



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

November 4, 2008

Mr. Larry Meyer
Site Vice President
FPL Energy Point Beach, LLC
6610 Nuclear Road
Two Rivers, WI 54241

**SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2, NRC INTEGRATED
INSPECTION REPORT 05000266/2008004 AND 05000301/2008004**

Dear Mr. Meyer:

On September 30, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Point Beach Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 8, 2008, with you and 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 your personnel.

Based on the results of this inspection, one NRC-identified and two self-revealed findings of very low safety significance were identified. All of these findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as Non-Cited Violations (NCVs), consistent with Section VI.A.1 of the NRC Enforcement Policy.

If you contest any NCV in this report, 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 Point Beach Nuclear Plant.

L. Meyer

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Sincerely,

/RA/

Michael A. Kunowski, Chief
Branch 5
Division of Reactor Projects

Docket Nos. 50-266; 50-301
License Nos. DPR-24; DPR-27

Enclosure: Inspection Report 05000266/2008004; 05000301/2008004
w/Attachment: Supplemental Information

cc w/encl: M. Nazar, Senior Vice President and Nuclear, Chief Operating Officer
J. Stall, Executive Vice President, Nuclear and Chief Nuclear Officer
A. Khanpour, Vice President, Engineering Support
Licensing Manager, Point Beach Nuclear Plant
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T. O. Jones, Vice President, Nuclear Operations, Mid-West Region
P. Wells, (Acting) Vice President, Nuclear
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J. McCarthy, Vice President, Point Beach Recovery
J. Bjorseth, Plant General Manager
K. Duveneck, Town Chairman, Town of Two Creeks
Chairperson, Public Service Commission of Wisconsin
J. Kitsembel, Electric Division, Public Service Commission of Wisconsin
P. Schmidt, State Liaison Officer

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Letter to L. Meyer from M. Kunowski dated November 4, 2008

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2, NRC INTEGRATED
INSPECTION REPORT 05000266/2008004 AND 05000301/2008004

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-266; 50-301
License Nos: DPR-24; DPR-27

Report No: 05000266/2008004; 05000301/2008004

Licensee: FPL Energy Point Beach, LLC

Facility: Point Beach Nuclear Plant, Units 1 and 2

Location: Two Rivers, Wisconsin

Dates: July 1, 2008, through September 30, 2008

Inspectors: R. Krsek, Senior Resident Inspector
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Approved by: Michael Kunowski, Chief
Branch 5
Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000266/2008004, 05000301/2008004; 07/01/2008-09/30/2008; Point Beach Nuclear Plant, Units 1 & 2; Plant Modifications; Post-Maintenance Testing; and Follow-up of Events.

This report covers a three-month period of inspections by resident inspectors and regional specialists. Three Green findings were identified. All of the findings that were identified had associated NCVs. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the failure to properly rig and install the P-32E service water pump shaft on June 7, 2006. The bent pump shaft subsequently led to high pump vibrations and pump inoperability in excess of Technical Specification Action Condition completion time in February 2008. Specifically, the licensee determined that Routine Maintenance Procedure (RMP), RMP 9216-2, "Service Water Pump Removal, Installation, and Maintenance," lacked adequate installation and rigging instructions to ensure excessive force was not applied to the shaft during installation. As part of its corrective actions, the licensee revised the RMP to include proper installation and rigging instructions.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance, and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Tables 3b and 4a for the Mitigating Systems Cornerstone. The inspectors determined that the finding was of very low safety significance (Green) because the finding did not involve a design or qualification deficiency, there was no actual loss of safety function, no single train loss of safety function for greater than the technical specification allowed outage time, and no risk due to external events. The inspectors also determined that the finding has a cross-cutting aspect in the area of human performance, resources component, because licensee procedures were not complete or adequate to ensure that the P-32E pump shaft was rigged and installed without damage to the shaft. [H.2(c)] (Section 40A3.1)

Cornerstone: Barrier Integrity

- Green. A finding of very low safety significance and associated Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspectors for the failure to perform a written evaluation that provided the bases for the determination that the installation of new feedwater heaters did not require a license amendment.

Specifically, the licensee performed a written evaluation in June 2008 for the replacement of the feedwater heaters that inappropriately linked two elements of the modification by treating two discrete elements of the modification as interdependent. This resulted in the inappropriate evaluation of both elements together. At the end of the inspection period, the licensee continued to perform a causal evaluation and implemented several remedial corrective actions, including the revision of the feedwater heater modification package to keep feedwater temperature in the currently approved range.

The finding was determined to be more than minor because if left uncorrected the finding would become a more significant safety concern, in that, changes made to the plant may inappropriately conclude that prior NRC approval is not required. The finding is not suitable for SDP evaluation under the Barrier Integrity Cornerstone, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The finding would have had greater than very low safety significance if the failure resulted in a change in which the consequence was evaluated as having low to moderate or greater safety significance. Additionally, the inspectors determined that the finding had a cross-cutting aspect in the area of human performance, in that, the licensee failed to appropriately coordinate work activities by incorporating actions to address the need for work groups to maintain interfaces with offsite organizations and communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance. [H.3(b)] (Section 1R18.1)

- Green. A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the failure to follow system operating procedure requirements to visually inspect and remove debris from the Unit 1 lower containment airlock door sealing surface upon exit from the airlock, which resulted in the failure of the airlock to meet its post-maintenance testing acceptance criteria on September 9, 2008. As part of its corrective actions, the licensee reinforced with the hatch operators the procedural requirements.

The finding was determined to be more than minor because the finding was associated with the Barrier Integrity Cornerstone attribute of human performance and affected the cornerstone objective of providing reasonable assurance that physical design barriers, such as containment, protect the public from radionuclide releases caused by accidents or events. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Barrier Integrity Cornerstone. The inspectors determined that the finding was of very low safety significance because all of the questions in the containment barrier column of Table 4a were answered NO. The inspectors also determined that this finding has a cross-cutting aspect in the area of human performance, work practices component, because personnel did not follow procedures. [H.4(b)] (Section 1R19.1)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Unit 1 was at 100 percent power throughout the inspection period with the exception of an unplanned 36-hour downpower to 98.5 percent power on September 27, 2008, to allow for resolution of a feedwater temperature issue, and planned reductions in power during routine auxiliary feedwater (AFW) pump and secondary system valve testing.

Unit 2 was at 100 percent power throughout the inspection period with the following exceptions; an unplanned 4-hour downpower to 88.5 percent power on July 2, 2008, in response to the loss of heater drain tank pump 2P-27B; an unplanned 36-hour downpower to 97 percent power on September 27, 2008, to allow for resolution of a feedwater temperature issue; and planned reductions in power during routine AFW pump and secondary system valve testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

The inspectors performed partial walkdowns of accessible portions of risk-significant systems to determine the operability of these systems. The inspectors utilized system valve lineup and electrical breaker checklists, plant drawings, and selected operating procedures to determine whether the systems were correctly aligned to perform the intended design functions. The inspectors also examined the material condition of the components and observed operating equipment parameters to determine whether deficiencies existed. The inspectors reviewed completed work orders (WOs) and calibration records associated with the systems for issues that could affect component or train functions. The inspectors used the information in the appropriate sections of the Final Safety Analysis Report (FSAR) to determine the functional requirements of the system. Documents reviewed are listed in the Attachment.

Partial system walkdowns of the following systems constituted three inspection procedure samples as defined in Inspection Procedure (IP) 71111.04-05:

- Unit 2 AFW pump 2P-29;
- north service water (SW) header; and
- Unit 1 safety injection pump 1P-15B.

b. Findings

No findings of significance were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On July 21, 2008, the inspectors performed a complete system alignment inspection of the AFW system to verify the functional capability of the system. This system was selected because it was considered both safety-significant and risk-significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment line-ups, electrical power availability, system pressure and temperature indications, as appropriate, component labeling, component lubrication, component and equipment cooling, hangers and supports, operability of support systems, and to ensure that ancillary equipment or debris did not interfere with equipment operation. A review of a sample of past and outstanding WOs was performed to determine whether any deficiencies significantly affected the system function. In addition, the inspectors reviewed the corrective action program database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment.

These activities constituted one complete system walkdown sample 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 that focused on the following attributes: the availability, accessibility, and condition of fire fighting equipment; the control of transient combustibles and ignition sources; and the condition and status of installed fire barriers. The inspectors selected fire areas for inspection based on the area's overall fire risk contribution, as documented in the Individual Plant Examination of External Events, or the potential of a fire to impact equipment that could initiate a plant transient.

In addition, the inspectors assessed these additional fire protection attributes during walkdowns: fire hoses and extinguishers were in the designated locations and available for immediate use; unobstructed fire detectors and sprinklers; transient material loading within the analyzed limits; and fire doors, dampers, and penetration seals in satisfactory condition. The inspectors also determined whether minor issues identified during the inspection were entered into the licensee's corrective action program. Documents reviewed are listed in the Attachment to this report.

