



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION III  
2443 WARRENVILLE RD. SUITE 210  
LISLE, IL 60532-4352

January 27, 2016

Mr. Eric McCartney  
Site Vice President  
NextEra Energy Point Beach, LLC  
6610 Nuclear Road  
Two Rivers, WI 54241

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 – NRC INTEGRATED  
INSPECTION REPORT 05000266/2015004; 05000301/2015004

Dear Mr. McCartney:

On December 31, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Point Beach Nuclear Plant, Units 1 and 2. The enclosed report documents the results of this inspection, which were discussed on January 5, 2016, with Mr. D. DeBoer and other members of your staff.

Based on the results of this inspection, two NRC-identified findings of very low safety significance were identified. These findings involved violations of NRC requirements. Additionally, one licensee-identified violation is listed in Section 4OA7. However, because of their very low safety significance, and because the issues were entered into your corrective action program, the NRC is treating the issues as non-cited violations (NCVs) in accordance with Section 2.3.2 of the NRC Enforcement Policy.

If you contest the violations or significance of these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with copies to: (1) the Regional Administrator, Region III; (2) the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and (3) the NRC Resident Inspector at the Point Beach Nuclear Plant.

In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, **you should provide a response within 30 days of the date of this inspection report, with the basis** for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Point Beach Nuclear Plant.

E. McCartney

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In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records System (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

***/RA/***

Jamnes Cameron, Chief  
Branch 4  
Division of Reactor Projects

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

Enclosure:  
IR 05000266/2015004; 05000301/2015004

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 05000266; 05000301

License Nos: DPR-24; DPR-27

Report No: 05000266/2015004; 05000301/2015004

Licensee: NextEra Energy Point Beach, LLC

Facility: Point Beach Nuclear Plant, Units 1 and 2

Location: Two Rivers, WI

Dates: October 1, 2015 through December 31, 2015

Inspectors: D. Oliver, Senior Resident Inspector  
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Approved by: J. Cameron, Chief  
Branch 4  
Division of Reactor Projects

Enclosure

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## SUMMARY

Inspection Report 05000266/2015004, 05000301/2015004; 10/01/2015–12/31/2015; Point Beach Nuclear Plant, Units 1 & 2; Fire Protection and Inservice Inspection (ISI) Activities.

This report covers a 3-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. Two Green findings were identified by the inspectors. The findings involved NCVs of the U.S. Nuclear Regulatory Commission requirements. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," dated April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG–1649, "Reactor Oversight Process," dated February 2014.

### **Cornerstone: Mitigating Systems**

- Green. The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of license condition 4.F for the licensee's failure to have procedures or instructions to prevent firefighting booster hoses from being kinked and/or twisted on hose reels. Specifically, booster hoses were installed on hose reels in both unit's containments and in the turbine building (TB), which were twisted and kinked. The licensee's corrective actions included rewinding hoses in the Unit 2 containment, four hoses in the TB, and creating compensatory measures for hose reels for the Unit 1 containment.

The finding was determined to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Protection Against External Events (Fire) and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the licensee failed to ensure that activities such as inspection, testing, and maintenance of fire protection systems were prescribed and accomplished in accordance with documented instructions, procedures, and drawings. In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," Table 2, the inspectors determined the finding affected the Mitigating Systems cornerstone. The finding degraded fire protection defense-in-depth strategies, and the inspectors determined, using Table 3, that it could be evaluated using Appendix F, "Fire Protection Significance Determination Process." The inspectors screened the issue to Green under the Phase 1 Screening Question 1.3.1–A, because the inspectors determined that the impact of a fire would be limited to one train/division of equipment for the affected fire areas and at least one credited safe shutdown path would be unaffected. This finding has a cross-cutting aspect of Training (H.9), in the area of human performance, because the licensee did not provide training and ensure knowledge transfer to maintain a knowledgeable, technically competent workforce, and instill nuclear safety values. Specifically, the inspectors determined that operations personnel were not adequately trained to recognize deficiencies associated with firefighting equipment standards, such as kinked and twisted hoses on hose reels, and subsequently failed to initiate actions to remedy such conditions. (Section 1R05.1)

- Green. The inspectors identified a finding of very low safety significance and associated Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to maintain a Unit 2 auxiliary feedwater system (AFW) pipe segment containing linear defects in accordance with the design and material specifications. As a corrective action, the licensee performed light filing to remove the defects from this pipe segment. The licensee entered the failure to maintain the AFW pipe segment in accordance with the design into the corrective action program (CAP) as action request (AR) 02084077, and was evaluating additional corrective actions.

This finding was determined to be more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the licensee's failure to maintain the Unit 2 AFW pipe segment containing linear defects in accordance with the design and material specifications could result in an increase in the possibility of pipe leakage or failure. In addition, the failure to maintain the AFW pipe segment containing linear defects in accordance with the design and material specification adversely affected the Mitigating System Cornerstone attribute of Equipment Performance because it could result in failure of AFW piping which would reduce the availability and reliability of the this mitigating system. The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and Exhibit 2, "Mitigating Systems Screening Questions," of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power." The inspectors answered "Yes" to screening question A.1 of Exhibit 2. Although this finding adversely affected the design or qualification of the AFW pipe segments, the finding screened as very low safety significance (Green), because it did not result in the loss of operability or functionality of the affected pipe segment. This finding has a cross-cutting aspect in the Teamwork (H.4) component of the human performance cross-cutting area. Specifically, the licensee's Projects Team responsible for the AFW modifications did not effectively communicate and coordinate with the licensee's Programs Engineering Group for resolution of the AFW pipe nonconforming conditions to ensure nuclear safety was maintained. (Section 1R08.1)

- A violation of very low safety significance identified by the licensee has been reviewed by the NRC. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. This violation and CAP tracking numbers are listed in Section 4OA7 of this report.

## **REPORT DETAILS**

### **Summary of Plant Status**

#### **Unit 1**

The unit operated at or near full power until November 28, 2015, when the unit automatically tripped due to a failure of the main generator voltage regulator circuitry. The unit was restarted December 2, 2015, and reached full power the following day where it remained for the remainder of the inspection period.

#### **Unit 2**

The unit began the period at 89 percent power, in coastdown, in preparation for the planned refueling outage (RFO) U2R34. The unit was shut down on October 3, 2015, for U2R34 and was subsequently started up on October 29, 2015, following refueling. The unit achieved and remained at full power on November 3, 2015, until the end of the inspection period.

### **1. REACTOR SAFETY**

#### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness**

##### 1R01 Adverse Weather Protection (71111.01)

##### .1 Winter Seasonal Readiness Preparations

##### a. Inspection Scope

The inspectors conducted a review of the licensee's preparations for winter conditions to verify that the plant's design features and implementation of procedures were sufficient to protect mitigating systems from the effects of adverse weather. Documentation for selected risk-significant systems was reviewed to ensure that these systems would remain functional when challenged by inclement weather. During the inspection, the inspectors focused on plant specific design features and the licensee's procedures used to mitigate or respond to adverse weather conditions. Additionally, the inspectors reviewed the Final Safety Analysis Report (FSAR) and performance requirements for systems selected for inspection, and verified that operator actions were appropriate as specified by plant specific procedures. Cold weather protection, such as heat tracing and area heaters, was verified to be in operation where applicable. The inspectors also reviewed CAP items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their CAP in accordance with station corrective action procedures. Documents reviewed are listed in the Attachment to this report. The inspectors' reviews focused specifically on the following plant systems due to their risk significance or susceptibility to cold weather issues:

- feedwater isolation valves; and
- refueling water storage tank.

This inspection constituted one winter seasonal readiness preparations sample as defined in IP 71111.01-05.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- 2P-53 (Unit 2 motor-driven auxiliary feedwater {MDAFW} pump) with Unit 2 turbine-driven auxiliary feedwater (TDAFW) pump out-of-service (OOS);
- G-02 emergency diesel generator (EDG) with G-04 OOS; and
- G-04 EDG after monthly surveillance.

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

These activities constituted three partial system walkdown samples as defined in IP 71111.04–05.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown (71111.04S)

a. Inspection Scope

On October 1, 2015, the inspectors performed a complete system alignment inspection of the Unit 1 and Unit 2 safety injection (SI) 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 lineups; 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 CAP database to ensure that system equipment alignment problems were being identified and appropriately resolved. Documents reviewed are listed in the Attachment to this report.

These activities constituted one complete system walkdown sample as defined in IP 71111.04–05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

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

- Fire Zone 151: SI pump area;
- Fire Zone 304: auxiliary feedwater rooms;
- Fire Zone 608: Unit 2 containment 8' elevation; and
- Fire Zone 611: Unit 2 containment 21' elevation.

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

These activities constituted four quarterly fire protection inspection samples as defined in IP 71111.05–05.

b. Findings

Failure to Follow Fire Protection Program Requirements for Care, Use and Maintenance of Fire Hose

Introduction: A finding of very low safety significance and associated NCV of license condition 4.F was identified by the inspectors for the licensee's failure to have procedures or instructions to prevent firefighting booster hoses from being kinked and/or twisted on hose reels. Specifically, booster hoses were installed on hose reels in both unit's containments and in the TB which were twisted and kinked.

Description: On October 28, 2015, while touring the Unit 2 containment during the U2R34 RFO, the inspectors noted that fire hose reel HR-54 had rigid booster hose which was wound in a manner that caused the hose to twist and kink at the reel attachment fitting. The inspectors were concerned that this condition could prevent the proper flow of firefighting water upon pressurizing the hose on the reel as designed. Additionally the inspectors were concerned that storing the hose with a sharp bend or kink for a long period of time could lead to in-service failure of the hose, which could frustrate firefighting efforts and invalidate fire hazards analysis assumptions. In response to this and other related concerns surrounding the licensee's booster hoses, the licensee rewound HR-54 and declared the hose reels in Unit 1 containment non-functional. As a compensatory measure, the licensee staged hoses near the entrance of the Unit 1 containment for use in the event of a fire.

On December 1, 2015, the Unit 1 containment was opened during the unplanned outage discussed in Section 1R20.2 of this report. During the closeout inspection of the Unit 1 containment, inspectors identified hose reels with kinked and twisted booster hoses, similar to the conditions described for HR-54 for the Unit 2 containment. The licensee took no further action since the Unit 1 containment hose reels had already been deemed non-functional based on the discovery of the condition in the Unit 2 containment.

On December 15, 2015, inspectors discovered three booster hoses in the TB that were twisted and kinked at the reel attachment fitting similar to the conditions noted in the Unit 1 and 2 containments. The inspectors were concerned with these hose reels because they were credited for the response to fires in the main control room and vital switchgear areas and could potentially delay firefighting efforts in these areas. In response to the inspectors concerns, the licensee discovered an additional hose that was kinked on its reel, and rewound each of the TB hoses.

The inspector's review of these issues found that sections 2.3.1.4 and 4.1 of the licensee's Fire Protection Evaluation Report (FPER) incorporated National Fire Protection Association (NFPA) standard 1962 (1979 version) by reference. Chapter 3 of NFPA 1962 specified that booster hose shall not be stored kinked, and care shall be taken to avoid twisting when rolling the hose onto a reel. The inspectors reviewed numerous licensee procedures for fire hose installation, service tests, monthly inspections, and storage following use. The inspectors concluded that specific attributes listed in NFPA 1962, such as those mentioned above were required to be, but were not incorporated into these procedures.

Analysis: The inspectors determined that failure to have procedures or instructions to prevent booster hose from becoming kinked and/or twisted on hose reels was contrary to the licensee's FPER and was a performance deficiency. The finding was determined

to be more than minor because it was associated with the Mitigating Systems Cornerstone attribute of Protection Against External Events (Fire) and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the licensee failed to ensure that activities such as inspection, testing, and maintenance of fire protection systems were prescribed and accomplished in accordance with documented instructions, procedures and drawings.

In accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," Table 2, the inspectors determined the finding affected the Mitigating Systems cornerstone. The finding degraded fire protection defense-in-depth strategies, and the inspectors determined, using Table 3, that it could be evaluated using Appendix F, "Fire Protection Significance Determination Process." The inspectors screened the issue to Green under the Phase 1 Screening Question 1.3.1-A, because the inspectors determined that the impact of a fire would be limited to one train/division of equipment for the affected fire areas and at least one credited safe shutdown path would be unaffected.

This finding has a cross-cutting aspect of Training (H.9), in the area of human performance, because the licensee did not provide training and ensure knowledge transfer to maintain a knowledgeable, technically competent workforce, and instill nuclear safety values. Specifically, the inspectors determined that operations personnel were not adequately trained to recognize deficiencies associated with firefighting equipment standards, such as kinked and twisted hoses on hose reels, and subsequently failed to initiate actions to remedy such conditions.

Enforcement: License condition 4.F for both Unit 1 and Unit 2 required the licensee to implement and maintain in effect all provisions of the approved fire protection program as described in the FSAR and Safety Evaluation Report dated August 2, 1979, (and Supplements dated October 21, 1980, January 22, 1981, and July 27, 1988) and the Safety Evaluation Report issued January 8, 1997, for TS Amendment No. 170 and No. 174. Section 9.10 of the FSAR stated that the FPER was incorporated into the FSAR by reference. Section 4.2.b of the FPER stated, in part, that activities such as inspection, testing, and maintenance of fire protection systems are prescribed and accomplished in accordance with documented instructions, procedures, and drawings. Sections 2.3.1.4 and 4.1 of the FPER incorporated NFPA 1962 (1979 version) by reference. Chapter 3 of NFPA 1962 stated that booster hose shall not be stored kinked, and care shall be taken to avoid twisting when rolling the hose onto a reel.

Contrary to the above, until December 15, 2015, the licensee failed to have procedures or instructions to prevent booster hose from being kinked and/or twisted on hose reels, a condition which was identified by inspectors on three separate occasions. The licensee's corrective actions included rewinding hoses in the Unit 2 containment, four hoses in the TB, and creating compensatory measures for hose reels for the Unit 1 containment. Because this violation was of very low safety significance and it was entered into the licensee's CAP as AR 02099151, this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy **(NCV 05000266/2015004-01; 05000301/2015004-01, Failure to Follow Fire Protection Program Requirements for Care, Use and Maintenance of Fire Hose).**

1R06 Flooding (71111.06)

.1 Underground Vaults

a. Inspection Scope

The inspectors selected underground bunkers/manholes subject to flooding that contained cables whose failure could disable risk-significant equipment. The inspectors determined that the cables were not submerged, that splices were intact, and that appropriate cable support structures were in place. In those areas where dewatering devices were used, such as a sump pump, the device was operable and level alarm circuits were set appropriately to ensure that the cables would not be submerged. In those areas without dewatering devices, the inspectors verified that drainage of the area was available, or that the cables were qualified for submergence conditions.

