchanger
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ISI	Inservice Inspection
LORT	Licensed Operator Requalification Training
MCC	Motor Control Center
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NDE	Nondestructive Examination
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
OSP	Outage Safety Plan
OWA	Operator Work Around
PARS	Publicly Available Records
PI	Performance Indicator
RFO	Refueling Outage
SAT	Systems Approach to Training
SDP	Significance Determination Process
SG	Steam Generator
TI	Temporary Instruction
TS	Technical Specification
URI	Unresolved Item
USAR	Updated Safety Analysis Report
WO	Work Order

M. Schimmel

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Sincerely,

John B. Giessner, Chief  
Branch 4  
Division of Reactor Projects

Docket Nos. 50-282; 50-306; 72-010  
License Nos. DPR-42; DPR-60; SNM-2506

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INTEGRATED INSPECTION REPORT 05000282/2009004; 05000306/2009004

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