The walkdowns of the following selected fire zones constituted six inspection procedure samples as defined in IP 71111.05-05:

- fire zone 308; G-01 emergency diesel generator (EDG) room;
- fire zone 309; G-02 EDG room;
- fire zone 305; vital switchgear room;
- fire zone 306; D-06 station battery room;
- fire area A01-A; primary auxiliary building 8' elevation; and
- fire zone 301; Unit 1 turbine building 8' elevation.

b. Findings

No findings of significance were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On August 22 and September 9, 2008, the inspectors observed fire brigade activation drills. The first scenario involved a simulated fire within the protected area, east of the G-05 gas turbine generator building. The second scenario involved a simulated vehicle fire adjacent to the G-03/G-04 EDG building. Based on these observations, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies, openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were: (1) proper wearing of turnout gear and self-contained breathing apparatus; (2) proper use and layout of fire hoses; (3) employment of appropriate fire fighting techniques; (4) sufficient firefighting equipment brought to the scene; (5) effectiveness of fire brigade leader communications, command, and control; (6) search for victims and propagation of the fire into other plant areas; (7) smoke removal operations; (8) utilization of pre-planned strategies; (9) adherence to the pre-planned drill scenario; and (10) drill objectives. Documents reviewed are listed in the Attachment to this report.

These activities constituted one annual fire protection inspection sample as defined in IP 71111.05-05.

b. Findings

No findings of significance were identified.

1R06 Flooding (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the FSAR, engineering calculations, and abnormal operating procedures, to identify licensee commitments. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the

circulating water systems. The inspectors also reviewed the licensee's corrective action program documents with respect to past flood-related items identified to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant areas to verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- circulating water pump house; and
- holdup tank area in primary auxiliary building near panel C-59.

This inspection constituted two internal flooding samples as defined in IP 71111.06-05.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 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 August 11, 2008, through September 26, 2008, 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 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." Documents reviewed are listed in the Attachment to this report.

Completion of this section constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11B.

b. Findings

No findings of significance were identified.

.2 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

On September 22, 2008, the inspectors observed a crew of licensed operators in the plant's 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 technical specification (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

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:

- SW system; and
- Unit 2 charging pumps.

The inspectors reviewed events where ineffective equipment 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 systems. In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization. Documents reviewed are listed in the Attachment to this report.

This inspection constitutes two 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 Routine Quarterly Review

a. Inspection Scope

The inspectors reviewed risk assessments for planned and emergent maintenance activities during the specified work weeks. During these reviews, the inspectors compared the licensee's risk management actions to those actions specified in the licensee's procedures for the assessment and management of risk associated with maintenance activities. The inspectors assessed whether evaluation, planning, control, and performance of the work were done in a manner to reduce the risk and minimize the duration, where practical, and whether contingency plans were in place where appropriate.

The inspectors used the licensee's daily configuration risk assessment records, observations of shift turnover meetings, and observations of daily plant status meetings to determine whether the equipment configurations were properly listed. The inspectors also verified that protected equipment was identified and controlled as appropriate and that significant aspects of plant risk were communicated to the necessary personnel. The reviews of maintenance risk assessment and emergent work evaluation constituted five inspection procedure samples as defined in IP 71111.13-05:

- planned and emergent online maintenance during the week of July 20;
- planned and emergent online maintenance during the week of July 27;
- planned and emergent online maintenance during the week of August 4;
- planned and emergent online maintenance during the week of August 18; and
- planned and emergent online maintenance during the week of September 15.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed selected operability evaluations associated with issues entered into the licensee's corrective action program. The inspectors reviewed design basis information, the FSAR, TS requirements, and licensee procedures to determine the technical adequacy of the operability evaluations. In addition, the inspectors determined whether compensatory measures were implemented, as required. The inspectors assessed whether system operability was properly justified and that the system remained available, such that no unrecognized increase in risk occurred. Documents reviewed are listed in the Attachment to this report.

The reviews of the following operability evaluations constituted five samples as defined in IP 71111.15-05:

- AR 01129591; degraded cooling to primary auxiliary building battery and electrical equipment rooms;
- AR 01131456; residual heat removal pump 1P-10A oil degradation;
- AR 01131964; turbine-driven AFW pump 2P-29 aggregate operational impact;
- AR 01133245; pressurizer level indicator cold calibration; and
- AR 01136286; feedwater heater degradation.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

.1 Inadequate 10 CFR 50.59 Screening for Unit 1 Feedwater Heater Modification

a. Inspection Scope

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

- engineering change (EC) 12033, "Replacement of Unit 1 Feedwater Heaters (1HX-20 A/B and 1HX-21 A/B) to Support Extended Power Uprate (EPU)."

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 inspectors observed ongoing and completed work activities to verify that installation was consistent with the design control documents. The modification replaced the existing feedwater heaters 4A, 4B, 5A, and 5B with new, larger feedwater heaters that were rated for the EPU project, an overall power increase of approximately 17 percent. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

Introduction: A finding of very low safety significance and associated Severity Level IV NCV of 10 CFR 50.59(d)(1), "Changes, Tests, and Experiments," was identified by the inspectors for the failure to perform a written evaluation that provided the bases for the determination that the installation of new feedwater heaters did not require a license amendment. Specifically, the licensee performed a written evaluation for the replacement of the feedwater heaters that inappropriately linked two elements of the modification by treating two discrete elements of the modification as interdependent. This resulted in the inappropriate evaluation of both elements together.

Description: On June 16, 2008, the licensee plant operations review committee approved the 10 CFR 50.59 written evaluation EVAL 2008-013, for EC 12033. This EC was for the replacement of the 4A, 4B, 5A, and 5B feedwater heaters during the upcoming Unit 1 fall refueling outage. The new feedwater heaters were significantly larger than the existing feedwater heaters, in anticipation of the EPU project, and as a result would cause an increase in feedwater temperature. Therefore, the newer feedwater heaters could result in more energy being released into containment during a steam line break inside containment, potentially challenging the containment peak design pressure of 60 pounds per square inch gauge (psig). The EC and written 10 CFR 50.59 evaluation were performed by the licensee's contractors assigned to the EPU project and were approved by the licensee.

During the review of EVAL 2008-013 and EC 12033, in August 2008, the inspectors identified the following discrepancies: 1) the value of the current calculation of record for the peak containment pressure used in the evaluation and EC (59.97 psig) differed from the peak containment pressure described in the FSAR and TS Basis (59.8 psig); 2) the EC and evaluation changed the amount of surface area in containment available as a heat sink and treated this change as an input parameter, without adequately identifying that the heat sinks were not part of the original conservatisms of the containment peak pressure calculations; and 3) the written evaluation inappropriately linked the independent changes in heat sink surface area for the containment peak pressure calculation and changes to the new larger feedwater heaters, when those discrete elements were required to be evaluated separately and independently of each other.

The licensee reviewed the inspectors' observations and initiated condition reports, as well as a self-assessment of the feedwater heater replacement project. The licensee's self-assessment identified additional discrepancies associated with the currently approved modification package. In response to the first discrepancy, the licensee determined that communications issues, in the resolution of an operable but nonconforming condition, resulted in a vendor inadvertently changing the analysis of record for peak containment pressure. The licensee-planned resolution for this item included a formal EC and 10 CFR 50.59 written evaluation to address this operable but nonconforming issue. The second discrepancy was resolved through the appropriate research by the licensee into the license and design basis to scrupulously demonstrate that the changes in containment surface area available for heat sink were in fact design inputs, and not part of the original calculation conservatisms. Finally, the third item was reviewed and the licensee concluded that EVAL 2008-013 inappropriately linked two

independent modifications, as described in the site 50.59 Resource Manual and the Guidelines for 10 CFR 50.59 Implementation. The licensee revised the modification package to ensure that feedwater temperature remained in the currently approved range, through the use of an engineered bypass line around the 5A and 5B feedwater heaters. In addition, the licensee initiated two independent 10 CFR 50.59 evaluations, which were projected for completion in November 2008 for operation of Unit 1 at an increased feedwater temperature.

Analysis: The inspectors determined that the failure to perform an adequate 10 CFR 50.59 evaluation for the feedwater heater modification was a performance deficiency. The finding was determined to be more than minor because the finding, if left uncorrected, would become a more significant safety concern, in that, changes made to the plant may inappropriately conclude that prior NRC approval is not required.

The finding is not suitable for SDP evaluation under the Barrier Integrity Cornerstone, but has been reviewed by NRC management and is determined to be a finding of very low safety significance. The finding would have had greater than very low safety significance if the failure resulted in a change in which the consequence was evaluated as having low to moderate or greater safety significance.

This finding has a cross-cutting aspect in the area of human performance, work control component, because the licensee failed to appropriately coordinate work activities by incorporating actions to address the need for work groups to maintain interfaces with offsite organizations and communicate, coordinate, and cooperate with each other during activities in which interdepartmental coordination is necessary to assure plant and human performance. [H.3(b)]

Enforcement: 10 CFR 50.59(d)(1) states, in part, that the licensee shall maintain records of changes in the facility and procedures made pursuant to 50.59(c) and that these records include a written evaluation which provides the bases for the determination that the change does not require a license amendment.