The inspectors also reviewed the licensee's corrective action documents with respect to past submerged cable issues identified in the CAP to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following underground bunkers/manholes subject to flooding:

- manhole Z-065A (manhole #1); and
- manhole Z-065B (manhole #2).

Specific documents reviewed during this inspection are listed in the Attachment to this report. This inspection constituted one underground vaults sample as defined in IP 71111.06-05.

b. Findings

No findings were identified.

1R08 Inservice Inspection Activities (71111.08P)

From October 13, 2015 through October 21, 2015, the inspectors conducted a review of the implementation of the licensee's ISI Program for monitoring degradation of the reactor coolant system (RCS), steam generator (SG) tubes, emergency feedwater systems, risk-significant piping and components, and containment systems.

.1 Piping Systems Inservice Inspection

a. Inspection Scope

The inspectors observed the following Non-Destructive Examinations (NDEs) mandated by the American Society of Mechanical Engineers (ASME) Section XI Code to evaluate compliance with the ASME Code Section XI and Section V requirements, and if any indications and defects were detected, to determine if these were dispositioned in accordance with the ASME Code or an NRC approved alternative requirement:

- ultrasonic (UT) examination of reactor closure head studs 17-21; and
- visual (VT-1) examination of reactor closure head nuts and washers 17 through 32.

The inspectors observed the following NDE conducted as part of the licensee's industry initiative inspection programs for managing vessel internals cracking to determine whether the examinations were conducted in accordance with the licensee's Augmented Inspection Program, industry guidance documents and associated licensee examination procedures, and if any indications and defects were detected, to determine whether these were dispositioned in accordance with approved procedures and NRC requirements:

- underwater VT-1 examination of circumferential core barrel weld No. 3 utilizing a remote camera and a fiberscope to meet industry standards MRP-228, "Materials Reliability Program: Inspection Standard for Pressurized Water Reactor Internals," and MRP-227, "Materials Reliability Program: Pressurized Water Reactor Internals Inspection and Evaluation Guidelines."

The inspectors reviewed the following examinations completed during the previous outages with relevant/recordable conditions/indications accepted for continued service to determine if acceptance was in accordance with the ASME Code Section XI or an NRC approved alternative:

- dye penetrant (PT) examination reports Nos. 451240, 451236, and AR 01950806 that recorded and dispositioned linear indications identified in a Unit 2 base metal pipe segment (P103/2a) near the cross-tie line for the TDAFW system pump; and
- PT report No. PT-271 and AR 01384224 that recorded and dispositioned linear indications identified in a Unit 1 base metal pipe segment (F4) near the cross-tie line for the motor driven auxiliary feedwater pump (MDAFWP).

The inspectors reviewed records of the following pressure boundary welds completed for risk-significant systems since the beginning of the last RFO to determine if the licensee applied the preservice NDEs and acceptance criteria required by the Construction Code and ASME Code, Section XI. Additionally, the inspectors reviewed the welding procedure specification and supporting weld procedure qualification records to determine if the weld procedures were qualified in accordance with the requirements of Construction Code and the ASME Code Section IX:

- ASME Code Section XI Class 2 Repair Replacement Activity - Fabrication of AFW pipe welds 35, 38, and 39 to support installation of pipe (DB-3) that provided for a cross-tie connection between the AFW for each Unit.

b. Findings

Inadequate Evaluation of Non-Conforming Auxiliary Feedwater System Pipe Defects

Introduction: The inspectors identified a finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the licensee's failure to maintain a Unit 2 AFW pipe segment containing linear defects in accordance with the design and material specifications.

Description: In 2010 and 2014, the licensee identified linear defects in the base metal for two AFW pipe segments and subsequently returned these non-conforming pipe segments to service without determination of the extent of the defects (e.g., depth and/or length). The inspectors were concerned that these non-conforming pipe segments posed an increased risk for in-service failure.

On March 22, 2014, during the preparation for welding on an existing Unit 2 AFW system pipe segment (P103/2a) near the cross-tie line for the turbine-driven auxiliary feedwater (TDAFW) pump, the licensee identified linear defects. Specifically, in PT examination report No. 451240, the licensee recorded three linear defects 0.75 inches long and a fourth linear defect 0.5 inch in length. The licensee initially assigned actions to grind on the pipe material to remove these defects or replace this pipe segment. Subsequently, the defects were not removed, nor was the pipe segment replaced. Instead, the licensee documented in AR 01950806 that

“radiography did not reveal defects in any view. The lines are consistent, but the depth seems to vary some as indicated by the amount of buffing required to make the indication clear completely. UT 0 degree revealed one spot in the buffed area where wall thickness was 0.264 inch. This is just above the 12.5 percent manufacturer’s tolerance of 0.2625 inch. This is still believed to be a defect caused during the manufacturing process and is original to construction. It is the opinion of the NDE Engineer that the pipe is satisfactory for continued use.”

Therefore, the licensee returned the linear pipe defects to service after attributing the condition to manufacturing defects, and without investigation, to determine if these defects meet the acceptance criteria for the applicable manufacturing code or standard.

On March 8, 2010, during the preparation for welding on an existing Unit 1 AFW system pipe segment (F4) near the cross-tie line for the MDAFWP, the licensee identified linear defects. Specifically, in PT examination report No. 271, the licensee documented that three linear defects each two inches in length remained following “buffing” on this pipe segment and that these defects continued under the unremoved paint coating. Despite a lack of information on the actual length or depth of these defects, the licensee accepted this condition for service as documented in AR 01384224 which stated:

“ISI has reviewed the pictures and determined that the linear indication is a minor surface defect due to hot rolling during the manufacturing process. The linear indication is nearly perfectly straight and of uniform depth. This indication is not a crack since cracks are jagged and follow a path perpendicular or parallel to the metal grain.”

In addition, the AR stated:

“linear indication is a manufacturing defect which is allowed by code. Per the notes in this AR, and conversation with ISI Program Owner, there is no issue with this indication, and work has already continued. Not a mode hold issue, and can be closed.”

Therefore, the licensee returned the linear pipe defects to service after attributing the condition to manufacturing defects, and without investigation, to determine if these defects meet the acceptance criteria for the applicable manufacturing Code or standard.

The applicable design standard for the AFW piping was identified in DG-M03, “Point Beach Nuclear Plant Design and Installation Guidelines,” Attachment 1, “Bechtel Piping Class Specification.” This specification required the AFW pipe to meet American Society of Testing and Materials (ASTM) A-106B, “Seamless Carbon Steel Pipe for High Temperature Service.” ASTM A-106B, Section 20, “Finish” Step “a,” stated that, “the

finished pipe shall be reasonably straight and free from injurious defects,” and Step b, “Depth of Injurious Defects,” stated, “all defects shall be explored for depth. When the depth is in excess of 12.5 percent of the nominal wall thickness or encroaches the minimum wall thickness such defects shall be considered injurious.” Additionally, ASTM A-106B Paragraph c(1) required machining or grinding defects not classified as injurious must be removed if greater than 5 percent of the pipe wall. For the Unit 1 and Unit 2 AFW pipe segments containing linear defects, the licensee had not explored the depth of the defects and for the Unit 1 pipe segment the length of the three defects was not determined. Therefore, the inspectors were concerned that these AFW pipe segments containing linear defects were non-conforming with respect to the ASTM A-106B specification.

In response to the inspectors’ concern for these non-conforming AFW pipe conditions, the licensee entered these issues into the CAP. For the Unit 2 AFW pipe segment, the licensee documented in AR 02082787 that the NRC questioned the acceptance criteria applied. Because Unit 2 was in an outage and in a shutdown condition (Mode 6), the affected system was not required to be operable. On October 20, 2015, the licensee completed follow-up UT and magnetic particle (MT) examination of the affected Unit 2 pipe segment. During the MT examination, the licensee detected a three inch long linear defect in this pipe segment and the UT examination confirmed that the minimum pipe wall measured in the area of previous grinding/buffing near this defect was 0.265 inch thick. The UT examination also confirmed that the nominal pipe wall in this pipe segment was approximately 0.298 inch. Therefore, approximately 11 percent of the material had been removed by grinding prior to detecting the three inch long linear defect during the MT examination. Subsequently, the licensee performed light filing on this defect and completed a PT examination to confirm this defect was removed from this pipe segment. For the Unit 1 AFW pipe segment, the licensee documented in AR 02083211 that the NRC questioned the acceptance criteria applied. Because Unit 1 was in an operating condition (Mode 1), the affected system was required to be operable. The licensee initially determined the pipe segment was operable because the linear defects had been accepted by engineering. The inspectors’ questions as to the basis for this determination prompted the licensee to provide more information to support immediate operability. Specifically, the licensee completed review of the pipe stress analysis for the affected pipe segment to demonstrate that margins existed to code allowable stress limits and identified that the pipe had successfully passed hydrostatic pressure tests as a basis for immediate operability. On October 23, 2015, the licensee completed follow-up UT and MT examination of the affected Unit 1 pipe segment. During the MT examination, the licensee detected a 2.75 inch long linear defect in this pipe segment and the UT examination confirmed that the pipe remained above the minimum pipe wall measured in the area of previous grinding/buffing near this defect (e.g. lowest reading was 0.269 inch thick). The licensee noted that the MT examination indication presented only a faint indication (e.g., very little MT powder retained) and elected to confirm if the indication represented a true surface defect by performing a PT examination. Subsequently, the licensee completed a PT examination which did not detect any defects. The licensee attributed the lack of the defects to undocumented grinding/buffing activities which occurred following the 2010 PT examination that originally identified the three linear indications and concluded that the Unit 1 AFW pipe segment was in conformance with the ASTM A-106B material specification.

The licensee entered the failure to maintain the AFW pipe segment in accordance with the design into the CAP as AR 02084077, and evaluated additional corrective actions.

Analysis: The inspectors determined that the licensee's failure to maintain a Unit 2 AFW pipe segment containing linear defects in accordance with the design and material specifications was contrary to 10 CFR Part 50, Appendix B, Criterion III, "Design Control," and a performance deficiency.

The inspectors determined that the finding was more than minor in accordance with IMC 0612, Appendix B, because if left uncorrected the performance deficiency had the potential to lead to a more significant safety concern. Specifically, the licensee's failure to maintain the Unit 2 AFW pipe segment containing linear defects in accordance with the design and material specifications could result in an increase in the possibility of pipe leakage or failure. In addition, the failure to maintain the AFW pipe segment containing linear defects in accordance with the design and material specification adversely affected the Mitigating System Cornerstone attribute of Equipment Performance because it could result in failure of AFW piping, which would reduce the availability and reliability of this mitigating system.

The inspectors evaluated the finding in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," and Exhibit 2, "Mitigating Systems Screening Questions," of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," dated June 19, 2012. The inspectors answered "Yes" to screening question A.1 of Exhibit 2. Although this finding adversely affected the design or qualification of the AFW pipe segments, the finding screened as very low safety significance, because it did not result in the loss of operability or functionality of the affected pipe segment.

This finding has a cross-cutting aspect in the Teamwork (H.4) component of the human performance cross-cutting area. Specifically, the licensee's Projects Team responsible for the AFW modifications did not effectively communicate and coordinate with the licensee's Programs Engineering group for resolution of the AFW pipe non-conforming conditions to ensure nuclear safety was maintained.

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion III, "Design Control," requires, in part, that measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for those structures, systems, and components (SSCs) to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the SSCs.

Procedure DG-M03, "Point Beach Nuclear Plant Design and Installation Guidelines," Attachment 1, "Bechtel Piping Class Specification," required AFW pipe to meet ASTM A-106B "Seamless Carbon Steel Pipe for High Temperature Service."

Procedure ASTM A-106B, Section 20, "Finish" Step "a," stated that, "The finished pipe shall be reasonably straight and free from injurious defects," and Step b, "Depth of Injurious Defects," stated, "all defects shall be explored for depth. When the depth is in excess of 12.5 percent of the nominal wall thickness or encroaches the minimum wall thickness such defects shall be considered injurious."



Contrary to the above, on March 22, 2014, for Unit 2 AFW system pipe segment (P103/2a) four defects were identified during PT examination (report No. 451240), which were not explored for depth or removed to ensure that the finished pipe segment was free of injurious defects (AR 01950806). Because this violation was of very low safety significance and was entered into the licensee's CAP (AR 02084077), this violation is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy **(NCV 05000301/2015004-02; Inadequate Evaluation of Non-Conforming Auxiliary Feedwater System Pipe Defects)**.

## .2 Reactor Pressure Vessel Upper Head Penetration Inspection Activities

### a. Inspection Scope

A bare metal VT and non-visual examination of the reactor head upper head penetrations were not required this outage to fulfill the requirements of 10 CFR 50.55a(g)(6)(ii)(D). Additionally, the licensee did not perform any welded repairs to vessel head penetrations since the beginning of the preceding outage. Therefore, no NRC review was completed for these inspection procedure attributes.

### b. Findings

No findings were identified.

## .3 Boric Acid Corrosion Control

### a. Inspection Scope

The inspectors performed an independent walkdown of the RCS and related lines in the containment, which had received a recent licensee boric acid walkdown and verified whether the licensee's boric acid corrosion control VT examinations emphasized locations where boric acid leaks can cause degradation of safety significant components.

The inspectors reviewed the following licensee evaluations of RCS and connected/affected components with boric acid deposits to determine if degraded components were documented in the CAP. The inspectors also evaluated corrective actions for any degraded RCS components to determine if they met the ASME Section XI Code.

- Boric Acid Evaluation Screening 14-091, 2RC-506C;
- Boric Acid Evaluation Screening 14-152, 2RH-716C; and
- Boric Acid Evaluation Screening 14-155, 2RH-706A.

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

- AR 01948376; Boric Acid Leak 2S-V-29 Vent Cap;
- AR 01948460; Boric Acid Leak 2SI-V-12; and
- AR 01949101; Boric Acid Leak 2RC-00506C.

b. Findings

No findings were identified.

.4 Steam Generator Tube Inspection Activities

a. Inspection Scope

Examination of the SG tubes was not required this outage pursuant to the Point Beach, Unit 2, TSSs. Therefore, no NRC review was completed for this IP attribute.

b. Findings

No findings were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

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

- the licensee had established an appropriate threshold for identifying ISI/SG related problems;
- the licensee had performed a root cause (if applicable) and taken appropriate corrective actions; and
- the licensee had evaluated operating experience and industry generic issues related to ISI and pressure boundary integrity.

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

b. Findings

No findings were identified.

The inspections described in Sections 1R08.1, 1R08.2, 1R08.3, 1R08.4, and 1R08.5 above constituted one ISI sample as defined in IP 71111.08.