Contrary to the above, on June 16, 2008, the licensee made changes pursuant to 10 CFR 50.59(c) to the facility and plant procedures as described in the FSAR and had not performed a written evaluation that provided the bases for determining the changes did not require a license amendment. Specifically, while the licensee had performed an approved written evaluation on June 16, 2008, that evaluation did not provide an adequate basis for the determination that the change did not require a license amendment. The violation was determined to be of very low safety significance; therefore, this violation of 10 CFR 50.59 was classified as a Severity Level IV violation. Because this violation was of very low safety significance, was not repetitive or willful, and was entered into the licensee's corrective action program as AR 01134122, the violation is being treated as an NCV, consistent with Section VI.A.1 of NRC Enforcement Policy (NCV 05000266/2008004-01).

At the end of the inspection period, the licensee continued to perform a causal evaluation and develop long-term corrective actions. The licensee implemented remedial corrective actions which included: revision of the feedwater heater modification package to keep feedwater temperature in the currently approved range, and performance of separate evaluations for the feedwater heater change and changes to the containment peak pressure accident analyses.

.2 Temporary Plant Modifications

a. Inspection Scope

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

- air curtain on the Unit 1 equipment hatch during fuel movement.

This design package 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, affected procedures, and procedure changes were reviewed. This modification, with procedural controls, enabled the containment equipment hatch to remain removed during times of fuel movement of non-recently irradiated fuel (when greater than 65 hours have elapsed since the reactor was last critical). This modification will temporarily install a vinyl strip curtain at the hatch entrance to allow for transport of large components and equipment through the hatch while maintaining the ventilation barrier of containment in the event of a fuel handling accident, in accordance with Technical Requirements Manual section 3.9.3, "Containment Penetrations." Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (PMT) (71111.19)

.1 Failure to Follow Containment Airlock Operation Procedure for Unit 1 Lower Containment Hatch

a. Inspection Scope

The inspectors reviewed the Unit 1 lower containment hatch PMT activities following corrective interlock maintenance from September 4 to September 9, 2008, to verify that procedures and test activities were adequate to ensure system operability and functional capability. This activity was selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated the activity for the following: 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; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing; and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the FSAR, 10 CFR Part 50 requirements, and licensee procedures to verify 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 PMTs to determine whether the licensee was identifying problems and entering them in the corrective action program 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 constitutes one sample as defined in IP 71111.19-05.

b. Findings

Introduction: A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed for the failure to follow system operating procedure requirements to visually inspect and remove debris from the Unit 1 lower containment airlock door sealing surface upon exit from the airlock. This resulted in the failure of the airlock to meet its PMT acceptance criteria.

Description: On September 9, 2008, the Unit 1 lower containment airlock failed to pass its TS-required pressurized door seal test, TS-10A, when the measured air leakage past the outer hatch seal exceeded the acceptance criteria. The licensee's subsequent evaluations attributed this component failure to the presence of paint chips on the door seal, which created a leak path. The licensee's evaluation further concluded that the paint chips were likely deposited on the seal during the period of troubleshooting on the hatch interlocks between September 4 and September 9, 2008.

Throughout this period of troubleshooting, numerous hatch operations were conducted under the guidance of procedure OI 134, "Containment Airlock Operation with Inoperable Components." This procedure required the use of a level 2 dedicated operator to perform all airlock manipulations in accordance with procedure 1-SOP-CONT-001, "Operating Containment Airlocks." Procedure 1-SOP-CONT-001 required that a visual inspection of the door sealing surface be performed by the dedicated hatch operator and any debris found be removed prior to every entry and exit through the hatch. As evidenced by the presence of paint chips on the sealing surface identified immediately after the failure, as well as through the inspectors' direct observation of multiple hatch operations during the troubleshooting period, the required visual inspections were not performed in accordance with the procedure.

The inspectors also noted a number of factors that could have contributed to the procedural violation. Specifically, the procedure 1-SOP-CONT-001 was classified as a "reference use" procedure, despite it containing multiple detailed instructions and its relatively infrequent use. Additionally, the containment airlock operation checklist, PBF-2137, did not contain a step to check the seal for debris.

Analysis: The inspectors determined that the failure to identify and remove debris from the Unit 1 lower containment airlock outer door seal prior to every operation of entry and exit from the hatch was a performance deficiency. The finding was determined to be more than minor because the finding was associated with the Barrier Integrity Cornerstone attribute of human performance and affected the cornerstone objective of providing reasonable assurance that physical design barriers, such as containment, protect the public from radionuclide releases caused by accidents or events. Specifically, the lower hatch outer door was assumed to be degraded for some time during the September 4 through September 9 timeframe as a result of excessive seal bypass; yet, during that period, individuals frequently entered containment for

troubleshooting purposes – in effect leaving the degraded outer door as the only containment barrier during those brief moments of entry and exit.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of findings," Table 4a for the Barrier Integrity Cornerstone. The inspectors determined that the finding was of very low safety significance because the finding did not represent a degradation of the radiological barrier function provided for the control room, or auxiliary building, or spent fuel pool; the finding did not represent a degradation of the barrier function of the control room against smoke or a toxic atmosphere; the finding did not represent an actual open pathway in the physical integrity of reactor containment (valves, airlocks, containment isolation system (logic and instrumentation), and heat removal components; and the finding did not involve an actual reduction in function of hydrogen ignitors in the reactor containment.

This finding has a cross-cutting aspect in the area of human performance, work practices, because personnel work practices did not support human performance. Specifically, the licensee did not follow procedures. [H.4(b)]

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances and be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, between September 4 and September 9, 2008, the licensee failed to accomplish the operation of the lower hatch in accordance with procedures. Specifically, the dedicated hatch operators failed to perform the procedurally required visual inspection of the door seal to identify and remove debris prior to closing the hatch. Because this violation was of very low safety significance and it was entered into the licensee's corrective action program as AR 01135022, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000266/20080004-02; 05000301/2008004-02).

In response to this issue, the licensee ensured that hatch operators for upcoming containment entries were briefed on the event and reiterated the visual inspection procedural requirements. Also, at the end of the inspection period, the licensee was evaluating the need for procedural guidance enhancements.

.2 Post-Maintenance Testing

a. Inspection Scope

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

- return to service of charging pump 1P-2C following maintenance the week of September 15; and
- return to service of the SW system following maintenance on valve SW-2891 the week of September 22.

These activities were selected based upon the structure, system, or component's ability to impact risk. The inspectors evaluated these activities for the following: 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; and test documentation was properly evaluated. The inspectors evaluated the activities against TSs, the FSAR, 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 PMTs to determine whether the licensee was identifying problems and entering them in the corrective action program 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 constitutes two samples as defined in IP 71111.19-05.

b. Findings

No findings of significance were identified.

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:

- IT-9A for AFW pump 2P-29 the week of August 11 (inservice test);
- Unit 1 TS-ECCS-02 safety injection system venting on August 26 (routine);
- IT-07 D,E,F for the north SW pumps on September 3 (routine); and
- PBTP 167 EDG fuel oil storage tank cross connect flushing and transfer test on September 12 (routine).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine whether: any preconditioning occurred; effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing; acceptance criteria were clearly stated, demonstrated operational readiness, and were 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 were in accordance with TSs, the FSAR, 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, American Society of Mechanical Engineers (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 corrective action program. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine licensee emergency drill on September 18, 2008, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator, Technical Support Center, and Emergency Operations Facility to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. Documents reviewed are listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06-05.

b. Findings

No findings of significance were identified.

.2 Drill and Exercise Performance Indicator (PI)

a. Inspection Scope

The inspectors observed two evolutions for licensed operators on April 12 and July 3, 2008, which required simulated emergency plan implementation by a licensee operations crew. These evolutions were included in PI data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also reviewed the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that the licensee evaluators noted the same issues and entered them into the corrective action program. Documents reviewed are listed in the Attachment to this report.

This inspection constitutes two samples as defined in IP 71114.06-05.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program (71122.03)

.1 Inspection Planning

a. Inspection Scope

The inspectors reviewed the licensee's 2006 and 2007 Annual Monitoring Reports, the results of radiological environmental monitoring analyses for the first quarter of 2008, and the most recent licensee assessment results to verify that the REMP was implemented as required by the license's Offsite Dose Calculation Manual (ODCM) and the Environmental Manual (EM). The inspectors reviewed the environmental monitoring reports for changes to the ODCM with respect to environmental monitoring, commitments in terms of sampling locations, monitoring and measurement frequencies, milking animal survey, contract laboratory interlaboratory comparison program, and analysis of radiological environmental sample data. The inspectors reviewed the ODCM and the EM to identify environmental monitoring stations and evaluated station locations and the types of samples collected from each to determine if they were consistent with the ODCM and NRC guidance contained in Regulatory Guide 1.21, "Measuring, Evaluating, and Reporting Radioactivity in Solid Wastes, and Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light Water Cooled Nuclear Power Plants," in Regulatory Guide 4.8, "Environmental Technical Specifications for Nuclear Power Plants," and in associated NRC Branch Technical Positions and NUREG documents. The inspectors also reviewed licensee self-assessments, audits, licensee event reports (LERs), and interlaboratory comparison program results. The inspectors reviewed the FSAR for information regarding the environmental monitoring program and for meteorological monitoring instrumentation and historical meteorological data

including relative deposition rates. The inspectors reviewed the scope of the licensee's audit program to verify that it met the requirements of 10 CFR 20.1101(c). Documents reviewed are listed in the Attachment to this report.

This inspection constitutes one sample as defined in IP 71122.03-5.

b. Findings

No findings of significance were identified.

.2 Onsite Inspection

a. Inspection Scope

The inspectors walked down four of the licensee's five "indicator" environmental air sampling stations and approximately 25 percent of the thermoluminescence dosimeter (TLD) monitoring stations to determine if they were located as described in the EM and to assess equipment material condition. Each station walked down was also examined to assess monitoring station orientation relative to plant effluent release locations, to evaluate equipment configuration, and to determine whether vegetation growth control allowed for the collection of representative samples. In addition, the inspectors evaluated surface water and milk sampling locations to verify the suitability of each in complying with REMP requirements.

This inspection constitutes one sample as defined in IP 71122.03-5.

The inspectors observed the collection of a surface water (lake) sample and the change-out of air particulate and charcoal cartridges at four environmental monitoring locations to determine whether environmental sampling was representative of the release pathways as specified in the EM and whether sampling techniques were consistent with the licensee's procedure.

This inspection constitutes one sample as defined in IP 71122.03-5.

Based on direct observations and records review, the inspectors verified that the meteorological instruments at each of the licensee's three meteorological towers were operable, calibrated, and maintained in accordance with the FSAR, NRC Safety Guide 23, and licensee procedures. The inspectors verified that the meteorological data displays and data communication links were operable. The inspectors reviewed real time meteorological data (i.e., wind speed, wind direction, and delta temperature) provided by the licensee's communication links and discussed system capabilities with the licensee to verify that data was sampled and compiled consistent with the aforementioned NRC Safety Guide.

This inspection constitutes one sample as defined in IP 71122.03-5.

The inspectors reviewed each event documented in the 2006 and 2007 Annual Monitoring Reports which involved a missed sample, inoperable sampler, lost TLD, or anomalous measurement for the cause and corrective actions and conducted a review of the licensee's assessment of any positive sample results (i.e., licensed radioactive material detected above the lower-limits-of-detection). The inspectors reviewed the

associated radioactive effluent release data that was the likely source of the released material, if applicable.

This inspection constitutes one sample as defined in IP 71122.03-5.

The inspectors reviewed changes made by the licensee to the ODCM and/or EM as a result of changes to the milking animal use census, air sampler station modifications or other modifications to the location or type of environmental sampling since the last inspection. The inspectors reviewed technical justifications for changed sampling locations, as applicable. The inspectors verified that the licensee performed the reviews required to ensure that the changes did not affect its ability to monitor the impacts of radioactive effluent releases on the environment.

This inspection constitutes one sample as defined in IP 71122.03-5.

The inspectors reviewed flow verification and maintenance records for the licensee's environmental air sample pumps, including the calibration of the rotameter used for pump flow measurements. The inspectors reviewed the results of the REMP sample vendor's laboratory quality control program including the interlaboratory comparison program to verify the adequacy of the vendor's program and the corrective actions for any identified deficiencies. The inspectors verified that the appropriate detection sensitivities were achieved by the vendor laboratory for counting samples (i.e., the samples met ODCM/EM required lower-limits-of-detections). The inspectors reviewed technical evaluations/audits the licensee performed of its vendor laboratory since the last inspection or was otherwise performed as part of a joint nuclear utilities audit, as applicable. Additionally, the inspectors reviewed the results of the licensee's interlaboratory cross-check comparison program for its gamma spectroscopy equipment to verify the adequacy of effluent sample analyses performed by the licensee. The inspectors reviewed the licensee's determination of any bias to the data and the overall effect on the REMP. The inspectors reviewed Nuclear Oversight Organization audit results of the program to determine whether the licensee met ODCM/EM requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constitutes one sample as defined in IP 71122.03-5.

b. Findings

No findings of significance were identified.

.3 Unrestricted Release of Material from the Radiologically Controlled Area (RCA)

a. Inspection Scope

The inspectors observed the principal locations where the licensee monitors potentially contaminated material leaving the RCA and evaluated the procedures and practices used for control, survey, and release of materials from these monitoring areas. The inspectors observed radiation protection staff survey and release material for unrestricted use to verify that the surveys were performed in accordance with plant procedures. Additionally, the inspectors questioned several members of the radiation protection staff who conduct surveys for the unconditional release of material to determine whether they understood the proper methods and radiation survey equipment

to use for various unconditional release applications. Documents reviewed are listed in the Attachment to this report.

This inspection constitutes one sample as defined in IP 71122.03-5.

The inspectors verified that the radiation monitoring instrumentation was appropriate for the radiation types present and was calibrated with appropriate radiation sources. The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material and verified that there was guidance on how to respond to an alarm which indicates the presence of licensed radioactive material. The inspectors reviewed the licensee's equipment to ensure the radiation detection sensitivities were consistent with the NRC guidance contained in Circular 81-07 and Information Notice 85-92 for surface contamination. The licensee did not release potentially contaminated volumetric liquids or solids for unconditional release; however, the inspectors discussed Health Physics Position No. 221 for volumetrically contaminated material with the licensee's chemistry and radiation protection staffs to determine whether the licensee understood release criteria. The inspectors reviewed the licensee's program to determine if it identified difficult-to-detect radionuclides including those that decay via electron capture. The inspectors reviewed the licensee's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters (i.e., counting times and background radiation levels). The inspectors verified that the licensee had not established a "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high radiation background area. Documents reviewed are listed in the Attachment to this report.

This inspection constitutes one sample as defined in IP 71122.03-5.

b. Findings

No findings of significance were identified.

.4 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed the licensee's self-assessments, audits, LERs, and Special Reports, as applicable, related to the radiological environmental monitoring and unconditional release programs since the last inspection to determine if identified problems were entered into the corrective action program for resolution. The inspectors also verified that the licensee's self-assessment program was capable of identifying repetitive deficiencies or significant individual deficiencies in problem identification and resolution.

The inspectors also reviewed corrective action reports related to the REMP and the unconditional release survey program since the previous inspection, interviewed staff and reviewed documents to determine if the following activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk:

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

This inspection constitutes one sample as defined in IP 71122.03-5.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

.1 Mitigating Systems Performance Index (MSPI) - Cooling Water Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI - Cooling Water Systems PI for Unit 1 and Unit 2 for the fourth quarter of 2007 through the third quarter of 2008. 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 logs and MSPI derivation reports 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 corrective action program 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 cooling water system sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.2 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures PI Unit 1 and Unit 2 for the second quarter 2007 through the second quarter 2008. To determine the accuracy of the PI data reported during those periods, PI definitions and

guidance contained in NEI 99-02 and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," definitions and guidance, were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance WOs, event reports, and NRC integrated inspection reports for April 2007 through June 2008 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator. Finally, the licensee entered any discrepancies identified into the corrective action program. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two safety system functional failures sample as defined in IP 71151-05.

b. Findings

No findings of significance were identified.

.3 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors reviewed Chemistry Department records; including isotopic analyses completed in September 2007 - June 2008, to determine if the greatest dose equivalent iodine values obtained during steady state operations corresponded to the values reported to the NRC. The inspectors also reviewed selected dose equivalent iodine calculations; including the application of thyroid dose conversion factors for accuracy. Sample collection and analyses methods and corresponding station procedures were reviewed and discussed with chemistry staff to determine their adequacy. Documents reviewed are listed in the Attachment to this report.

These reviews constitute two samples under the Barrier Integrity Cornerstone as defined in IP 71151.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution (71152)

.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 corrective action program 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 corrective action program 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

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 corrective action program. This review was accomplished through inspection of the station's daily condition report packages.

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 Selected Issue Follow-up Inspection: Corrective Actions Related to the Improperly Installed Pump Shaft on the P-32E SW Pump

a. Inspection Scope

The inspectors performed a selected issue follow-up to evaluate the licensee's corrective action program response to the issue that was self-revealed on February 2, 2008, when the P-32E SW pump vibrations were found to be in excess of the ASME Code required action level and the pump was declared inoperable. This issue is discussed in further detail in section 4OA2 of this report.

The inspection criteria for this review included: the completeness and accuracy of the identification of the problem, the extent of condition, classification and resolution of the issue commensurate with its safety significance, the identification of the causes of the problem, identification of corrective actions and verification that the corrective actions have been implemented. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings of significance were identified in this sample. A finding associated with this issue was identified and documented in section 4OA3 of this inspection report for the improper installation of the pump shaft and columns.