1R11 Licensed Operator Regualification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Regualification (71111.11Q)

a. Inspection Scope

On November 17, 2015, the inspectors observed crew B licensed operators in the plant's simulator during licensed operator regualification training. The inspectors verified that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and that training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- licensed operator performance;

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

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

This inspection constituted one quarterly licensed operator requalification program simulator sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation During Periods of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On October 29 and 30, 2015, the inspectors observed reactor startup on Unit 2. This was an activity that required heightened awareness or was related to increased risk. 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 (if applicable);
- correct use and implementation of procedures;
- control board (or equipment) manipulations;
- oversight and direction from supervisors; and
- ability to identify and implement appropriate TS actions and Emergency Plan actions and notifications (if applicable).

The performance in these areas was compared to pre-established operator action expectations, procedural compliance, and task completion requirements. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11-05.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

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

- incorrect lube oil added to 2P-11A component cooling water (CCW) pump and 1P-28 main feed pump;
- multiple failures of the K-2B service air compressor; and
- service water pump P-32B failed to start.

The inspectors reviewed events such as where ineffective equipment maintenance had resulted or could have 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 SSCs/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

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

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

b. Findings

No findings were identified.

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

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related

equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- October 8, 2015: planned shutdown yellow risk for Unit 2 head lift;
- October 9, 2015: planned shutdown yellow risk for fuel movement;
- October 16, 2015: planned shutdown yellow risk for fuel movement; and
- December 17-18, 2015: emergent risk after 2P-11B CCW motor failure.

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

Documents reviewed during this inspection are listed in the Attachment to this report. These maintenance risk assessments and emergent work control activities constituted four samples as defined in IP 71111.13–05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- AR 02088465: Nitrogen Pressure Reads Zero - NRC Identified (2Q-3 containment penetration);
- FA 02004858: Primary Auxiliary Building Flooding Deficiencies;
- FA 02093466: Slow Through Wall Leak on U2 CVCS Piping;
- FA 02076105: P-35B Fails to Start on Battery 2; and
- POD 02095722: Unit 1 – Abandoned 3/8” SS Line Abrading Charging Piping.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and FSAR to the licensee's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the

evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment to this report.

This operability inspection constituted five samples as defined in IP 71111.15–05.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

.1 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following modification(s):

- EC 283475; Qualification of Duromar SAR-UW Epoxy Phenolic as a Service Level 3 Repair Coating for Internal Use in the CST [Condensate Storage Tank].

The inspectors reviewed the configuration changes and associated 10 CFR 50.59 safety evaluation screening against the design basis, the FSAR, and the TS, as applicable, to verify that the modification did not affect the operability or availability of the affected system(s). The inspectors, as applicable, observed ongoing and completed work activities to ensure that the modifications were installed as directed and consistent with the design control documents; the modifications operated as expected; post-modification testing adequately demonstrated continued system operability, availability, and reliability; and that operation of the modifications did not impact the operability of any interfacing systems. As applicable, the inspectors verified that relevant procedure, design, and licensing documents were properly updated. Lastly, the inspectors discussed the plant modification with engineering personnel to ensure that the plant modification would not adversely impact overall plant performance. 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

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- 2CV-313A; seal water return isolation valve stroke test post-rebuild;
- 2SI-830B; SI accumulator relief valve leak check following replacement;
- 2SI-854B; RHR suction from RWST valve stroke test following leak repair;
- leak-rate test of 2CC-755B; 2P-1B RCP CC header check valve following maintenance;
- Unit 2 TDAFWP air accumulator relief valve leak check following valve replacement; and
- Unit 2 TDAFWP pump test following outboard bearing replacement.

These activities were selected based upon the SSCs ability to impact risk. The inspectors evaluated these activities for the following (as applicable): the effect of testing on the plant had been adequately addressed; testing was adequate for the maintenance performed; acceptance criteria were clear and demonstrated operational readiness; test instrumentation was appropriate; tests were performed as written in accordance with properly reviewed and approved procedures; equipment was returned to its operational status following testing (temporary modifications or jumpers required for test performance were properly removed after test completion); and test documentation was properly evaluated. The inspectors evaluated the activities against 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 post-maintenance tests to determine whether the licensee was identifying problems and entering them in the CAP and that the problems were being corrected commensurate with their importance to safety. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Refueling Outage Activities

a. Inspection Scope

The inspectors reviewed the Outage Safety Plan (OSP) and contingency plans for the Unit 2 RFO, conducted October 3 through 30, 2015, to confirm that the licensee had appropriately considered risk, industry experience, and previous site-specific problems in developing and implementing a plan that assured maintenance of defense-in-depth. During the RFO, the inspectors observed portions of the shutdown and cooldown processes and monitored licensee controls over the outage activities listed below:

- licensee configuration management, including maintenance of defense-in-depth commensurate with the OSP for key safety functions and compliance with the applicable TS when taking equipment OOS;

- implementation of clearance activities and confirmation that tags were properly hung and equipment appropriately configured to safely support the work or testing;
- installation and configuration of reactor coolant pressure, level, and temperature instruments to provide accurate indication, accounting for instrument error;
- controls over the status and configuration of electrical systems to ensure that TS and OSP requirements were met, and controls over switchyard activities;
- monitoring of decay heat removal processes, systems, and components;
- controls to ensure that outage work was not impacting the ability of the operators to operate the spent fuel pool cooling system;
- reactor water inventory controls including flow paths, configurations, and alternative means for inventory addition, and controls to prevent inventory loss;
- controls over activities that could affect reactivity;
- maintenance of secondary containment as required by TS;
- licensee fatigue management, as required by 10 CFR Part 26, Subpart I;
- refueling activities, including fuel handling and sipping to detect fuel assembly leakage;
- startup and ascension to full power operation, tracking of startup prerequisites, walkdown of the drywell (primary containment) to verify that debris had not been left which could block emergency core cooling system suction strainers, and reactor physics testing; and
- licensee identification and resolution of problems related to RFO activities.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RFO sample as defined in IP 71111.20–05.

b. Findings

No findings were identified.

.2 Other Outage Activities

a. Inspection Scope

The inspectors evaluated outage activities for an unscheduled outage that began on November 28, 2015, and continued through December 2, 2015. The inspectors reviewed activities to ensure that the licensee considered risk in developing, planning, and implementing the outage schedule.

The unscheduled outage was required following the automatic reactor trip described in Section 4OA3 of this report. The licensee determined during initial steps of the subsequent Unit 1 reactor startup, that the N-31 source range nuclear instrument detector failed to exhibit proper response and required replacement. Detector replacement required the licensee to maintain the reactor shutdown and enter the Unit 1 containment. The inspectors observed the reactor shutdown, outage equipment configuration and risk management, control and monitoring of decay heat removal, control of containment activities, personnel fatigue management, startup and heatup activities, and identification and resolution of problems associated with the outage.

Documents reviewed are listed in the Attachment to this report.



This inspection constituted one other outage sample as defined in IP 71111.20–05.

b. Findings

No findings 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:

- ORT 3A: Safety Injection Actuation with Loss of Engineered Safeguards AC (Train A) Unit 2 (Routine);
- TS 40 Train A: 2MS-2018 Main Steam Isolation Valve Operability Trip Test Unit 2 (IST); and
- Unit 2 Containment Spray Train A Leakage Test (CIV).

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

- did preconditioning occur;
- the 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 was 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, ASMEs code, and reference values were consistent with the system design basis;
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable;

- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure;
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished;
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test;
- equipment was returned to a position or status required to support the performance of its safety functions; and
- all problems identified during the testing were appropriately documented and dispositioned in the CAP.

Documents reviewed are listed in the Attachment to this report.

This inspection constituted one routine surveillance testing sample, one in-service test sample, and one containment isolation valve (CIV) sample as defined in IP 71111.22, Sections–02 and–05.

b. Findings

No findings were identified.

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

.1 Emergency Action Level and Emergency Plan Changes

a. Inspection Scope

The regional inspectors performed an in-office review of the latest revisions to the Emergency Plan, Emergency Action Levels (EALs), and EAL Bases document to determine if these changes decreased the effectiveness of the Emergency Plan. The inspectors also performed a review of the licensee’s 10 CFR 50.54(q) change process as well as the Emergency Plan change documentation to ensure proper implementation for maintaining Emergency Plan integrity.

The U.S. Nuclear Regulatory Commission review was not documented in a safety evaluation report, and did not constitute approval of licensee-generated changes; therefore, this revision is subject to future inspection. The specific documents reviewed during this inspection are listed in the Attachment to this report.

This EAL and Emergency Plan Change inspection constituted one sample as defined in IP 71114.04-06.

b. Findings

No findings were identified.

## 2. RADIATION SAFETY

### Cornerstones: Public Radiation Safety and Occupational Radiation Safety

#### 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

##### .1 Inspection Planning (02.01)

###### a. Inspection Scope

The inspectors reviewed all licensee performance indicators for the Occupational Exposure Cornerstone for follow-up. The inspectors reviewed the results of the Radiation Protection (RP) Program audits (e.g., licensee's quality assurance audits or other independent audits). The inspectors reviewed any reports of operational occurrences related to occupational radiation safety since the last inspection. The inspectors reviewed the results of the audit and operational report reviews to gain insights into overall licensee performance.

###### b. Findings

No findings were identified.

##### .2 Radiological Hazard Assessment (02.02)

###### a. Inspection Scope

The inspectors determined if there have been changes to plant operations since the last inspection that may result in a significant new radiological hazard for onsite workers or members of the public. The inspectors evaluated whether the licensee assessed the potential impact of these changes and has implemented periodic monitoring, as appropriate, to detect and quantify the radiological hazard.

The inspectors reviewed the last two radiological surveys from selected plant areas and evaluated whether the thoroughness and frequency of the surveys were appropriate for the given radiological hazard.

The inspectors conducted walkdowns of the facility, including radioactive waste processing, storage, and handling areas to evaluate material conditions and performed independent radiation measurements to verify conditions.

The inspectors selected radiologically risk-significant work activities that involved exposure to radiation. For these work activities, the inspectors assessed whether the pre-work surveys performed were appropriate to identify and quantify the radiological hazard and to establish adequate protective measures. The inspectors evaluated the Radiological Survey Program to determine if hazards were properly identified, including the following:

- identification of hot particles;
- the presence of alpha emitters;
- the potential for airborne radioactive materials, including the potential presence of transuranics and/or other hard-to-detect radioactive materials (This evaluation

- may include licensee planned entry into non-routinely entered areas subject to previous contamination from failed fuel.);
- the hazards associated with work activities that could suddenly and severely increase radiological conditions and that the licensee has established a means to inform workers of changes that could significantly impact their occupational dose; and
- severe radiation field dose gradients that can result in non-uniform exposures of the body.

The inspectors observed work in potential airborne areas and evaluated whether the air samples were representative of the breathing air zone. The inspectors evaluated whether continuous air monitors were located in areas with low background to minimize false alarms and were representative of actual work areas. The inspectors evaluated the licensee's program for monitoring levels of loose surface contamination in areas of the plant with the potential for the contamination to become airborne.

b. Findings

No findings were identified.

.3 Instructions to Workers (02.03)

a. Inspection Scope

The inspectors selected various containers holding non-exempt licensed radioactive materials that may cause unplanned or inadvertent exposure of workers, and assessed whether the containers were labeled and controlled in accordance with 10 CFR 20.1904, "Labeling Containers," or met the requirements of 10 CFR 20.1905(g), "Exemptions To Labeling Requirements."

The inspectors reviewed the following radiation work permits (RWPs) used to access high-radiation areas and evaluated the specified work control instructions or control barriers:

- RWP 15-2016: removal/reinstall reactor vessel (RV) head;
- RWP 15-2018: seal table activities;
- RWP 15-2020: keyway entries; and
- RWP 15-2033: primary auxiliary building (PAB) valve maintenance activities.

For these RWPs, the inspectors assessed whether allowable stay times or permissible dose (including from the intake of radioactive material) for radiologically significant work under each RWP were clearly identified. The inspectors evaluated whether electronic personal dosimeter alarm set-points were in conformance with survey indications and plant policy.

The inspectors reviewed selected occurrences where a worker's electronic personal dosimeter noticeably malfunctioned or alarmed. The inspectors evaluated whether workers responded appropriately to the off-normal condition. The inspectors assessed whether the issue was included in the CAP, and dose evaluations were conducted as appropriate.

For work activities that could suddenly and severely increase radiological conditions, the inspectors assessed the licensee's means to inform workers of changes that could significantly impact their occupational dose.

b. Findings

No findings were identified.

.4 Contamination and Radioactive Material Control (02.04)

a. Inspection Scope

The inspectors observed locations where the licensee monitors potentially contaminated material leaving the radiological control area and inspected the methods used for control, survey, and release from these areas. The inspectors observed the performance of personnel surveying and releasing material for unrestricted use, and evaluated whether the work was performed in accordance with plant procedures and whether the procedures were sufficient to control the spread of contamination and prevent unintended release of radioactive materials from the site. The inspectors assessed whether the radiation monitoring instrumentation had appropriate sensitivity for the type(s) of radiation present.

The inspectors reviewed the licensee's criteria for the survey and release of potentially contaminated material. The inspectors evaluated whether there was guidance on how to respond to an alarm that indicates the presence of licensed radioactive material.

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. The inspectors assessed whether or not the licensee has established a *de facto* "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.

The inspectors selected several sealed sources from the licensee's inventory records, and assessed whether the sources were accounted for and verified to be intact.

The inspectors evaluated whether any transactions, since the last inspection, involving nationally tracked sources were reported in accordance with 10 CFR 20.2207.

b. Findings

No findings were identified.

.5 Radiological Hazards Control and Work Coverage (02.05)

a. Inspection Scope

The inspectors evaluated ambient radiological conditions (e.g., radiation levels or potential radiation levels) during tours of the facility. The inspectors assessed whether the conditions were consistent with applicable posted surveys, RWP's, and worker briefings.

The inspectors evaluated the adequacy of radiological controls, such as required surveys, RP job coverage (including audio and VT surveillance for remote job coverage), and contamination controls. The inspectors evaluated the licensee's use of electronic personal dosimeters in high-noise areas as high-radiation area monitoring devices.

The inspectors assessed whether radiation monitoring devices were placed on the individual's body consistent with licensee procedures. The inspectors assessed whether the dosimeter was placed in the location of highest expected dose or that the licensee properly employed a NRC-approved method of determining effective dose equivalent.

The inspectors reviewed the application of dosimetry to effectively monitor exposure to personnel in high-radiation work areas with significant dose rate gradients.

The inspectors reviewed the following RWPs for work within airborne radioactivity areas with the potential for individual worker internal exposures:

- RWP 15-2016: remove/reinstall RV head;
- RWP 15-2018: seal table activities; and
- RWP 15-2033: PAB valve maintenance.

For these RWPs, the inspectors evaluated airborne radioactive controls and monitoring, including potential for significant airborne levels (e.g., grinding, grit blasting, system breaches, entry into tanks, cubicles, and reactor cavities). The inspectors assessed barrier (e.g., tent or glove box) integrity and temporary high-efficiency particulate air ventilation system operation.

The inspectors examined the licensee's physical and programmatic controls for highly-activated or contaminated materials (i.e., nonfuel) stored within spent fuel and other storage pools. The inspectors assessed whether appropriate controls (i.e., administrative and physical controls) were in place to preclude inadvertent removal of these materials from the pool.

The inspectors examined the posting and physical controls for selected high-radiation areas and very high-radiation areas to verify conformance with the occupational performance indicator.

b. Findings

No findings were identified.

.6 Risk-Significant High-Radiation Area and Very-High Radiation Area Controls (02.06)

a. Inspection Scope

The inspectors discussed with the RP manager the controls and procedures for high-risk, high-radiation areas, and very-high radiation areas. The inspectors discussed methods employed by the licensee to provide stricter control of very-high radiation area access as specified in 10 CFR 20.1602, "Control of Access to Very-High Radiation Areas," and Regulatory Guide 8.38, "Control of Access to High and Very-High Radiation Areas of Nuclear Plants." The inspectors assessed whether any changes to licensee procedures substantially reduce the effectiveness and level of worker protection.

The inspectors discussed the controls in place for special areas that have the potential to become very-high radiation areas during certain plant operations with first-line health physics supervisors (or equivalent positions having backshift health physics oversight authority). The inspectors assessed whether these plant operations require communication beforehand with the health physics group, so as to allow corresponding timely actions to properly post, control, and monitor the radiation hazards including re-access authorization.

The inspectors evaluated licensee controls for very-high radiation areas and areas with the potential to become a very-high radiation area to ensure that an individual was not able to gain unauthorized access to the very-high radiation areas.

b. Findings

No findings were identified.

.7 Radiation Worker Performance (02.07)

a. Inspection Scope

The inspectors observed radiation worker performance with respect to stated RP work requirements. The inspectors assessed whether workers were aware of the radiological conditions in their workplace and the RWP controls/limits were in place, and whether their performance reflected the level of radiological hazards present.

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be human performance errors. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems. The inspectors discussed with the RP manager any problems with the corrective actions planned or taken.

b. Findings

No findings were identified.

.8 Radiation Protection Technician Proficiency (02.08)

a. Inspection Scope

The inspectors observed the performance of the RP technicians with respect to all RP work requirements. The inspectors evaluated whether technicians were aware of the radiological conditions in their workplace and the RWP controls/limits, and whether their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspectors reviewed radiological problem reports since the last inspection that found the cause of the event to be RP technician error. The inspectors evaluated whether there was an observable pattern traceable to a similar cause. The inspectors assessed whether this perspective matched the corrective action approach taken by the licensee to resolve the reported problems.

b. Findings

No findings were identified.

.9 Problem Identification and Resolution (02.09)

a. Inspection Scope

The inspectors evaluated whether problems associated with radiation monitoring and exposure control were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee that involve radiation monitoring and exposure controls. The inspectors assessed the licensee's process for applying operating experience to their plant.

This inspection constituted one complete sample as defined in IP 71124.01-05.

b. Findings

No findings were identified.

4. **OTHER ACTIVITIES**

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

40A1 Performance Indicator Verification (71151)

.1 Mitigating Systems Performance Index—Residual Heat Removal System

a. Inspection Scope

The inspectors sampled licensee submittals for the Mitigating Systems Performance Index (MSPI)—RHR System performance indicator (PI) for Point Beach Nuclear Plant, Units 1 and 2, for the period from the third quarter 2014 through the second quarter 2015. 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 7, dated August 31, 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, MSPI derivation reports, event reports, and NRC Integrated Inspection 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 issue report 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 residual heat removal system samples as defined in IP 71151-05.



b. Findings

No findings were identified.

.2 Mitigating Systems Performance Index—Cooling Water Systems

a. Inspection Scope

The inspectors sampled licensee submittals for the MSPI—Cooling Water Systems PI for Point Beach Nuclear Plant, Units 1 and 2, for the period from the third quarter 2014 through the second quarter 2015. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 7, dated August 31, 2013, were used. The inspectors reviewed the licensee’s operator narrative logs, issue reports, MSPI derivation reports, event reports, and NRC Integrated Inspection 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 issue report 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 samples as defined in IP 71151–05.

b. Findings

No findings were identified.

.3 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures PI for Point Beach Nuclear Plant, Units 1 and 2, for the period from the fourth quarter 2014 through the third quarter 2015. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 7, dated August 31, 2013, 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, issue reports, event reports, and NRC Integrated Inspection Reports 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 and none were identified. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two safety system functional failures samples as defined in IP 71151–05.

b. Findings

No findings were identified.

.4 Reactor Coolant System Specific Activity

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS specific activity PI for Point Beach Nuclear Plant, Units 1 and 2, for the period from the third quarter 2014 through the second quarter 2015. The inspectors used PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 2013, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's RCS chemistry samples, TS requirements, issue reports, event reports, and NRC Integrated Inspection Reports 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. In addition to record reviews, the inspectors observed a chemistry technician obtain and analyze a RCS sample. Documents reviewed are listed in the Attachment to this report.

This inspection constituted two RCS specific activity samples as defined in IP 71151-05.

b. Findings

No findings were identified.

.5 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors sampled licensee submittals for the Occupational Exposure Control Effectiveness PI for the period from the third quarter 2014 through the second quarter 2015. The inspectors used PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 2013, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's assessment of the PI for occupational radiation safety to determine if indicator related data was adequately assessed and reported. To assess the adequacy of the licensee's PI data collection and analyses, the inspectors discussed with RP staff, the scope and breadth of its data review and the results of those reviews. The inspectors independently reviewed electronic personal dosimetry dose rate and accumulated dose alarms and dose reports and the dose assignments for any intakes that occurred during the time period reviewed to determine if there were potentially unrecognized occurrences. The inspectors also conducted walkdowns of numerous locked high and very-high radiation area entrances to determine the adequacy of the controls in place for these areas. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one occupational exposure control effectiveness sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.6 Radiological Effluent Technical Specification/Offsite Dose Calculation Manual  
Radiological Effluent Occurrences

a. Inspection Scope

The inspectors sampled licensee submittals for the Radiological Effluent Technical Specification (RETS)/Offsite Dose Calculation Manual (ODCM) radiological effluent occurrences PI for the period from the third quarter 2014 through the second quarter 2015. The inspectors used PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 7, dated August 2013, to determine the accuracy of the PI data reported during those periods. The inspectors reviewed the licensee's issue report database and selected individual reports generated since this indicator was last reviewed to identify any potential occurrences such as unmonitored, uncontrolled, or improperly calculated effluent releases that may have impacted offsite dose. The inspectors reviewed gaseous effluent summary data and the results of associated offsite dose calculations for selected dates to determine if indicator results were accurately reported. The inspectors also reviewed the licensee's methods for quantifying gaseous and liquid effluents and determining effluent dose. Documents reviewed are listed in the Attachment to this report.

This inspection constituted one RETS/OCMD radiological effluent occurrences sample as defined in IP 71151-05.

b. Findings

No findings were identified.

4OA2 Identification and Resolution of Problems (71152)

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

a. Inspection Scope

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

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

The licensee identified a finding and an associated NCV which is documented in Section 4OA7 of this report.

.2 Daily Corrective Action Program Reviews

a. Inspection Scope

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

These 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 were identified.

.3 Annual Follow-up of Selected Issues: Containment Electrical Penetration 2Q-3 Does Not Hold Nitrogen Pressure

a. Inspection Scope

During a review of items entered in the licensee's CAP, the inspectors recognized a corrective action item documenting a depressurized containment electrical penetration for the Unit 2 containment. Specifically, the licensee responded to observations made by inspectors noting that the containment electrical penetration, 2Q-03, nitrogen pressure gauge indicated that the penetration was completely depressurized only two days after maintenance was performed to check and re-pressurize this assembly.

The inspectors performed a detailed review of the licensee's corrective actions for 2Q-03 and other similar containment electrical penetrations, as well as a review of the licensee's containment leak rate testing program. Specifically, the inspectors verified the following attributes during their review of the licensee's corrective actions for the containment penetration:

- Complete, accurate and timely documentation of the identified problem in the CAP;
- consideration of the extent of condition, generic implications, common cause, and previous occurrences;
- classification and prioritization of the resolution of the problem, commensurate with safety significance;
- action taken in the correction of the identified problem;

- identification of negative or worsening short-term trends associated with equipment performance either directly or indirectly caused by actively leaking component; and
- operating experience was adequately evaluated for applicability, and lessons learned were and are intended to be communicated to the appropriate organizations for implementation.

Observations: The inspectors conducted a historical review of the condition and included penetrations of both Unit 1 and 2 containments to evaluate the licensee's corrective actions respective to the attributes listed above. Inspectors determined that the condition had existed for this single penetration since the late-1990s. Several ARs were written for this condition since it was first identified, and inspectors determined that the licensee has had several opportunities to replace the assembly during previous Unit 2 RFOs but has opted to scope the work out of each outage in favor of other priorities during latter stages of outage planning. The inspectors also determined that the licensee included this penetration in their 10 CFR Part 50, Appendix J containment leak testing program and was performing leak-rate testing on this assembly at regular intervals. This penetration had at one time been evaluated as operable but non-conforming and was being monitored as a maintenance rule a(1) status component, but was deemed fully operable and was removed from maintenance rule a(1) by this inclusion in the containment leak rate testing program. The inspectors concluded that ultimately this penetration and the overall containment leakage is being monitored and trended in accordance with the requirements of NEI 94-01; "Industry Guidance for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J; July 26, 1995," which has been endorsed by the NRC.

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

b. Findings

No findings were identified.

.4 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a review of the licensee's CAP and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors' review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screening discussed in Section 4OA2.2 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the 6-month period of July 1, 2015 through December 31, 2015, although some examples expanded beyond those dates where the scope of the trend warranted.

The review also included issues documented outside the normal CAP in major equipment problem lists, repetitive and/or rework maintenance lists, departmental problem/challenges lists, system health reports, quality assurance audit/surveillance reports, self-assessment reports, and Maintenance Rule assessments. The inspectors compared and contrasted their results with the results contained in the licensee's

CAP trending reports. Corrective actions associated with a sample of the issues identified in the licensee's trending reports were reviewed for adequacy.

This review constituted one semi-annual trend inspection sample as defined in IP 71152-05.

Observations: During the course of the review period for this inspection sample, the inspectors noted several examples where the licensee's handling and control of lubricating oil had led to the wrong oil being added to components. Although these errors did not result in any immediate adverse consequences, a potential trend in this area is apparent and suggests that additional licensee attention to effect corrective actions may be appropriate. Specific examples associated with this trend included, but were not limited to:

- July 16, 2015: the licensee identified two barrels of waste oil in the TB that were not labeled and were not being controlled in accordance with the licensee's chemical control program requirements.
- August 11, 2015: abnormal color was noted from oil changed from the Unit 2 CCW pump outboard bearing. A detailed analysis of the oil and operability determination was made, which concluded that the wrong oil had been added to the bearing oiler during maintenance as a result of a human performance error. The wrong oil was identified by analysis and was determined to be the same base oil, but with additives which served to provide additional protection from corrosion and wear. The licensee determined that no detrimental effect resulted from this condition.
- September 16, 2015: the licensee determined that the wrong oil was added to the Unit 1 'B' SG feed pump (non-safety related). Analysis of the oil indicated elevated levels of phosphorous and calcium, and a higher viscosity. Based on the properties of the oil contamination, the licensee determined that feed and bleed of the oil was required to prevent damage to the pump bearings. The licensee later determined that cross-contamination had likely occurred via a rig used for filling EH system fluid.
- September 17, 2015: the licensee discovered the door for the lube oil storage room unlocked. The unlocked door was meant to be used to control access to quality-controlled lubricants. Upon inspection of the room, the licensee discovered several deficiencies, including industrial safety problems and containers which appeared to have been used to store and transfer several different oil types.
- October 6, 2015: the licensee identified that the barrels identified in July's AR were now labeled; however, they lacked the detail required by the chemical control program procedures.
- October 16, 2015: the licensee identified improperly labeled oil in a storage cabinet.
- October 27, 2015: licensee maintenance personnel removed a barrel of oil from the lube oil storage room labeled as "new." This oil was intended to be added to both of the Unit 2 SG feed pumps; however, maintenance personnel noted that the oil looked "dark and dirty." Engineering personnel were contacted and determined that the barrel actually contained waste oil and was not properly labelled.
- December 4, 2015: the licensee received the results of oil sample analysis from the Unit 2 TDAFWP which had elevated levels of phosphorous, which was

abnormal for this pump. The licensee determined that the cause was likely due to contamination during oil change maintenance. The licensee concluded that the AFW pump remained operable based on factors of contamination levels, viscosity, and the required mission time for the safety-related pump.

Each of the observations above represented failures of the licensee's implementation of their programs for the storage, use, and handling of chemical as well as control of quality materials and were entered into their CAP. Many of the oils stored in the lube oil storage room may be interchangeably used for safety and non-safety applications. At the time, no adverse impacts have resulted from the licensee's demonstrated weaknesses in this area for safety-related equipment that could be determined as more-than-minor.

b. Findings

No findings were identified.

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

.1 Unit 1 Main Generator Lock-out and Automatic Reactor Trip

a. Inspection Scope

On November 28, 2015, at 7:12 p.m., operators received several alarms associated with the Unit 1 main generator voltage regulator followed by a Generator Lockout alarm and a subsequent automatic reactor trip from full power. All equipment functioned as designed, including the AFW system that automatically started on low SG water level. The licensee's investigation revealed that a transducer failed within the main generator voltage regulator circuitry. The licensee repaired the voltage regulator, and commenced a reactor startup on November 30, 2015. Prior to reaching criticality, the licensee re-inserted all control rods due to operators observing a lack of proper response from the N-31 source range nuclear instrument. The licensee then entered a forced outage to replace the N-31 source range nuclear instrument detector as documented in Section 1R20.2 of this report.

The inspectors responded to the site immediately following the reactor trip and verified that the trip was uncomplicated by any significant equipment or human performance issues. Several minor equipment issues were reviewed by the inspectors to verify that plant operators were appropriately compensating for the issues in accordance with plant procedures.

This event was reported by the licensee (event number 51570) in accordance with 10 CFR 50.72(b)(2)(iv)(B) and 10 CFR 50.72(b)(3)(iv)(A), for the automatic actuation of a reactor trip and the automatic system actuation of the AFW system.

A reactor startup was commenced on December 2, 2015, and the main generator was synchronized to the grid later that day. Documents reviewed are listed in the Attachment to this report.

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

b. Findings

No findings were identified.

40A5 Other Activities

.1 Institute of Nuclear Power Operations (INPO) Plant Assessment Report Review

a. Inspection Scope

The inspectors reviewed the final report for the INPO plant evaluation conducted in August 2015. The inspectors reviewed the report to ensure that issues identified were consistent with the NRC perspectives of licensee performance and to verify if any significant safety issues were identified that required further NRC follow-up.

b. Findings

No findings were identified.