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) LER 05000266/2008-002-00: One SW Pump Inoperable in Excess of TS Allowed Completion Time

a. Inspection Scope

On February 2, 2008, vibrations on SW pump P-32E were found to be in excess of the ASME Code required action level. The pump was secured, declared inoperable, and subsequently disassembled. Significant wear was identified on the pump shaft near one of the pump shaft bearings. The licensee evaluated the historical vibration data with the observed pump bearing and shaft damage and concluded that the pump should have been declared inoperable on approximately January 9. The Technical Specification Action Condition (TSAC) completion time limit of 7 days was exceeded because 24 days had elapsed between January 9 and February 2. The inspectors reviewed the licensee's evaluation of this TS violation and actions taken.

b. Findings

Improper Rigging and Installation of the P-32E SW Pump Shaft

Introduction: A finding of very low safety significance and associated non-cited violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," was self-revealed, for the failure to properly rig and install the P-32E SW pump shaft on June 7, 2006. The bent pump shaft subsequently led to the high pump vibrations and pump inoperability in excess of TSAC completion time.

Description: On February 2, 2008, an auxiliary operator noted abnormal vibrations on the P-32E SW pump. The licensee secured the pump and started the P-32F SW pump. The licensee subsequently restarted and measured vibrations on P-32E and found them to be in excess of the ASME Code required action level. The pump was secured, declared inoperable, and subsequently disassembled. Based on the review of the as-found condition of the removed pump and an uncoupled motor run, the only components the licensee identified in an abnormal condition were the pump shafts. The pump line shafts were found with significant wear on one side of the shaft at the cutlass bearing locations. The licensee determined that the bent shaft failure mechanism was consistent with the vibration data obtained previously in the fall of 2007; however, this failure mechanism was not recognized at that time. The total indicated runout of the third intermediate shaft was found to be in excess of acceptance criteria, confirming that the shaft was bent.

Based on procedures in place that verify the straightness of the shafts prior to installation and direct observation of maintenance rigging practices in January 2008, the licensee concluded that the cause of the bent pump shaft was maintenance rigging practices during the field installation that occurred on June 7, 2006. The licensee determined that RMP 9216-2, "Service Water Pump Removal, Installation, and Maintenance," lacked adequate installation and rigging instructions to ensure excessive force was not applied to the shaft during installation.

The licensee replaced the pump, line shaft and cutlass bearing inserts to return the pump to service. New installation techniques were utilized to prevent stressing the shaft during installation. The licensee also revised RMP 9216-2 to include precautions and techniques to avoid side loading the pump shafts during future installations. The licensee performed an extent of condition and determined that all six SW pumps were susceptible to the same bent shaft condition and should have increased vibration monitoring frequencies. The licensee has since implemented periodic call-up PC 23 part 10, "Periodic Service Water Pump Alignment for Shaft Vibration Monitoring," to further address this issue.

The licensee evaluated the historical vibration data along with the observed pump bearing and shaft damage and concluded that the pump should have been declared inoperable on approximately January 9. The TSAC completion time limit of 7 days was exceeded because 24 days had elapsed between January 9 and February 2, 2008.

Analysis: The inspectors determined that the failure to properly rig and install the P-32E pump shaft and surrounding column pieces, which led to the bent shaft and subsequently the high pump vibrations, was a performance deficiency.

The finding was determined to be more than minor because the finding was associated with the Mitigating Systems Cornerstone attribute of equipment performance and affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). Specifically, the improperly installed bent pump shaft led to high vibrations and the inoperability of the P-32E pump for a time period greater than that allowed by TSAC 3.7.8.A.

The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 - Initial Screening and Characterization of Findings," Table 4a for the Mitigating Systems Cornerstone. The inspectors determined that the finding was of very low safety significance (Green) because the finding did not involve a design or qualification deficiency, there was no actual loss of safety function, no single train loss of safety function for greater than the TS allowed outage time, and no risk due to external events.

This finding has a cross-cutting aspect in the area of human performance, resources component, because licensee procedures were not complete or adequate to ensure that the P-32E pump shaft was rigged and installed without damage to the shaft. [H.2(c)]

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires, in part, that activities affecting quality be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and be accomplished in accordance with these instructions, procedures, or drawings.

Contrary to the above, on June 7, 2006, procedure RMP 9216-2 was not appropriate to the circumstances, in that, it did not prescribe appropriate instructions to ensure that the rigging and installation of the P-32E pump shaft and columns was completed without damaging the shaft. Because of the very low safety significance of this finding and because the finding was entered into the licensee's corrective action program as AR 01121068 and AR 01121260, the violation is being treated as an NCV, consistent with Section VI.A.1 of NRC Enforcement Policy (NCV 05000266/2008004-03; 05000301/2008004-03).

As an immediate corrective action, the licensee replaced portions of the line shaft to return the pump to service; new installation techniques were utilized to prevent stressing the shaft during installation; RMP 9216-2 was revised to include precautions and techniques to avoid side loading the pump shafts during future installations; and the licensee implemented periodic callup PC 23 part 10, "Periodic Service Water Pump Alignment for shaft Vibration Monitoring," to further address this issue.

Documents reviewed as part of this inspection are listed in the attachment. This LER is considered closed.

.2 (Discussed) LER 05000266/2007-006-00; 05000301/2007-006-00: Fire Inspection Analysis of Pressurizer Power-Operated Relief Valves (PORV) and Block Valves

This LER was written as a result of the inspectors' identification, on July 12, 2007, of a failure to ensure that alternative shutdown capability, and its associated circuits, would be free of fire damage in the event of a severe fire in an alternate shutdown area. This event is discussed in Section 4OA5 of this report.

.3 (Closed) LER 05000266/2008-001-00: Manual Reactor Shutdown Required by Technical Specification LCO 3.8.1 AC Sources-Operating Not Met

This LER was written as a result of the loss of the Unit 1 1X04 transformer, resulting in the loss of all offsite power to the Unit 1 essential busses, an Unusual Event and a Unit 1 shutdown in accordance with TSs. The NRC conducted a special inspection and the performance deficiencies associated with this event were documented in NRC Special Inspection Report 05000266/2008007; 05000301/2008007. The inspectors reviewed the LER and did not identify any additional licensee performance issues. Therefore; this LER is considered closed.

.4 (Closed) LER 05000266/2007-005-00: Manual Reactor Shutdown Required by Technical Specification; LCO 3.7.5 AFW Not Met

This LER was written as a result of a Unit 1 shutdown in accordance with TSs due to the inoperability of the Unit 1 turbine-driven AFW pump. The NRC conducted a special inspection and the performance deficiencies associated with this event were documented in NRC Special Inspection Report 05000266/2007008; 05000301/2007008 and NRC Inspection Report 05000266/2007004; 05000301/2007004 . The inspectors reviewed the LER and did not identify any additional licensee performance issues. Therefore; this LER is considered closed.

4OA5 Other Activities

.1 (Discussed) Unresolved Item (URI) 05000266/2007006-02; 05000301/2007006-02: Failure to Protect Circuits Associated with PORVs and Block Valves

This URI was opened by the inspectors during the 2007 triennial fire protection inspection and was originally discussed in section 1R05.2.b.2 of Inspection Report 05000266/2007006(DRS); 05000301/2007006(DRS). This issue was reported to the NRC via LER 05000266/2007-006-00; 05000301/2007-006-00. The LER status is discussed in Section 4OA3.

The licensee is in transition to National Fire Protection Association (NFPA) 805 and; therefore, this URI is being evaluated in accordance with the criteria established by Section A of the NRC's Interim Enforcement Policy Regarding Enforcement Discretion for Certain Fire Protection Issues (10 CFR 50.48) for a licensee in NFPA 805 transition. One of those criteria is that in order for the NRC to consider granting enforcement discretion the violation must not be associated with a finding of high safety significance. The licensee submitted a risk evaluation that estimated the bounding core damage frequencies for a control room fire and a cable spreading room fire. The inspectors had concerns with the licensee's assumptions regarding the credit for automatic suppression (0.1 failure probability) and manual suppression (0.1 failure probability) for a fire in the cable spreading room. Specifically, the concern was that the time to damage of the cables may be less than the licensee's calculations show. Therefore, this URI will remain open pending a more thorough risk evaluation from the licensee that will be completed as part of their transition process to NFPA 805.

.2 Reactor Coolant System Dissimilar Metal Butt Welds (DMBW) (Temporary Instruction (TI) 2515/172)

a. Inspection Scope

From September 8 through 10, 2008, the inspectors conducted a review of the licensee's activities regarding DMBW mitigation and inspection implemented in accordance with the industry self-imposed requirements of Materials Reliability Program (MRP) - 139, "Primary System Piping Butt Weld Inspection and Evaluation Guidelines." TI 2515/172, "Reactor Coolant System Dissimilar Metal Butt Welds," was issued February 21, 2008, to support the evaluation of licensees' implementation of MRP-139.

(1) Licensee's Implementation of the MRP-139 Baseline Inspections

The licensee identified that the hot and cold leg nozzle to safe-end welds in the Unit 2 replacement steam generators (SGs) were welded with Alloy 82/182. These four welds were clad with Alloy 52 on the interior diameter when installed. It was the licensee's position that since these welds were clad with Alloy 52, they were not susceptible to primary water stress-corrosion cracking (PWSCC) and, therefore, baseline inspections per MRP-139 were not applicable. The inspectors also performed a record review to confirm no additional dissimilar metal welds, including those in the pressurizer or reactor vessel, fell within the scope of MRP-139.

(2) Volumetric Examinations

There were no required MRP-139 volumetric examinations conducted during previous outages since the licensee does not consider any of its DMBWs falling within the inspection scope of MRP-139. The baseline examinations of the Unit 2 SG primary nozzle to safe-end Alloy 82/182 welds were performed in May of 1996. One of the inlet nozzle welds was examined in accordance with the licensee's Inservice Inspection Long Term Plan in December 1998 and one in January 1999. The licensee did not plan on performing any mitigation strategies at this time for the Unit 2 SG primary nozzle to safe-end welds.

(3) Mechanical Stress Improvement

The licensee did not perform any DMBW stress improvement activities for DMBWs during previous outages.

(4) Inservice Inspection Program

Because the licensee did not consider any of its DMBWs to be within the inspection scope of MRP-139, the requirement to categorize welds in accordance with MRP-139 was not applicable.

b. Observations

Summary: Point Beach is a Westinghouse 2-loop design with four primary nozzle to safe-end DMBWs containing 82/182 material located in the Unit 2 replacement SGs. These four SG welds were clad on the inside with Alloy 52 material during installation and therefore have not come into contact with primary water. The licensee's intent is to place these welds in the ASME Code 10-year risk informed ISI program for future examinations due to their non-susceptibility to PWSCC.

In accordance with requirements of TI 2515/172, the inspectors evaluated and answered the following questions:

(1) Licensee's Implementation of the MRP-139 Baseline Inspections

1. a. Have the baseline inspections been performed or are they scheduled to be performed in accordance with MRP-139 guidance?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

- b. Were the baseline inspections of the pressurizer temperature DMBWs of the nine plants listed in 03.01.b completed during the spring outage?

Not applicable. Point Beach was not one of the nine plants listed in 03.01.b.

2. Is the licensee planning to take any deviations from the MRP-139 baseline inspection requirements of MRP-139? If so, what deviations are planned, what is the general basis for the deviation, and was the NEI 03-08 process for filing a deviation followed?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

(2) Volumetric Examinations

1. Were examinations performed in accordance with the examination guidelines in MRP-139 Section 5.1 for unmitigated welds or mechanical stress improved welds consistent with NRC staff relief request authorization for weld overlaid welds?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

2. Performed by qualified personnel?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

3. Performed such that deficiencies were identified, dispositioned, and resolved?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

(3) Weld Overlays

1. Performed in accordance with ASME Code welding requirements and consistent with NRC staff relief request authorizations? Has the licensee submitted a relief request and obtained NRR staff authorization to install the weld overlays?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

2. Performed by qualified personnel? (Briefly describe the personnel training/qualification process used by the licensee for this activity.)

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

3. Performed such that deficiencies were identified, dispositioned, and resolved?

Not applicable. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

(4) Mechanical Stress Improvement

Not applicable. There were no stress improvement activities performed or planned by this licensee in response to MRP-139. The licensee determined that none of the DMBWs fell within the scope of MRP-139.

(5) Inservice Inspection Program

1. Has the licensee prepared an MRP-139 inservice inspection program? If not, briefly summarize the licensee's basis for not having a documented program and when the licensee plans to complete preparation of the program.

No. The licensee did not prepare a MRP-139 inspection program, because none of the four DMBWs fell within the scope of MRP-139. Of the four DMBWs identified, the licensee believed that none were susceptible to PWSCC because the Unit 2 SG welds were inlaid with Alloy 52.

2. In the MRP-139 inservice inspection program, are the welds appropriately categorized in accordance with MRP-139? If any welds are not appropriately categorized, briefly explain the discrepancies.

Not applicable. No DMBWs were identified within the MRP-139 scope.

3. In the MRP-139 inservice inspection program, are the inservice inspection frequencies, which may differ between the first and second intervals after the MRP-139 baseline inspection, consistent with the inservice inspections frequencies called for by MRP-139?

Not applicable. No DMBWs were identified within the MRP-139 scope.

4. If any welds are categorized as H or I, briefly explain the licensee's basis of the categorization and the licensee's plans for addressing potential PWSCC.

Not applicable. No DMBWs were identified within the MRP-139 scope. Therefore, no welds are categorized as H or I.

5. If the licensee is planning to take deviations from the inservice inspection "requirements" of MRP-139, what are the deviations and what are the general bases for the deviations? Was the NEI 03-08 process for filing deviations followed?

Not applicable. No DMBWs were identified within the MRP-139 scope.

c. Findings

No findings of significance were identified.

.3 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors observed 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.

4OA6 Management Meetings

.1 Exit Meeting Summary

On July 16, 2008, the inspectors presented the inspection results to Mr. Larry Meyer and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meeting

An interim exit meeting was conducted for:

- radiological environmental monitoring program inspection with Mr. L. Meyer and other licensee staff on July 18, 2008.
- the results of the TI 2515/172 for reactor coolant system dissimilar metal butt welds with Ms. F. Flentje on September 10, 2008. The inspectors returned proprietary information reviewed during the inspection prior to leaving the site and the licensee confirmed that none of the potential report input discussed was considered proprietary.
- the results of the licensed operator requalification training program inspection with the Requalification Training Program Lead Instructor, Mr. J. Pierce, on September 30, 2008.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Amundson, General Supervisor Operations Supervisor
R. Bardo, ISI Program Engineer
J. Bjorseth, Plant Manager
F. Flentje, Regulatory Affairs Supervisor
D. Frey, Chemistry Manager
G. Gozdziwski, Construction Supervisor
B. Harrigan, SG Program Engineer
R. Harrsch, Operations Manager
J. Hofstra, Boric Acid Program Engineer
B. Jensen, NDE Level III
C. Jilek, Site Maintenance Rule Coordinator
K. Johansen, Chemist
J. Keltner, SG Program Engineer
G. LeClair, Radiation Protection Supervisor
J. Leiker, Senior Engineer
K. Locke, Regulatory Affairs Specialist
L. Meyer, Site Vice-President
S. Pfaff, Performance Assessment Supervisor
J. Pierce, Licensed Operator Requalification Training Lead Instructor
C. Sizemore, Training Manager
B. Simiril, Appendix R Engineer
B. Vandervelde, Maintenance Manager
G. Young, Nuclear Oversight Manager

Nuclear Regulatory Commission

J. Cushing, Point Beach Project Manager, Office of Nuclear Reactor Regulations
M. Kunowski, Chief, Division of Reactor Projects, Branch 5

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000266/2008004-01	NCV	Inadequate 10 CFR 50.59 Evaluation for New Feedwater Heaters (Section 1R18.1)
05000266/2008004-02; 05000301/2008004-02	NCV	10 CFR 50, Appendix B, Criterion V NCV for the Failure to Follow Procedures for Use of the Containment Hatch Doors (Section 1R19.1)
05000266/2008004-03; 05000301/2008004-03	NCV	10 CFR 50, Appendix B, Criterion V NCV for the Failure to Have Adequate Maintenance Procedures for Service Water Pump Replacements (Section 4OA3.1)

Closed

05000266/2008002-00; 05000301/2008002-00	LER	One Service Water Pump Inoperable in Excess of Technical Specification Allowed Outage Time (Section 4OA3.1)
05000266/2008-001-00	LER	Manual Reactor Shutdown Required by Technical Specification LCO 3.8.1 (Section 4OA3.3)
05000266/2007005-00; 05000301/2007005-00	LER	Manual Reactor Shutdown Required by Technical Specification 3.7.5 (Section 4OA3.4)

Discussed

05000266/2007006-00; 05000301/2007006-00	LER	Fire Inspection Analysis of Pressurizer Power-Operated Relief Valves and Block Valves (Section 4OA3.2)
05000266/2007006-02; 05000301/2007006-02	URI	Failure to Protect Circuits Associated with PORVs and Block Valves (Section 4OA5.1)