40A6 Management Meetings

.1 Exit Meeting Summary

On January 5, 2016, the inspectors presented the inspection results to Mr. D. DeBoer, Plant General Manager, and other members of the licensee staff. The licensee acknowledged the issues presented.

.2 Interim Exit Meetings

Interim exits were conducted for:

- The inspection results for the areas of radiological hazard assessment and exposure controls; and RCS specific activity, occupational exposure control effectiveness, and RETS/ODCM radiological effluent occurrences performance indicator verification were discussed with Mr. E. McCartney, Site Vice President, on October 16, 2015.
- The inspection results for ISI were discussed with Mr. E. McCartney, Site Vice President, on October 21, 2015.
- The annual review of EAL and Emergency Plan changes were discussed with Mr. R. Seizert, Emergency Preparedness Manager, on November 13, 2015.

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

40A7 Licensee-Identified Violations

The following violation of very low significance (Green) was identified by the licensee and is a violation of NRC requirements; it meets the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.



- The licensee identified a finding of very low safety significance (Green) and an NCV of TS 5.4.1, "Procedures" for the failure to maintain the emergency operating procedures (EOPs).

The licensee's TS 5.4.1 required, in part, that written procedures shall be maintained including the EOPs required to implement the requirements of NUREG-0737 and to NUREG-0737, Supplement 1, as stated in Generic Letter 82-33. During design reviews, the licensee discovered that following a 2012 calculation update, the licensee inconsistently applied pre and post-modification uncertainties that had resulted from a 2010 modification associated with the sensitivity and calibration of both units Subcooling Margin Monitors. Ultimately the calculative errors resulted in 19 EOP Subcooling setpoints being incorrectly calculated. These Subcooling setpoints are used throughout the licensee's EOPs network to provide operators with discrete indications for key EOP decision making.

Contrary to the above, from April 12, 2012 through November 5, 2015, the licensees' EOP network of procedures for both Unit 1 and 2, contained the incorrect setpoints for decision points with respect to subcooling. The licensee entered this issue into the CAP as AR 02089011 and AR 02099152.

The inspectors consulted the Region III Senior Reactor Analysts and determined that this issue was of very low safety significance (Green) after reviewing IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated July 1, 2012 and IMC 0609, Appendix A, "The Significance Determination Process (SDP) For Findings At-Power," dated July 1, 2012. The inspectors determined that the issue was a design or qualification deficiency confirmed not to result in a loss of operability; therefore, answered yes to question A.1 in Exhibit 2, Section A, Mitigating SSCs and Functionality. This resulted in the finding screening as Green.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

E. McCartney, Site Vice President  
D. DeBoer, Plant General Manager  
S. Aerts, Performance Improvement Manager  
S. Forsha, Principal Engineer  
D. Forter, Project Site Manager  
B. Gerbers, Engineering Supervisor  
R. Harrsch, Engineering Site Director  
L. Hawki, Engineering Site Manager-ERRT  
W. Jensen, Principal Engineering Analyst  
B. Kopetsky, Security Site Manager  
T. Lesniak, Mechanical Department Head  
S. Manthei, Senior Engineer  
S. Merriner, Maintenance Section Supervisor  
M. Millen, Senior Project Manager  
C. Neuser, Engineering Site Manager-Systems  
R. Parker, Chemistry Manager  
E. Schmidt, Engineering Site Manager-Programs  
T. Schneider, Senior Engineer  
E. Schultz, Operations Assistant Manager-Line  
R. Seizert, Emergency Preparedness Manager  
G. Strharsky, Site Quality Manager  
R. Webber, Operations Site Director  
R. Welty, Radiation Protection Manager  
P. Wild, Design Engineering Manager  
B. Woyak, Licensing Manager

#### Nuclear Regulatory Commission

J. Cameron, Chief, Reactor Projects Branch 4

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

05000266/2015004-01 05000301/2015004-01	NCV	Failure to Follow Fire Protection Program Requirements for Care, Use and Maintenance of Fire Hose (Section 1R05.1)
05000301/2015004-02	NCV	Inadequate Evaluation of Non-Conforming Auxiliary Feedwater System Pipe Defects (Section 1R08.1)

### Closed

05000266/2015004-01 05000301/2015004-01	NCV	Failure to Follow Fire Protection Program Requirements for Care, Use and Maintenance of Fire Hose (Section 1R05.1)
05000301/2015004-02	NCV	Inadequate Evaluation of Non-Conforming Auxiliary Feedwater System Pipe Defects (Section 1R08.1)

## 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 inspector 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.

### 1R01 Adverse Weather Protection (71111.01)

- 1-SOP-CS-001; Main Feedwater Isolation Valve (MFIV) Support Systems Operation Unit 1; Revision 4
- 2-SOP-CS-001; Main Feedwater Isolation Valve (MFIV) Support Systems Operation Unit 2; Revision 4
- AOP-13C; Severe Weather Conditions; Revision 41
- AR 02091005; Freeze Concerns Associated with the Fire Protection System
- Memo NPM 2015-0201; Seasonal Readiness – Cold Weather 2015; September 24, 2015
- OP-AA-102-1002; Seasonal Readiness; Revision 9
- PC 49 Part 1; Turbine Hall Ventilation Unit 1; Revision 10
- PC 49 Part 4; Auxiliary Building Miscellaneous and Facades; Revision 31
- PC 49 Part 5; Cold Weather Checklist: Outside Areas and Miscellaneous; Revision 32
- PC 49; Cold Weather Preparations; Revision 11
- WO 40350267-01; PC-49.4, Cold Weather Preparation for PAB & Facades
- WO 40350267-02; PC 49.4, RWST and RMUW Tank Heater AMP Check
- WO 40350267-03; PC-49.4, IC Support for MFIV Dewpoint Check During N2 Purge
- WO 40350267-04; PC-49.4, N2 Purge of MFIVS for Cold Weather Prep
- WO 40350268-01; PC-49.5, Cold Weather Preparation of Outside Areas
- WO 40350280-01; PC-49.1, Cold Weather Ventilation Sys Checks – U1 TH
- WO 40350295-01; PC-49.2, Cold Weather Ventilation Sys Checks – U2 TH

### 1R04 Equipment Alignment (71111.04)

- AR 02077641; NRC Identifies Bent Rod on SI Pipe Hanger
- AR 02077863; Small Wire Found on ISI-897A
- CL 7A; Safety Injection System Checklist Unit 2; Revision 32
- CL 7B; Safety Injection System Checklist Unit 1; Revision 34
- CL 11A G-02; G-02 Diesel Generator Checklist; Revision 29
- CL 11A G-04; G-04 Diesel Generator Checklist; Revision 10
- CL 13E Part 2; Auxiliary Feedwater Valve Lineup Motor Driven; Revision 52
- Drawing 110E017; Sheet 1; Safety Injection System P&ID
- Drawing 110E017; Sheet 2; Safety Injection System P&ID
- Drawing 110E017; Sheet 3; Safety Injection System P&ID
- Drawing M-217; Sheet 1; Auxiliary Feedwater System; Revision 103
- Drawing M-217; Sheet 2; Auxiliary Feedwater System; Revision 33
- IT 40 Train A; Safety Injection Valves Train A Unit 1; Revision 2
- TS 40 Train A; 2MS-2018; Main Steam Isolation Valve Operability Trip Test Unit 2; Revision 1
- WO 40305431-01; TS 40 A Train

### 1R05 Fire Protection (71111.05)

- 0-PT-FP-008; Triennial Service Testing of Fire Hose and Fire Hose Stations; Revision 9
- AR 02086752; Rewind Fire Hose Reel HR-54

- AR 02088718; Multiple Missing Fire Extinguishers
- AR 02089744; Rotate Standard Fire Hoses into Containment
- AR 02097454; Four Hose Reels in TH Were Wound Tightly, Slightly Restricted
- AR 02097458; PC 73 Part 2 – Monthly Surveillance of Fire Hose Stations
- AR 02097500; Fire Hose Reel Winding Practices
- C1157; Letter from C. Fey to H. Denton Regarding Appendix R Hydrostatic Hose Tests; July 24, 1981
- Calculation 32-5052938; Debris Evaluation for Point Beach Nuclear Plant Unit 2; Revision 5
- CE 02080744; Condition Evaluation to Evaluate the Procurement of Inadequate Fire Hose; November 11, 2015
- DBD-T-40; Fire Protection/Appendix R Design Basis Document; Revision 11
- FEP 4.7; Containment Unit 2; Revision 9
- FEP 4.12; Auxiliary Feedwater Pump and Vital Switchgear Area; Revision 10
- Firequip TM Specification Sheet for Firequip Fire Engine Booster Hose; September 2015
- FPER; Fire Protection Evaluation Report; Revision 16
- FPTE 013; Technical Evaluation of PBNP Fire Hose Details; Revision 0
- FPTE 013; Technical Evaluation of PBNP Fire Hose Details; Revision 1
- NP 1.9.9; Transient Combustible Control; Revision 26
- NPC-27492; Letter from C. Fey to E. Case Regarding Point Beach Fire Protection Provisions; June 20, 1977
- NPC-35989; Fire Protection Safety Evaluation Report; August 2, 1979
- NUREG 0800; Standard Review Plan Section 9.5.1 – Fire Protection Program; Revision 3
- PBC-218; Sheet 2; Fire Protection for Turbine Building, Aux Building, & Containment Elev.8'-0"; Revision 31
- PBC-218; Sheet 3; Fire Protection for Turbin Building, Aux Building, & Containment Elev.26'-0"; Revision 16
- PBC-218; Sheet 5; Fire Protection for Turbine Building, Aux Building & Containment Elev.66'-0"; Revision 07
- PC 73 Part 2; Monthly Surveillance of Fire Hose Stations, Revision 23
- PC 73 Part 3; Service Testing of Fire Hose and Fire Hose Stations; Revision 20
- PC 74; Conducting and Evaluating Fire Drills
- RF 75; Fire Hose and Fire Station Service Test Unit 2; Revision 8
- TS 79; Monthly Surveillance of Fire Hose Stations, Revision 11
- WO 00386117; FP / Replace Sprinkler Heads and Inspector Sprinkler Piping; March 29, 2010

#### 1R06 Flooding (71111.06)

- AR 01782307; Z-065A Unistrut Collapse During Performance of WO 40171797
- AR 02013391; Inspect NMH-1 and NMH-2 for Blockage
- DG-E02; Seismic Conduit Support; Revision 5
- DG-E13; Insulated Electrical Cable Installation; Revision 1
- Drawing E-1; Concealed Electrical Work Pump House – Plan – Unit 1 Point Beach Nuclear Plant; Revision 10
- Drawing E-3; Circ Water Pumphouse Concealed Electrical Details; Revision 7
- Drawing E-100; Sheet 1; Electrical Plot Plan Details; Revision 39
- FPEE 1999-006; Service Water Duct Banks & Manholes; January 9, 2006
- LR-AMP-014-CCMON; Cable Conditioning Monitoring Program Basis Document for License Renewal; Revision 9
- NP 7.7.4; Scope and Risk Significant Determination for the Maintenance Rule; Revision 23
- NP 7.7.28; Cable Condition Monitoring Program; Revision 5

- POD 01641275 & POD 01641291; Manhole #1 and Manhole #2 Degraded Cable Supports; April 26, 2011
- Specification No. PB-546; Point Beach Nuclear Plant Specification for Electrical Installation; November 23, 1994
- STD-EF-103; Sargent & Lundy Standard; Concrete Duct Runs, Manholes, and Handholes; February 28, 1966
- STD-EF-105; Sargent & Lundy Standard; Concrete Duct Run Construction; October 16, 1967
- WO 40361253; Pump Electrical Manhole Sumps; October 1, 2015
- WO 40361253-01; Pump Electrical Manhole Sumps-6 Month PM; October 1, 2015
- WR 94109974; STP/Inspect NMH-1 and NMH-2 for Blockage; December 16, 2014

1R08 Inservice Inspection Activities (71111.08)

- AR 01384224; Linear Indication on Aux Feed
- AR 01945128; Valve Stem Defective
- AR 01948376; Boric Acid Leak 2S-V-29 Vent Cap
- AR 01948460; Boric Acid Leak 2SI-V-12
- AR 01949101; Boric Acid Leak 2RC-00506C
- AR 01950806; Indication Found in Existing AFW Piping
- AR 01953205; SG A FOSAR Results
- AR 01953734; SG B FOSAR Results
- AR 01953805; Incorrect Calibration Block for Examination
- AR 01995919; U1R35 SG Degradation Assessment
- AR 01996685; Inadequate Weld Fit-Up
- AR 02013390; Incorrect WPS
- AR 02058273; ASME Pressure Test Issue
- AR 02073664; AFW Cross-Tie Pipe Evaluation
- AR 02073667; ISI Commitment for Discharge Cross-Tie Pipe
- AR 02077994; Non-Conservative Technical Specification
- AR 02082445; Revise WPS to Include Plant Name
- AR 02082787; NRC ISI Inspection Weakness in Disposition of Indication
- AR 02083211; NRC ISI Inspection Weakness in Disposition of Indication
- AR 02083456; ISI Program Document Update IWA-2430
- AR 02084077; NRC U2 ISI Green NCV
- Boric Acid Evaluation Screening 14-091; 2RC-506C; March 17, 2014
- Boric Acid Evaluation Screening 14-152; 2RH-716C; March 21, 2014
- Boric Acid Evaluation Screening 14-155; 2RH-706A; March 27, 2014
- Boric Acid Examination Guidelines; Revision 5
- Boric Acid Indication Evaluation; Revision 13
- Boric Acid Leakage and Corrosion Monitoring (BALCM) Program; Revision 7
- DG-M03; Bechtel Piping Class Summary; Revision 34
- FP-PE-WLD-01; Welding Manual- Program Control; Revision 7
- Letter Nuclear Management Company; Owner as Defined by ASME; April 11, 2002
- Letter WEP-04-02; Evaluation of Foreign Objects in Unit 2A (Model D47F) RSG During Fall 2003 Outage; January 9, 2004
- NDE-750; Visual Examination (VT-1) of Nuclear Power Plant Components; Revision 26
- PBNP Visible Liquid Penetrant Examination Record; Piping DB-03; October 8, 2014
- PQR GMP 102-311-GS; PQR for WPS FP-PE-B31-P1P1-GTSM-001; Revision 0
- PQR SM-1-1; PQR for WPS FP-PE-B31-P1P1-GTSM-001; Revision 0
- PQR WP-6; PQR for WPS FP-PE-B31-P1P1-GTSM-001; Revision 0