LIST OF DOCUMENTS REVIEWED

The following is a partial 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

- OI 62B; Turbine Driven Auxiliary Feedwater System (P-29); Revision 16
- IT-09A; Cold Start of Turbine Driven Auxiliary Feed Pump and Valve Test (Quarterly) Unit 2; Revision 47
- CL 13E Part 1; Auxiliary Feedwater Valve Lineup Turbine-Driven Unit 2; Revision 21
- CL 10B; Service Water Safeguards Lineup; Revision 62
- AR 01134602; All Three North Header SW Pumps Show Signs of Degradation; August 28, 2008
- CL 13E Part 1; Auxiliary Feedwater Valve Lineup Turbine-Driven Unit 1; Revision 37
- CL 13E Part 1; Auxiliary Feedwater Valve Lineup Turbine-Driven Unit 2; Revision 21
- CL 13E Part 2; Auxiliary Feedwater Valve Lineup Motor Driven; Revision 42
- 0-TS-AFW-002; Auxiliary Feedwater System Valve and Lock Checklist (Monthly); Revision 4

1R05 Fire Protection

- Fire Hazards Analysis Report; June 2008 Revision
- NP 1.9.9; Transient Combustible Control
- OM 3.27; Control of Fire Protection & Appendix R Safe Shutdown Equipment; Revision 33
- PC 74; Conducting and Evaluating Fire Drills; Revision 10
- NP 1.9.14; Fire Protection Organization; Revision 9

1R06 Flood Protection

- AOP 9A; Service Water System Malfunction; Revision 23
- CAP00906713; Internal Flooding Concern in the Circulating Water Pump House; February 2, 2006

1R07 Annual Heat Sink Performance

- HX-01; Heat Exchanger Condition Assessment Program; Revision 6

1R11 Licensed Operator Requalification Program

- Point Beach Licensed Operator Requalification Schedule and SEG for Cycle 08C
- Point Beach Licensed Operator Requalification Schedule and SEG for Cycle 08D
- Point Beach Annual Requalification Exam Results; September 30, 2008

1R12 Maintenance Rule Implementation

- Maintenance Rule Data Packages for Unit 2 chemical and volume control system
- Maintenance Rule Data Packages for service water system
- AR 01119172; 2P-2B Charging Pump Leak Rate Change

1R13 Maintenance Risk Assessments and Emergent Work Control

- NP 10.3.6; Shutdown Safety Review and Safety Assessment; Revision 19
- Safety Monitor Calculation Reports for Units 1 and 2 for Applicable Work Weeks
- Work Week Execution Schedules for the Applicable Work Weeks
- Operator Logs for the Applicable Work Weeks
- NP 10.3.7; Online Safety Assessment; Revision 16

1R15 Operability Evaluations

- AR 01129591; Degraded Cooling to PAB Battery and Electrical Equipment Rooms
- AR 01131456; Residual Heat Removal Pump 1P-10A Oil Degradation
- AR 01131964; Turbine Driven Auxiliary Feedwater Pump 2P-29 Aggregate Operational Impact
- AR 01136286; Feedwater Heater Degradation
- AR 01133245; Pressurizer Level Indicator Cold Calibration

1R18 Plant Modifications

- EC 12033; Replacement of Unit 1 Feedwater Heaters (1 HX-020 A/B and 1HX-021 A/B) to Support EPU
- SER-2008-0004; Replacement of Unit 1 Feedwater Heaters (1 HX-020 A/B and 1HX-021 A/B) to Support EPU
- SCR 2008-0172-02; Use of Strip Curtain on the Unit 1 Equipment Hatch During Fuel Movement
- AOP 8-B; Irradiated Fuel Handling Accident in Containment; Revisions 11 and 12
- AR 01133154; Potential Issue with AFW Design/License Basis Requirements

1R19 Post-Maintenance Testing

- CAP 01135276; Unit 1 Containment Lower Hatch Outer Door Failed the TS-10A Containment Door Seal Leak Test; September 9, 2008
- MRE 01135276-01; Maintenance Rule Evaluation for 2C-2-D2 Unit 1 Containment Lower Airlock Outer Door; October 7, 2008
- TS 10A; Containment Airlock Door Seal Testing Unit 1; Revision 30; Performed September 8, 2008
- RMP 9225-2; Defeating/Restoring Containment Personnel and Escape Hatch Door Interlocks; Revision 10
- OI 134; Containment Airlock Operation with Inoperable Components; Revision 9
- 1-SOP-CONT-001; Operating Containment Airlocks; Revision 11
- PBF-2137; Containment Airlock Operation Checklist; Revision 4
- WO 00360537-01; C-1 Inner Door Interlock; September 7, 2008
- WO 00360537-01 Addendum; C-1 Inner Door Interlock; September 8, 2008
- WO 00360730-01; C-2 Outer Door Interlock; September 10, 2008
- DBD-12; Service Water System; Revision 14
- PC 43 Part 3; Service Water System Strainers and Flushing; Revision 34
- OI-70; Service Water System Operation; Revision 55
- IT-21; Charging Pumps and Check Valve Test; Revision 19

1R22 Surveillance Testing

- IT 09A; Cold Start of Turbine Driven Auxiliary Feed pump and Valve Test (Quarterly) Unit 2 performed on August 11, 2008; Revision 47
- 1-TS-ECCS-002; Safeguards System Venting (Monthly) Unit 1; Revision 6
- IT 07D; P-32D Service Water Pump Quarterly; Revision 19; Performed September 3, 2008
- IT 07E; P-32E Service Water Pump Quarterly; Revision 23; Performed September 3, 2008
- IT 07F; P-32F Service Water Pump Quarterly; Revision 20; Performed September 3, 2008
- PBTP 167; EDG Fuel Oil Storage Tank Cross Connect Flushing and Transfer Test; Revision 0

1EP6 Drill Evaluation

- Event Notification Worksheets and NARS Forms for Unusual Events on April 12, 2008 and July 3, 2008
- Event Notification Worksheets and NARS Forms for Emergency Drill on September 18, 2008

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Program

- Point Beach Nuclear Plant Offsite Dose Calculation Manual; Revision 18
- Point Beach Nuclear Plant Environmental Manual; Revision 19
- Point Beach Nuclear Plant Annual Monitoring Report for 2006 (issued April 2007) and for 2007 (issued April 30, 2008)
- Results of Point Beach Nuclear Plant Interlab Radiological Cross Check Program Results for 2006 and 2007; Gamma Spectroscopy System Detectors Nos. 1, 2, 3, 5, and 6; dated various periods in 2006 and 2007
- Low Volume Air Sampler Maintenance & Calibration Record; Environmental Units Located at E-01, E-02, E-03, E-04, E-08 and E-20; various dates in May 2006, May 2007 and August 2007
- HPCAL 1.33; Maintenance and Calibration of Low Volume Air Samplers; Revision 12
- F and J Specialty Products, Inc. Certificate of Calibration for Digital Venturi Calibrator; Model D-812, Serial No. 2774; dated November 11, 2005 and February 7, 2007
- Nuclear Oversight Observation Report No. 2006-003-3-015; Radiation Protection Quarterly Rollup; dated September 28, 2006
- Report of NUPIC Joint Audit of Environmental, Inc. Northbrook, IL; NUPIC Audit No. 19238; dated January 18, 2006
- Nuclear Oversight Observation Report; Report No. 2007-03-005; Radiation Protection/Radiological Effluent; dated August 8, 2007
- NP 4.2.25; Release of Material, Equipment and Personal Items from Radiologically Controlled Areas; Revision 14
- Evaluation of Isotopic Mixture and Radiation Protection Programs Impact; dated January 31, 2007
- NRC Letter dated January 13, 1988; Approval Under 10 CFR 20.302 of Procedures for Disposal of Contaminated Sewage Sludge at Point Beach Nuclear Plant
- CAMP 914; Routine Sewage Treatment Plant Sampling and Effluent Limitations; Revision 11
- ICP 06.055; Meteorological Tower Instrumentation Six-Month Calibration Procedure; Revision 2; and Associated Meteorological Instrument Calibration Records; dated October 2, 2007 and March 11, 2008
- ICP 06.003; Meteorological and Circulating Water System Calibration; Revision 7; and Associated Meteorological Instrument Multiplexer Calibration Records; dated June 4, 2008 and March 28, 2007

- ICP 07.030; Meteorological Monitoring System 28-Day Inspection; Revision 0; and Associated Inspection Records; dated various periods between January 27, 2006 – June 4, 2008
- CAP 01122149; REMP Air Particulate and Charcoal Samples Arrive Late at Environmental, Inc; dated February 19, 2008
- CAP 01127195; Deleted REMP Annual Monitoring Report Requirements; dated May 2, 2008
- CAP 01096051; Smearable Contamination Found in Tool Room Flashlight Drawer; dated June 8, 2007
- CAP 01120218; Fire Extinguishers Released from the RCA without Isotopic Analysis; dated January 18, 2008
- CAP 01111812 & 01113643; REMP Samples Lost in Transit; dated September 13, 2007 and October 4, 2007
- CAP 01070307; Improved Ownership of the Environmental Program Needed; dated January 5, 2007
- CAP 01129790 & 01123818; Environmental Air Sampler Loss of Power; dated March 19, 2008 and June 16, 2008