- Procedure NDE-169; PDI Generic Procedure for the Strait-Beam Ultrasonic Examination of Bolts and Studs; Revision 18
- Radiographic Examination Record; P103 3" Butt weld 38; October 14, 2014
- Radiographic Examination Record; P103 3" Butt weld 39; October 14, 2014
- Radiographic Examination Record; P103 4" Butt weld 35; October 14, 2014
- Radiographic Examination Record; P103 4" Butt weld 35R1; October 15, 2014
- Report No. 2015U2UT-028; UT Bolting/Stud Examination; RPV Closure Head Studs; October 14, 2015
- Report No. 2015U2VT-054; Visual Examination of Pressure Retaining Bolting (VT-1); RPV Closure Head Nuts; October 14, 2015
- Report No. 2015U2VT-055; Visual Examination of Pressure Retaining Bolting (VT-1); RPV Closure Head Washers; October 14, 2015
- Report No. 40419737-01; PBNP Magnetic Particle Examination Record; Pipe P-103; October 20, 2015
- Report No. 451236 - PBNP Visible Liquid Penetrant Examination Record; Piping P103/2a; March 30, 2014
- Report No. 451240 - PBNP Visible Liquid Penetrant Examination Record; Piping P103/2a; March 22, 2014
- Report No. PT-271 - Nondestructive Examination Report Liquid Penetrant Examination; Pipe F4; March 8, 2010
- WDI-STD-088; Underwater Remote Visual Examination of Reactor Vessel Internals; Revision 12
- Weld Data Sheet; Weld P-103SH2CR-35; October 16, 2014
- Weld Data Sheet; Weld P-103SH2CR-35R1; October 16, 2014
- Weld Data Sheet; Weld P-103SH2CR-38; October 16, 2014
- Weld Data Sheet; Weld P-103SH2CR-39; October 16, 2014
- WPS FP-PE-B31-P1P1-GTSM-001; Manual Gas Tungsten Arc Welding; P-1 to P-1; Revision 3

#### 1R11 Licensed Operator Regualification Program (71111.11)

- AD-AA-100-1006; Procedure and Work Instruction Use and Adherence; Revision 6
- LOC Cycle 15F Schedule; Revision 0
- OP 1B; Reactor Startup; Revision 70
- OP-AA-100-1000; Conduct of Operations; Revision 16
- OP-AA-103-1000; Reactivity Management; Revision 4
- PBN LOC 15F 002S; Simulator Exercise Guide for Crew B Cycle 15F; Revision 0
- RESP 4.1; BOL Physics Tests; Revision 27

#### 1R12 Maintenance Effectiveness (71111.12)

- ACE 02077732; Adverse Trend – Oil Use and Control; November 11, 2015
- AR 01918006; 1P-11A CCW Pump Inboard Oil Leak
- AR 01945192; SA-3063S K-3B Unload/Load Solenoid Malfunctioning
- AR 01976826; Z-015 Aux Building Crane (PAB) Stopped Working
- AR 01991654; K-3B SA Comp Observed No Interstage Pressure When Loaded
- AR 01998617; U1 Manipulator LS-16 Broken, Fuel Motion Halted
- AR 02003336; Spring Can AC-152N-4-AC-9 Hot Load Setting Less Than Design
- AR 02023171; Maintenance Rule Annual Reviews Not Complete
- AR 02035012; 2015 CDBI: Hydraulic Pump Used in EOPs and MRule Scope
- AR 02060667; Unlabeled Barrels in Lube Oil Storage Tank Area

- AR 02062237; Dispensing Of Oil From Drum In Lo Storage Tank Room
- AR 02063860; P-32B Failed to Start on the First Attempt
- AR 02066156; 2P-011A CCW Pump OB Oil Sample Abnormal
- AR 02067553; Analysis Results For 2P-011A Oil Documented AR2066156
- AR 02074543; Wrong Oil Added to 1P-028B
- AR 02074611; Lube Oil Storage Room Door Found Unlocked
- AR 02076885; K-3B Out-Of-Service (Not Loading Properly)
- AR 02077138; Unmarked Oil Dispenser Found In QA Lo Storage Room
- AR 02077732; Review For Adverse Trend – Oil Use & Control
- AR 02079438; Used Oil Drums Improperly Labeled
- AR 02080753; U2R34 – Used Oil Handling Issues
- AR 02082769; Chemicals Not Stored Correctly
- AR 02083505; PBNP Service Air System Meets Criteria for (A)(1)
- AR 02084685; Lack Of An Assigned MTN Rule Coordinator May Be Missing MRFF
- AR 02086917; Waste Oil Almost Added to 2P-28A
- AR 02087174; Drum of Transformer Oil Left At 2X-02
- AR 02087350; CR Closed Without Creating MRFFs
- AR 02087362; MRFF Assignments Inappropriately Assigned
- AR 02088801; MRFF Missed for Appendix R Emergency Light (EL-073)
- AR 02091134; Maint Rule Regulatory Near Miss
- AR 02091284; Mechanical Binding of SA Unloader Solenoid
- AR 02092018; MRFF Needed For Previous 2Z-16 Air Reel Failure
- AR 02092025; Weakness In Ownership Of SBO Program
- AR 02096063; MRFF Eval Updates Needed
- AT-01.10 Search ARs for Equipment Record Report for Component Cooling;  
December 21, 2015
- CE 02067553; Analysis Results For 2P-011A Oil Documented AR2066156
- CE 02074543; Wrong Oil Added to 1P-028B
- CE 02086917; Waste Oil Almost Added to 2P-28A; November 6, 2015
- Change Request Form for AR 01868350; 1P-28A SG Feed Pump Low Oil; March 3, 2015
- Condition Report 93-221; Unit 1 P-015A Motor Bearing Failure and Incorrect Oil In Pump and  
Motor Reservoirs and Mispositioned Oil Slinger Ringer; May 6, 1993
- Condition Report Search for Bearing Temperature from December 21, 2014 –  
December 21, 2015
- Condition Report Search for IA – Instrument Air and SA – Service Water from  
November 16, 2014 – November 16, 2015
- Condition Report Search for K-3B from November 24, 2013 – November 24, 2015
- Condition Report Search for Maintenance Rule from June 22, 2015 – December 22, 2015
- Condition Report Search for Moisture for December 4, 2015
- Condition Report Search for SA – Service Air from December 7, 2013 – December 7, 2015
- Condition Report Search for SA – SERVICE AIR, SA – Service Air from November 24, 2013 –  
November 24, 2015
- Condition Report Search from November 13, 2015 – November 16, 2015
- Condition Report Search from December 21, 2013 – December 21, 2015
- Control Room Log Entries for SA from July 1, 2015 – July 14, 2015
- DBD-06; Instrument & Service Air System (I&SA); Revision 6
- Documentation of Maintenance Rule Performance Criteria for Component Cooling;  
October 2, 2013
- Documentation of Maintenance Rule Performance Criteria for Condensate and Feedwater  
System; June 6, 2012
- Documentation of Maintenance Rule Performance Criteria for SA; November 14, 2005



- Drawing M-209; Sheet 1; Service Air; Revision 39
- Equipment Apparent Cause Evaluation Report for AR 02076885; K-3B Out-Of-Service (Not Loading Properly); November 18, 2015
- FSAR Section 9.7; Instrument Air (IA) / Service Air (SA); UFSAR 2013
- Function Lists for All Maintenance Rule Systems for SA – Service Air
- LM 1.1; PBNP Lubricant Handling Guidelines; Revision 4
- LM 2.1; PBNP Equipment Lube List; Revision 60
- MA-AA-100-1011-F01; Initial Troubleshooting Investigation for WO 40403928; Tasks 1, 2, and 3 Performed a Breaker Swap and Returned P-32B to Service
- MA-AA-100-1011-F02; Troubleshooting Control Form for AR 02063860; P-32B Failed to Start on the First Attempt; September 21, 2015
- Maintenance Rule (a)(1) Status PBNP; Updated June 8, 2015
- Maintenance Rule Functional Failure Evaluation for K-003B; AR 02091060 and AR 02091284; December 3, 2015
- Maintenance Rule Functional Failure Evaluation for K-3B; AR 01983446; September 10, 2014
- Maintenance Rule Functional Failure Evaluation for P-032B; AR 02063860; August 25, 2015
- Maintenance Rule(a)(1) Action Plan for Unit 1 & 2 Condensate & Feedwater; April 1, 2015
- NP 1.9.1; Hazardous and Special Material Control Program; Revision 15
- NP 3.1.6; PBNP Chemical Control Program; Revision 16
- Performance Criteria Assessments for CC Since 10/1/2013; December 4, 2015
- Performance Criteria Assessments for SA Since October 1, 2013
- Performance Criteria Assessments for SA Since October 30, 2015
- POR 02063860; P-32B Failed to Start on the First Attempt; August 31, 2015
- SCR 2010-0159-01; EC 13506 – Self-Cooled Service Air Compressor; October 13, 2010
- Station Log from December 20, 2015 – December 21, 2015
- Unit 1 System Health Report for Component Cooling; December 3, 2015
- Unit 1 System Health Report for IA – Plant Air Systems; December 3, 2015
- Unit 2 System Health Report for Component Cooling; December 3, 2015
- WO 40415327-01; SA-00051, K-3B Not Loading Properly
- WO 40417196-01; K-3B SA Compressor Failure to Load
- WO 40422061-01; K-003B SA Compressor Not Loading

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

- AR 02073919; On-line Safety Assessment of Scheduled Work
- AR 02092441; Scheduled Performed As Written Would Result in Yellow Risk
- AR 02097748; Issues With 24 Hour Risk Look Ahead on 12/15/15
- AR 02098710; Safety Monitor Performance Question
- CL 1E; Containment Closure Checklist Unit 2, Revision 21
- Clearance Coversheet for Clearance 2 CC P-11B-M EM Component Cooling Water Pump Motor
- Condition Report Search for Safety Monitor from June 30, 2015 – December 30, 2015
- Control Room Log Entries from March 23, 2015 – March 24, 2015
- Control Room Log Entries for October 8, 2015
- Control Room Log Entries for October 9, 2015
- Control Room Log Entries for October 16, 2015
- Control Room Log Entries from December 15, 2015 – December 18, 2015
- Control Room Log Entries from December 17, 2015 – December 18, 2015
- NP 10.3.7; On-Line Safety Assessment; Revision 35
- Safety Monitor Change Notice 0071; December 16, 2015
- Station Log Entries from December 16, 2015 – December 18, 2015

- Unit 1 Safety Monitor for December 16, 2015
- Unit 1 Safety Monitor for December 18, 2015
- Unit 2 Safety Monitor for October 8, 2015
- Unit 2 Safety Monitor for October 9, 2015
- Unit 2 Safety Monitor for October 16, 2015
- Unit 2 Safety Monitor for December 16, 2015
- Unit 2 Safety Monitor for December 18, 2015

#### 1R15 Operability Determinations and Functional Assessments (71111.15)

- 10 CFR 50.59 Screening for Ops Work Plan 2014-049; SCR 2014-0199, Operations Work Plan 2014-049 – Isolate SW-LW-61/62; October 30, 2014
- 10 CFR Applicability Determination for AR 02030656; Clearance Order 0 SW-LW-61/62 Flooding Concern 01H Applicability; April 10, 2015
- AOP-13C; Severe Weather Conditions; Revision 40
- AR 01948109; Internal Flooding Hazards in PAB not Fully Evaluated
- AR 01982413; Need Flood Protection At U2 Façade Doors 231 and 232
- AR 01987856; Current Configuration Not Previously Evaluated for Flooding
- AR 01992690; 8" SW Supply, Return Pipe For BDE In PAB May Not Be Seismic
- AR 02001639; License Basis Requirements For TB Rood Drains Questioned
- AR 02002165; Flooding Conveyance Path to Facades Not Analyzed
- AR 02002825; Legacy Flooding Modification Concerns
- AR 02004858; Question Screening of AR 2002825 For Functionality
- AR 02006807; Rad Waste Storage Vaults/ Flood Conveyance Path
- AR 02008004; Pipe Penetration Grout/Seal Degraded
- AR 02008551; Seal Penetrations in Half Wall In – 19 El. Unit 1 RHR Chase
- AR 02010158; Lack of Redundancy for Internal Flood Detection
- AR 02012950; Potential New Non-Seismic PAB Flood Sources
- AR 02013411; AOP-28 – (P)
- AR 02019501; FSAR Inappropriately Changed (Legacy)
- AR 02044783; Reduced Available Operator Response Time for DGB Flood
- AR 02066328; Compensatory Measures Not Created For Functionality Issues
- AR 02076105; P-35B Fails to Start on Battery 2
- AR 02080343; Flooding Model Did Not Properly Incorporate Relief Paths
- AR 02088455; Identified Errors With EN-AA-203-1001
- AR 02088729; Trend – EN-AA-203-1001 Requirements Not Followed At PBNP
- AR 02093466; Slow Through Wall Leak on U2 CVCS Piping
- AR 02093732; Boric Acid Evidence Destroyed Due to Clean-Up
- AR 02093813; Timeliness of AR 02093466 Slow Through Wall Leak on U2 CVCS
- AR 02094533; Provide Permanent Repair for CV-00356
- AR 02094995; EN-AA-205-1102 CVCS Piping TCC Install Prior to EC Approval
- AR 02095722; Abandoned 3/8" SS Line Abrading Charging Pump
- Calculation 2014-0014; Develop Inputs Needed to Establish License Basis Piping Failure Flow Rates; December 19, 2014
- Calculation PBNP-994-21-13; HELB Reconstitution Program Task 13 – Building Recovery; December 15, 2010
- Clearance Coversheet for Clearance 0-SW-LW-61/62 Flooding Concern 01I
- Clearance Coversheet for Clearance 0 SW-LW-61/62 Flooding Concern 03
- Clearance Tag List for Clearance 0 SW-LW-61/62 Flooding Concern 01I
- Clearance Tag List for Clearance 0 SW-LW-61/62 Flooding Concern 03
- Condition Report Search for Cubicle Drain from December 16, 2013 – December 16, 2015