4OA1 Performance Indicator Verification

- Occupational Exposure Performance Indicator Data Packages; September 2007 – March 2008
- Unplanned Scrams with Complications Data Packages; April 2007 – March 2008
- Reactor Coolant System Leakage Data Packages; April 2007 – March 2008
- CAMP 600.3; Primary Side Sampling Procedures: Hot Leg Liquid Sampling-Depressurized Liquid; Revision 4
- CAMP 410; Determination of Radioactive Iodine and Iodine 131 Equivalents in Reactor Coolants; Revision 6
- NP 3.2.2; Primary Water Chemistry Monitoring Program; Revision 18
- Performance Indicator Data Collection, Review and Approval Records for Reactor Coolant System Activity; dated September 2007 – June 2008
- CAP 01119295; NRC Indicator for Fuel Performance; dated January 7, 2008 and Associated Apparent Cause Evaluation; dated February 7, 2008

4OA2 Problem Identification and Resolution

- LER 2008-002-00; One Service Water Pump Inoperable in Excess of Technical Specification Allowed Completion Time; May 23, 2008
- RMP 9216-2; Service Water Pump Removal, Installation and Maintenance; Revision 11
- RMP 9216-5; Service Water Pump Bowl Assembly Inspection and Maintenance; Revision 4
- RMP 9216-6; Service Water Pump Mechanical Inspection; Revision 1
- CAP 01121260; Service Water Pump Assembly Improvement
- CAP 01121068; P-32E SW Pump Found to Have High Vibrations
- CAP 01121369; RMP 9216-2 (Rev 8)
- CAP 01121161; P-32E Impeller Keys & Spares Found Undersized
- CAP 01121118; Service Water Pump Repair Procedure Improvements
- CAP 01121174; Proper Method of Measuring Shaft Runout
- CAP 01121177; Unclear Guidance for Measuring Bearing ID on SW Pumps
- CAP 01121163; Requirements For Use of Elastic Stop Nuts Is Not Clear
- CAP 01121104; Steady Bushing Clearance on P-32E Is Out of Spec
- ACE 01121068-01; Service Water Pump P-32E Removed From Service Due to Higher Than Normal Vibrations; February 7, 2008
- MPR Associates, Inc.; Point Beach Service Water Pump Shaft Evaluation; April 9, 2008

40A3 Follow-up of Events and Notices of Enforcement Discretion

- LER 2008-002-00; One Service Water Pump Inoperable in Excess of Technical Specification Allowed Completion Time; May 23, 2008
- RMP 9216-2; Service Water Pump Removal, Installation and Maintenance; Revision 11
- RMP 9216-5; Service Water Pump Bowl Assembly Inspection and Maintenance; Revision 4
- RMP 9216-6; Service Water Pump Mechanical Inspection; Revision 1
- CAP 01121260; Service Water Pump Assembly Improvement
- CAP 01121068; P-32E SW Pump Found to Have High Vibrations
- CAP 01121369; RMP 9216-2 (Rev 8)
- CAP 01121118; Service Water Pump Repair Procedure Improvements
- CAP 01121174; Proper Method of Measuring Shaft Runout
- CAP 01121177; Unclear Guidance for Measuring Bearing ID on SW Pumps
- CAP 01121163; Requirements For Use of Elastic Stop Nuts Is Not Clear
- CAP 01121104; Steady Bushing Clearance on P-32E Is Out of Spec
- ACE 01121068-01; Service Water Pump P-32E Removed From Service Due to Higher Than Normal Vibrations; February 7, 2008
- MPR Associates, Inc.; Point Beach Service Water Pump Shaft Evaluation; April 9, 2008
- AR01130877; Sodium Hypochlorite Tank Leak, UE Declared

40A5 Other Activities

- 541F091; P&ID Reactor Coolant System for Unit 1; Sheet 3; Revision 17
- AM 3-31; Alloy 600 Management Program; Revision 0
- AOP-10A; Safe Shutdown – Local Control; Revision 43
- AR 01101461; Potential Coincident Fire Included Failure of PORVs and Block Valves
- ASME Code Form N-1A; Manufacturers Data Report for Nuclear Vessels, National Board No. 68-5 (Unit 2 Pressurizer)
- B&W Manual 00210; Unit 1 Reactor Vessel
- Boric Acid Leakage and Corrosion Monitoring Program; Revision 1
- C.E. Manual 00112; Unit 2 Reactor Vessel
- Westinghouse Drawing 6147E62; Point Beach Unit 2 Steam Generator Primary Nozzle Details; Revision E
- Westinghouse Drawing 681J252; Pressurizer Lower Head Assembly & Details; dated August 1966
- Westinghouse Drawing 718J531; Pressurizer Upper Head Assembly & Details; dated November 1967
- Westinghouse Manual 00103; Pressurizer
- Westinghouse Manual 00109; Unit 2 Steam Generators
- Westinghouse Owners Group Letter – Alloy 600 Primary Loop Locations in Domestic WOG Plants; dated January 1995
- Westinghouse Weld Data Sheet; Stainless Steel Safe-End to Safety Injection Nozzle; dated June 17, 1969

NRC-Identified Condition Reports

- AR 01130764; Supplement to LAR 257 Needed
- AR 01130944; Revise Calculation N-93-079 to Include 1 and 2 SI-000857 A and B
- AR 01131331; Supplement to LAR 260, Motor-Driven Auxiliary Feedwater Pump CT Ext Needed
- AR 01131660; St. Lucie Confirmatory Order Has Point beach Nuclear Plant Applicability

- AR 01131661; Follow-Up with NRC Required
- AR 01131678; NRC REMP Inspection: Old Meteorological Data
- AR 01131679; NRC REMP Inspection: TLD Placement
- AR 01131680; NRC REMP Inspection: Liquid Sample Preservation
- AR 01131681; NRC REMP Inspection: Air Sampling
- AR 01131682; NRC REMP Inspection: Release of Bulk Volumetric Materials
- AR 01131684; NRC REMP Inspection: 2007 AMR Not a Good Document
- AR 01131733; NRC REMP Inspection: Meteorological Data in AMR
- AR 01131755; NRC REMP Inspection: Offsite Wells
- AR 01131832; Procedures Lack Guidance for System Shutdown and Startup
- AR 01131890; 2007 UFSAR Must be Resubmitted to NRC
- AR 01131964; 2P-29 Turbine-Driven Auxiliary Feedwater Pump Aggregate Operational Impact
- AR 01132662; Implementation of Fleet Operability Determination Procedure
- AR 01132691; Approved Operability Procedure Not Available
- AR 01132798; NRC Identified Issues with Scaffold in Auxiliary Feedwater Pump Room
- AR 01132887; I&C Cal Practices May Not Mirror Industry Best Practice
- AR 01133276; Functionality Reviews May Need Improving
- AR 01133834; 50.59 Evaluation for FWH Mod has Misleading Wording
- AR 01134024; Emergency Light EL-17 Blocked by Scaffold
- AR 01134122; New Feedwater Heater Modification 50.59 Evaluation Issues
- AR 01134255; Scaffold Braced to Plant Equipment Without Engineer Review
- AR 01134319; FSAR 14.2.5 Peak Containment Pressure Inconsistencies
- AR 01134489; Portable Fire Protection Equipment in VSGR Questioned
- AR 01134917; 2008 NRC Mid-Cycle Substantive Cross-Cutting Issues
- AR 01135658; NRC Open Issue with JB SGI Event
- AR 01135749; WO 330838-04 for Tendon Galley Sump Conduit Requires Rework
- AR 01135901; Operations Staffing Concerns
- AR 01136054; Cook Fire OE for Fire Fighters
- AR 01136401; Foreign Material Caught on Forebay Trash Rack
- AR 01136570; Shift Manager Alignment with OCC Turnover Process
- AR 01136571; Formality of 0630 Production Meeting Improvement Needed

LIST OF ACRONYMS USED

AFW	Auxiliary Feedwater
AR	Action Request
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CFR	Code of Federal Regulations
DMBW	Dissimilar Metal Butt Weld
DRP	Division of Reactor Projects
EC	Engineering Change
EDG	Emergency Diesel Generator
EM	Environmental Manual
EPU	Extended Power Uprate
FSAR	Final Safety Analysis Report
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
ISI	Inservice Inspection
LER	Licensee Event Report
MRP	Materials Reliability Program
MSPI	Mitigating Systems Performance Index
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NP	Nuclear Procedure
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
OP	Operating Procedure
PI	Performance Indicator
PMT	Post-Maintenance Testing
PORV	Power-Operated Relief Valve
Psig	Pounds Per Square Inch Gauge
PWSCC	Primary Water Stress Corrosion Cracking
RCA	Radiologically Controlled Area
RCS	Reactor Coolant System
REMP	Radiological Environmental Monitoring Program
RMP	Routine Maintenance Procedure
SDP	Significance Determination Process
SG	Steam Generator
SW	Service Water
TI	Temporary Instruction
TLD	Thermoluminescence Dosimeter
TS	Technical Specification
TSAC	Technical Specification Action Condition
URI	Unresolved Item
WO	Work Order