- Condition Report Search for Operability Determination from December 16, 2014 – December 16, 2015
- Control Room Log Entries from November 25, 2015 – November 26, 2015
- Drawing 684J741; Chemical & Volume Control; Revision 75
- Drawing CBD685J175; Sheet 2; ISI Classification Diagram Chemical & Volume Control; Revision 20
- Drawing M-207; Sheet 3; Service Water; Revision 69
- Drawing P-127; Piping Isometric Charging Pump Discharge to SI and HX-2; June 10, 2000
- EN-AA-203-1001; Operability Determinations / Functionality Assessments; Revision 16
- EN-AA-203-1001; Operability Determinations / Functionality Assessments; Revision 20
- FA 02004858; Primary Auxiliary Building Flooding Deficiencies; December 23, 2014
- FA 02004858; Primary Auxiliary Building Flooding Deficiencies; May 5, 2015
- FA 02076105; Past Functionality Review Form for P-35B Fails to Start on Battery 2; November 3, 2014
- FA 02093466; Slow Through Wall Leak on U2 CVCS Piping; December 8, 2015
- Fire Protection Evaluation Report; Revision 15; August 8, 2015
- Fire Protection Evaluation Report; Revision 16; September 22, 2015
- FSAR Appendix A.2; High Energy Pipe Failure Outside Containment; UFSAR 2013
- FSAR Section 9.2; Residual Heat Removal (RHR); UFSAR 2014
- FSAR Section 9.3; Chemical and Volume Control System (CV); UFSAR 2015
- ISI Basis Document; Basis for ASME Section XI; Inservice Inspection Basis Document; Revision 5
- Letter from U.S. Atomic Energy Commission to Wisconsin Electric Power Company; September 26, 1972
- Letter from U.S. Atomic Energy Commission to Wisconsin Electric Power Company; December 10, 1974
- Letter from U.S. Nuclear Regulatory Commission to Wisconsin Electric Power Company; September 29, 1975
- Letter from U.S. Nuclear Regulatory Commission to Wisconsin Electric Power Company; November 20, 1975
- Letter from Wisconsin Electric Power Company to U.S. Atomic Energy Commission; Flooding Resulting From Non-Category I Failure Point Beach Nuclear Plant – Units 1 and 2; February 20, 1973
- Letter from Wisconsin Electric Power Company to U.S. Nuclear Regulatory Commission; Flooding Resulting From Non-Category I Failure Point Beach Nuclear Plant – Units 1 and 2; February 17, 1975
- Letter from Wisconsin Electric Power Company to U.S. Nuclear Regulatory Commission; Flooding Resulting From Failures of Non-Category I Equipment Point Beach Nuclear Plant – Units 1 and 2; April 28, 1975
- Letter from Wisconsin Electric Power Company to U.S. Nuclear Regulatory Commission; Potential For Flooding Of Safety Related Equipment Point Beach Nuclear Plant Unit Nos. 1 and 2; October 24, 1975
- Letter from Wisconsin Electric Power Company to U.S. Nuclear Regulatory Commission; Flooding Resulting From Non-Category 1 Failures Point Beach Nuclear Plant Units 1 and 2; May 26, 1976
- NP 8.4.17; PBNP Flooding Program; Revision 20
- PBNP Inservice Testing Background Valve Data Sheet for Valve 0SW-LW-61; 1HX-150/2HX-150/HX-142/143 Inlet Temp Control Valve
- PBNP Inservice Testing Background Valve Data Sheet for Valve 0SW-LW-62; 1HX-150/2HX-150/HX-142/143 Outlet Temp Control Valve

- POD 02095722; Unit 1 – Abandoned 3/8” SS Line Abrading Charging Piping; December 15, 2015
- POR 02008551; Seal Penetration in Half Wall in -19 El. Unit 1 RHR Chase; January 15, 2015
- SCR 2009-0057; USAR 01141895 Changes to FSAR A.7, “Plant Internal Flooding;” May 5, 2009
- TRM 3.5.1; Chemical and Volume Control System; Revision 10

#### 1R18 Plant Modifications (71111.18)

- AR 01381263; As-Found Conditions Inside CSTs T-24A and T-24B
- AR 02033462; EC 283475: RMP 9367 – Level 1 and Level 3 Coatings
- AR 02046112; As-Found Conditions Inside T-24A CST
- AR 02048377; Inadequately Cured Coatings Found on T-24B Repair Areas
- AR 02048677; CST Coatings – Vendor Product Data Sheet is Flawed
- AR 02054787; Wiring Errors with Roll-Up Door Z-1009 Motor
- AR 02055008; Quick Hit / Department Assessment: MODs/10 CFR 50.59 Issues
- AR 02056816; Quick Hit / Department Assessment: MODs/10 CFR 50.59 Issues
- AR 02057219; Quick Hit / Department Assessment: MODs/10 CFR 50.59 Issues
- AR 02094556; Affected Document List (ADL) Adequacy for Equivalence EC
- Commercial Grade Item Review for Duromar; SAR-UW Underwater Ceramic Putty; Product Data Sheet
- Condition Report Search for Modification from June 17, 2015 – November 17, 2015
- Duromar; SAR-UW Underwater Ceramic Putty; Product Data Sheet
- EC 0000283475; Qualification of Duromar SAR-UW Epoxy Phenolic as a Service Level 3 Repair Coating for Internal use in CST’s
- EN-AA-100; Design Control Program; Revision 4
- Equivalency Change 13513; Tank Protective Coating (Interior)
- Letter from Bechtel Corporation to Wisconsin-Michigan Power Company Point Beach Nuclear Plant; Field Erected Tanks; November 1, 1967
- RMP 9367; Level 1 and Level 3 Coatings; Revision 24
- TLB 34; Condensate Storage Tank (T-24 A/B); Revision 12
- U.S. Nuclear Regulatory Commission Regulatory Guide 1.54; Service Level I, II, and III Protective Coatings Applied to Nuclear Power Plants; Revision 2
- WMPCo Specification No. PB-35; Point Beach Nuclear Plant Wisconsin Michigan Power Company; Specification for Repairing the Internal Coating of the Condensate Storage Tanks T24A & B; Revision 0
- WO 40237346-74; EC279034 Mockup Testing of Paint Prep & Install Methods; April 21, 2015
- WO 40287734-12; 0T-24B; Contingency Repair; May 21, 2015
- WO 40289542-10; 0T-24A; Paint Repair; May 8, 2015

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

- 2-PT-AF-3; 2P-29 Turbine-Driven AFW Pump Backup Air System Pressure Decay Test (REFUELING) Unit 2, Revision 8
- AR 02067280; PMT Of Coupling Upstream Of DA-200 Unsat
- AR 02070990; 1P-2B Return To Service And Mod Acceptance Issues
- AR 02077529; Troubleshooting Findings On P-35B Fail To Start On Batt 2
- AR 02081929; 2CV-313A Failed PMT
- AR 02084191; 2CC-755B Failed PMT (ORT 69)
- AR 02087432; IT 09A – Cold Start of Turbine-Driven Auxiliary Feed Pump [revise vibration acceptance criteria following bearing replacement]

- AR 02089198; Leaking Fittings (on Unit 2 air accumulator tank 2T-212)
- AR 02096189; Issues During Restoration of 2P-11B
- Condition Report Search for PMT from October 31, 2015 – December 31, 2015
- Drawing 110E029; Sheet 1; P&ID Auxiliary Coolant System; Revision 54
- FSAR Section 6.2; Safety Injection System; UFSAR 2015
- FSAR Section 14.2.5; Rupture of a Steam Pipe; UFSAR 2014
- FSAR Section 14.3.1; Small Break Loss of Coolant Accident Analysis; UFSAR 2010
- IT-04 Train B; Low Head Safety Injection Pumps and Valves Train B Unit 2; Revision 3
- IT 09A; Cold Start of Turbine-Driven Auxiliary Feed Pump and Valve Test (Quarterly) Unit 2, Revision 65
- OI 100B; Pressurize SI Accumulators From The Nitrogen Truck; Revision 17
- ORT 69; Component Cooling Water To and From 2P-1B Refueling Shutdown Unit 2, Revision 31
- RMP 9141; Air-Operated Valve Testing and Adjustment, Revision 12
- RMP 9377; Relief, Safety Relief Valve Testing; Revision 21
- RMP 9377-1; Relief, Safety and Safety Relief Valve Installation and Removal; Revision 19
- WO 40262067-02, 2AF-04061 OPS PMT/RTS
- WO 40283156-01; 2SI-00830B/Remove 2SI-830B Temp Mod (EC 282356); October 10, 2015
- WO 40300617; 2SI-00854B Seat Leakage During IT-535
- WO 40301255-06; 2CV-00313A / OPS-PMT-RTS IT 255
- WO 40312562-02; 2CC-755B / OPS PMT-RTS
- WO 40313329-01; 2SI-00830B/Replace Relief Valve – IST Program; October 23, 2015
- WO 40313329-03; 2SI-00830B/Ops PMT/RTS
- WO 40313329-06; 2SI-00830B/Rebuild For Use During 2R34 (Send Offsite)
- WO 40366639-01; IT-09A, 2P-29 AFP Cold Start Test/Valves
- WO 40418965-03; 2CV-00313A / Operations PMT/RTS
- WP 2015-022; 2SI-854B PMT Leak Rate

#### 1R20 Outage Activities (71111.20)

- 0-SOP-FH-001; Fuel/Insert/Component Movement in the Spent Fuel Pool or New Fuel Vault; Revision 26
- AR 02085874; Ty-wrap Found on Main Steam Safeties Manual Lift Handle
- Calculation PBN-2FJF-15-228; Point Beach Unit 2 Cycle 35 eNDR – Final Documentation; September 21, 2015
- CL 1E; Containment Closure Checklist Unit 2; Revision 21
- CL 2A; Defueled to Mode 6 Checklist; Revision 16
- CL 2B; Mode 6 to Mode 5 Checklist; Revision 16
- CL 2C; Mode 5 to Mode 4 Checklist; Revision 22
- CL 2D; Mode 4 to Mode 3 Checklist; Revision 21
- CL 2E; Mode 3 to Mode 2 Checklist; Revision 23
- CL 2F; Mode 2 to Mode 1 Checklist; Revision 22
- CI 20; Post Outage Containment Closeout Inspection Unit 2; Revision 27
- CL 20; Post Outage Containment Closeout Inspection Unit 2; Revision 27
- CL 20A Unit 2; Unit 2 Containment Closeout Inspection; Revision 6
- Clearance Coversheet for Clearance 0 125V D-107 EM System Multi and/or Non-Numbered Equipment
- Clearance Coversheet for Clearance 2 OP-3C P-15A Safety Injection Pump
- Control Room Log Entries for October 26, 2015
- Control Room Log Entries for October 27, 2015
- Control Room Log Entries from October 26, 2015 – October 27, 2015

- Control Room Log Entries from October 14, 2015 – November 4, 2015
- OP 3B Appendix A; Shutdown Margin Calculation; Revision 18
- Point Beach Component Move Sheet for 2015 B5B Moves; Revision 0
- Point Beach Spent Fuel Cycle 1R36 New Fuel Receipt
- ROD 9 Unit 2; Reference Boron Concentrations; Revision 24
- SDM 3.1 Reactivity Control Systems
- SNM and Other Device Physical Inventory Unit 2 Reactor Core Map for Cycle 35; October 18, 2015
- U2R34 Outage Safety Review Supporting Documentation
- U2R34 SDS Risk Profile Printed on September 17, 2015
- Various OCC Turnover Reports
- Various Radiological Maps
- WO 40305429-01; U2 RESP 4.1: Initial Critically and ARO Physics Tests

#### 1R22 Surveillance Testing (71111.22)

- AR 02083540; Received An Out-Of-Tolerance Report for M&TE Temp/RH Monitor
- AR 02085712; Received An Out-Of-Tolerance Report for M&TE (MCRT-002)
- AR 02085716; Received An Out-Of-Tolerance Report for M&TE (ICTIS-1024)
- Calculation 2005-0014; Instrument Uncertainty of Safeguards Sequence Time Delay Relays; August 8, 2005
- CLRT Testing Program Basis Document; Revision 15
- Condition Report Search for M&TE from July 1, 2015 – December 31, 2015
- Condition Report Search for Surveillance from October 1, 2015 – December 31, 2015
- Drawing 110E163-2; Sheet 7A; Train “A” Reactor Safeguards Systems; Revision 14
- Drawing 110E163-2; Sheets 12A; Train “A” Safeguards Systems; Revision 11
- ESFAS Instrumentation 3.3.2; Table 3.3.2-1; Engineered Safety Feature Actuation System Instrumentation
- FSAR Section 6.2; Safety Injection System; UFSAR 2015
- FSAR Section 8.8; Diesel Generator (DG) System; UFSAR 2015
- NP 7.7.37; Surveillance Frequency Control Program Manual; Revision 2
- NP 8.7.1; Measurement and Test Equipment; Revision 28
- ORT 3A; Safety Injection Actuation with Loss of Engineered Safeguards AC (Train A) Unit 2; Revision 45
- ORT 59; Train A Spray System CIV Leakage Test Unit 2; Revision 33
- SR 3.5.2.4; Surveillance Requirements for ECCS – Operating
- SR 3.5.2.5; Surveillance Requirements for ECCS – Operating
- SR 3.7.5.3; Surveillance Requirements for AFW System
- SR 3.7.5.4; Surveillance Requirements for AFW System
- SR 3.7.8.2; Surveillance Requirements for SW System
- SR 3.7.8.3; Surveillance Requirements for SW System
- SR 3.8.1.5; Surveillance Requirements for AC Sources – Operating
- WO 40313604; ORT59, 2P14A/2SI-862A/2SI-864A

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

- 2014-PB-027; 10 CFR 50.54(q) Screening Form
- 2014-PB-029; 10 CFR 50.54(q) Screening Form
- 2014-PB-031; 10 CFR 50.54(q) Screening Form
- 2014-PB-036; 10 CFR 50.54(q) Screening Form
- 2015-PB-002; 10 CFR 50.54(q) Screening Form

- 2015-PB-004; 10 CFR 50.54(q) Screening Form
- 2015-PB-006; 10 CFR 50.54(q) Screening Form
- 2015-PB-007; 10 CFR 50.54(q) Screening Form
- 2015-PB-008; 10 CFR 50.54(q) Screening Form
- EP-AA-100-1007; Evaluation of Changes to the Emergency Plan, Supporting Documents and Equipment (10 CFR 50.54(q)); Revision 3

#### 2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

- AR 01971287; Trend in Radworker RWP Access
- AR 01980113; The Barricade at LHRA Does Not Meet Procedural Height
- AR 02002162; Radiological Posting Discrepancy in U1 Containment
- AR 02077572; Safety Interlocks Failed Operational Checks on JL Shepherd
- AR 02078111; Dose Rate Alarm Received in Unit2 Containment
- AR 02079583; EPD Dose Rate Alarm Received in U2 Containment
- HP 2.14; Containment Keyway Personnel Access; Revision 17
- HP 2.17; Very High Radiation Area Personnel Access; Revision 9
- HP 3.1; Radiological Surveys and Records; Revision 16
- HP 3.2.8; Posting Requirements for Areas Affected by Fuel Movement; Revision 25
- HP 3.2; Radiological Labeling, Posting and Barricading Requirements; Revision 61
- HPIP 3.52; Airborne Radioactivity Surveys; Revision 38
- HPIP 8.1; Radioactive Source Inventory; Revision 7
- HPIP 8.2; Sealed Source Leak Testing; Revision 9
- PBF-4002; Airborne Radioactivity Survey; Various Dates
- PBF-4021; Radiological Survey; Various Dates
- RP-AA-102-1000; Alpha Monitoring; Revision 2
- RP-AA-103-1001; Posting Requirements for Radiological Hazards; Revision 2
- RP-AA-103-1002; High-Radiation Area Controls; Revision 3
- RP-AA-107-1003; Unconditional and Conditional Release of Material; Revision 1
- RWP 15-2016; Remove/Reinstall RV Head; Revision 00
- RWP 15-2018; Seal Table Activities; Revision 00
- RWP 15-2020; Keyway Entries; Revision 00
- RWP 15-2033; PAB Valve Maintenance Activities; Revision 00
- Sealed Source Leak Check and Inventory; July 23, 2015

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

- 2ICP 04.006-1; Steam Flow Transmitter Outage Calibrations; Revision 13
- AR 02020206; POD 01996698-01 Requires Revision
- AR 02096856; NRC Questions MSPI Accounting Practices
- AT-01.10 Search ARs for Equipment Record Report; November 23, 2015
- CE 01996698; EQ Seals for EGs Disconnect on Various Rosemount Transmitter; October 23, 2014; Completed February 3, 2015  
Completed July 1, 2015
- Control Room Log Entries from July 1, 2014 – September 30, 2015
- Effluent Dose Estimates and Quarterly NRC Performance Indicator Results; Various Dates
- Maintenance Rule Functional Failure Evaluation, AC-152N-4-AC-9 for AR 02003336; December 19, 2014
- MSPI Derivation Report; MSPI Cooling Water System; Unreliability Index; Units 1 and 2; June 2015

- MSPI Derivation Report; MSPI Residual Heat Removal System; Unavailability Index; Unit 1; June 2015
- MSPI Indicator Margin Remaining in Green for December 2014; Units 1 and 2; August 12, 2015
- MSPI Indicator Margin Remaining in Green for June 2015; Units 1 and 2; August 12, 2015
- MSPI Indicator Margin Remaining in Green for September 2014; Units 1 and 2; August 12, 2015
- MSPI Monthly Unavailability and Verification for CC System for April 2015; Completed May 4, 2015
- MSPI Monthly Unavailability and Verification for CC System for August 2014; Completed September 8, 2014
- MSPI Monthly Unavailability and Verification for CC System for December 2014; Completed January 5, 2015
- MSPI Monthly Unavailability and Verification for CC System for February 2015; Completed March 5, 2015
- MSPI Monthly Unavailability and Verification for CC System for January 2015
- MSPI Monthly Unavailability and Verification for CC System for June 2015;
- MSPI Monthly Unavailability and Verification for CC System for March 2015; Completed April 2, 2015
- MSPI Monthly Unavailability and Verification for CC System for May 2015; Completed June 9, 2015
- MSPI Monthly Unavailability and Verification for CC System; July 2014; August 4, 2014
- MSPI Monthly Unavailability and Verification for RH System for April 2015; Completed May 4, 2015
- MSPI Monthly Unavailability and Verification for RH System for February 2015; Completed March 3, 2015
- MSPI Monthly Unavailability and Verification for RH System for January 2015; Completed February 3, 2015
- MSPI Monthly Unavailability and Verification for RH System for June 2015; Completed July 1, 2015
- MSPI Monthly Unavailability and Verification for RH System for March 2015; Completed April 2, 2015
- MSPI Monthly Unavailability and Verification for RH System for May 2015; Completed June 9, 2015
- MSPI Monthly Unavailability and Verification for RH System; December 2014; January 6, 2015
- MSPI Monthly Unavailability and Verification for RH System; July 2014; August 4, 2014
- MSPI Monthly Unavailability and Verification for RHR System; August 2014; September 8, 2014
- MSPI Monthly Unavailability and Verification for SW System; April 2015; May 4, 2015
- MSPI Monthly Unavailability and Verification for SW System; August 2014; September 9, 2014
- MSPI Monthly Unavailability and Verification for SW System; December 2014; January 5, 2015
- MSPI Monthly Unavailability and Verification for SW System; February 2015; March 5, 2015
- MSPI Monthly Unavailability and Verification for SW System; January 2015; February 3, 2015
- MSPI Monthly Unavailability and Verification for SW System; July 2014; August 4, 2014
- MSPI Monthly Unavailability and Verification for SW System; June 2015; July 2, 2015
- MSPI Monthly Unavailability and Verification for SW System; May 2015; June 4, 2015
- MSPI Monthly Unavailability and Verification for SW System; October 2014; November 3, 2014
- NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 7
- NP 10.3.8; Safety Function Determination Program; Revision 2



- NRC Occupational Exposure Performance Indicator Data; Various Dates
- NRC Reactor Oversight Program; MSPI Basis Document for Point Beach Nuclear Plant; Revision 24
- POD 01996698; EQ Seals for EGs Disconnect on Various Rosemount Transmitter; October 10, 2014
- POD 01996698; EQ Seals for EGs Disconnect on Various Rosemount Transmitter; February 24, 2015
- POR 02003336; Spring Can AC-152N-4-AC-9 Hot Load Setting Less Than Design; December 18, 2014
- Reactor Coolant System Specific Activity Elements; Various Dates

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

- ACE 02077732; Adverse Trend – Oil Use and Control; November 11, 2015
- AR 01215622; Containment Electrical Penetrations Exceed Admin Leak Rate Limits
- AR 01330537; Unit 2 CI System Transition to Maintenance Rule (a)(1) Status
- AR 01622462; 2Q-03 Electrical Penetration Leakage Exceeds Admin Limit
- AR 01845608; ORT 70 Unit 2 – Electrical Penetration (CA01330537)
- AR 01942127; 2Q-03 Elect Pen Leak Rate Degraded
- AR 01966558; Potential Unqualified Material Inside Limitorque Housing
- AR 02044740; Inspect/Remove VCI Device From Inside LS Cover
- AR 02060667; Unlabeled Barrels in Lube Oil Storage Tank Area
- AR 02061737; Adverse Trend Identified During Mtn Self Evaluation Meeting
- AR 02062237; Dispensing of Oil From Drum in LO Storage Tank Room
- AR 02066156; 2P-011A CCW Pump OB Oil Sample Abnormal
- AR 02067553; Analysis Results for 2P-011A Oil Documented Under AR2066156
- AR 02070684; Nos Escalation ? MOD Work Package Quality Negative Trend
- AR 02074543; Wrong Oil Added to 1P-028B
- AR 02074611; Lube Oil Storage Room Door Found Unlocked
- AR 02077994; Non-Conservative Technical Specification
- AR 02079438; Used Oil Drums Improperly Labeled
- AR 02080753; U2R34 – Used Oil Handling Issues
- AR 02081682; Failure to Initiate New CR for Credited Blocked Floor Drain
- AR 02082769; Chemicals Not Stored Correctly
- AR 02083338; Non-Conservative Change to FSAR Chapter 14 Affects EQ
- AR 02084154; AFW LIC Amend 238/242 SER Contains a Discrepancy
- AR 02084158; Review NRC Position on TSTF-412, Rev.3
- AR 02087174; Drum of Transformer Oil Left at 2X-02
- AR 02088465; Nitrogen Pressure Reads Zero – NRC Identified
- AR 02089011; EOP Subcooling Setpoints Calculated Incorrectly
- AR 02090929; Removed VCI During WO 40385575
- AR 02091260; MOV Shipping Pad Inspections
- AR 02091934; CR Not Initiated Timely Upon Removal of VCI Documented in CR
- AR 02095834; Z-476, Balancing Stand Issues
- AR 02095943; Oil Analysis Identifies Unexpected Additive in 2P29 Oil
- AR 02099284; Unit 1 CVCS Pipe Hanger Missing Hardware
- AR 02099514; Repair Performed on ASME Section XI Piping W/Out R/R Plan
- Calculation 2010-0021; RCS Subcooling EOP Setpoints Calculation; Revision 1
- CAP 034707; Electrical Penetration Leakage Contingency
- CE 02067553; Analysis Results for 2P-011A Oil Documented Under AR2066156; September 30, 2015

- CE 02074543; Wrong Oil Added to 1P-028B; October 7, 2015
- CE 02077994; Non-Conservative Technical Specification
- CE 02086917; Waste Oil Almost Added to 2P-28A; November 6, 2015
- CLRT Testing Program Basis Document; Containment Leakage Rate Testing Program; Revision 15
- Completed WO Listing for Inspect and Maintain Q3 & Q58 Penetrations
- Drawing DE-2198; Electrical Penetration Composite; Revision 7
- Equipment Information for Q-03; U2C Elec Penetration 3
- Letter from U.S. NRC to All Holders of Operating Licenses for Nuclear Power Plants; Dispositioning of Technical Specifications that are Insufficient to Assure Plant Safety; December 29, 1998
- Letter from U.S. NRC to NextEra Energy Point Beach, LLC; – Issuance of License Amendments Re: Auxiliary Feedwater System Modification (TAC Nos. ME1081 and ME1082); March 25, 2011
- Letter from Wisconsin Electric Power Company to U.S. NRC, Region III; Electrical Penetration Survey Point Beach Nuclear Plant Units 1 and 2; December 2, 1977
- LM 2.1; PBNP Equipment Lube List; Revision 60
- LR-AMR-118-CSCS; CONT, Containment Unit 1/2 Structure (External Environment) Attachment 8.3 – Aging Effects Analysis by Material/Environment Group and Asset Aging Management Activities; March 3, 2004
- Mechanical WO Listing for ELECT PENETR; Scheduled from September 10, 2015 – June 30, 2016
- MI 30.2; Dynamic Balancing Stand
- ML071230105; Notice of Availability of Model Application Concerning Technical Specification Task Force (TSTF) Traveler TSTF 412 to Provide Actions for One Team Supply to Turbine Driven AFW/EFW; July 11, 2007
- ML14328A426; TSTF Handout from November 13, 2014, Meeting – Agenda Item 3.D – TSTF-412 White Paper II; June 28, 2012
- NEI 94-01; Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J; Revision 0
- NP 1.9.1; Hazardous and Special Material Control Program; Revision 15
- NP 7.7.25; PBNP Renewed License Program; Revision 9
- NRC 2010-0097; Letter from NextEra Energy Point Beach to U.S. NRC; License Amendment Request 261, Supplemental 5 Extended Power Uprate; July 8, 2010
- ORT 70; Electrical Penetration Leak Test Unit 2; Revision 3
- ORT 70; Electrical Penetration Leak Test Unit 2; Revision 4
- PBF-1515b; 10 CFR 50.59/72.48 Pre-Screening Review of Revision 4 to ORT-70 Unit 2, Electrical Penetration Leak Test; February 6, 2013
- Point Beach Station Self-Evaluation and Trending Analysis Report for 2nd Quarter 2015; September 4, 2015
- POR 02044783; Reduced Available Operator Response Time for DGB Flood
- Quick HU Learning Opportunity Review for CR 0274543; September 24, 2015
- RWT 02096116; Lack of Governing Control Procedure During LOOP in Mode 3
- U.S. NRC Bulletin 77-06; Potential Problems with Containment Electrical Penetration Assemblies; November 22, 1977
- U2R34 LLRT Totals Report; Printed November 19, 2015
- WO 00223243-01; 2Q-03 / Replace Electrical Penetration 2Q-03
- WO 00223243-02; Ops PMT ORT-70 After 2Q-03 Replaced
- WO 00333459-01; Inspect and Maintain Q3 & Q58 Penetrations
- WO 0600209; Replace U2C Elec. Penetration 3 via MR 05-012
- WO 40362666-01; Inspect and Maintain Q3 & Q58 Penetration

- WO 40385575-01; 1SI-851B-O/Inspect/Remove VCI Device From Inside LS

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

- AR 02094050; Security Status Level Change
- AR 02094051; Condenser Steam Dump Stuck at – 50Percent Post-Trip
- AR 02094052; U1 “D” MSR Inlet Valve Stuck 20 Percent Open
- AR 02094054; 1N-31 Indicates Lower Than Expected
- AR 02094061; Unit 1 Reactor Trip, Due to Generator Lockout
- AR 02094063; 1-74/TG03 Lockout Relay Was Found Tripped After Unit Trip
- AR 02094067; Unit 1 Reactor Trip, Due to Generator Lockout
- AR 02094068; U1 Main Turbine Max Speed Following Generator Lockout
- AR 02094116; Replace VR Firing Circuit Cards #2 During Forced Outage
- AR 02094127; Replace 1N-31 and 1N-35 During U1R36 Outage
- Control Room Log Entries from November 28, 2015 – November 30, 2015
- EN# 51570; Unit 1 Point Beach Nuclear Plant Event Notification Worksheet; November 28, 2015
- NP 5.3.3; Incident Investigation and Post-Trip Review; Attachment B; Personnel Statement; November 28, 2015
- NP 5.3.3; Incident Investigation and Post-Trip Review; Revision 16
- Unit 1 PBNP Control Room Summary Report; November 29, 2015
- Unit 1 Sequence of Events Report; November 28, 2015
- Unit 1 Trip Report; Group 5 of 11; November 28, 2015

## LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
ADAMS	Agencywide Document Access Management System
ADL	Affected Document List
AFW	Auxiliary Feedwater System
AOP	Abnormal Operating Procedure
AR	Action Request
ASME	American Society of Mechanical Engineers
ASTM	American Society of Testing and Materials
BALCM	Boric Acid Evaluation Screening
CAP	Corrective Action Program
CCW	Component Cooling Water
CFR	<i>Code of Federal Regulations</i>
CIV	Containment Isolation Valve
CST	Condensate Storage Tank
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
FPER	Fire Protection Evaluation Report
FSAR	Final Safety Analysis Report
FW	Feedwater
IMC	Inspection Manual Chapter
INPO	Institute of Nuclear Power Operations
IP	Inspection Procedure
IR	Inspection Report
ISI	Inservice Inspection
MDAFWP	Motor Driven Auxiliary Feedwater Pump
MFIV	Main Feedwater Isolation Valve
MSPI	Mitigating Systems Performance Index
MT	Magnetic Particle
NCV	Non-Cited Violation
NDE	Non-Destructive Examination
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NRC	U.S. Nuclear Regulatory Commission
ODCM	Offside Dose Calculation Manual
OOS	Out-of-Service
OSP	Outage Safety Plan
PAB	Primary Auxiliary Building
PARS	Publicly Available Records System
PI	Performance Indicator
PI&R	Problem Identification and Resolution
PMT	Post-Maintenance Testing
POD	Prompt Operability Determination
PT	Dye Penetrant
RCS	Reactor Coolant System
RETS	Radiological Effluent Technical Specification
RFO	Refueling Outage
RHR	Residual Heat Removal
RP	Radiation Protection

RV	Reactor Vessel
RWP	Radiation Work Permit
SSC	Structures, Systems, and Components
SDP	Significance Determination Process
SG	Steam Generator
SI	Safety Injection
TB	Turbine Building
TDAFWP	Turbine-Drive Auxiliary Feedwater Pump
TS	Technical Specification
UT	Ultrasonic
VT	Visual
WO	Work Order

E. McCartney

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Sincerely,

*/RA/*

Jamnes Cameron, Chief  
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