

Point Beach 1 4Q/2015 Plant Inspection Findings

Initiating Events

Mitigating Systems

Significance:  Dec 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

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

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.

Inspection Report# : [2015004](#) (*pdf*)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: FIN Finding

Incomplete Functionality Assessment for Flooding in the Diesel Generator Building

The inspectors identified a finding of very low safety significance for the licensee's failure to follow procedure EN AA 203 1001, "Operability Determinations/Functionality Assessments," Revision 19. Specifically, when the licensee

identified that internal flood sources in the diesel generator building (DGB) were larger than the drain capacity, they failed to identify all affected structures, systems, and components (SSCs). The DGB contains predominately Train B emergency power systems; however, the fuel oil transfer pumps for the Train A emergency diesel generators are located in the southeast corner of the building. The licensee failed to assess the effects of flooding on the Train A fuel oil transfer pumps. The licensee's corrective actions included the creation of an adverse condition monitoring plan, which implemented an hourly flood watch in the DGB when the fire pump was manually started.

The inspectors determined that the finding was more than minor, because if left uncorrected, it would potentially result in a more safety significant issue. Specifically, the failure to evaluate the effects of flooding on all SSCs resulted in inadequate compensatory measures. The inspectors determined the finding could be evaluated using the significance determination process (SDP) in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012. For the time period in question, May 17, 2015 to September 17, 2015, the inspectors reviewed the security door card reader reports and starting sump levels for the DGB and found that during times when the fire pumps were running, station personnel had toured the DGB at a frequency that would have identified flooding conditions before a loss of system function. The inspectors concluded that the finding was of very low safety significance (Green), because the inspectors answered "No" to the Mitigating Systems screening questions. This finding has a cross-cutting aspect of Evaluation (P.2), in the area of Problem Identification and Resolution (PI&R), for failing to thoroughly evaluate issues to ensure that resolutions address causes and extent of conditions commensurate with their safety significance.

Inspection Report# : [2015003](#) (pdf)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Potential Failure of Multiple Safety-Related Trains During Flooding Events

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 ensure that a non Category I (seismic) component failure, that results in flooding, would not adversely affect safety related equipment needed to get the plant to safe shutdown (SSD) or to limit the consequences of an accident. Specifically, the design of Point Beach did not ensure that the Residual Heat Removal (RHR) pumps would be protected from all credible non Category I (seismic) system failures. The licensee's corrective actions included an extensive internal flooding design review, which will result in an updated Final Safety Analysis Report (FSAR) with a more detailed description of the station's flooding licensing basis; modifications to multiple flood barriers to bring them into compliance with the licensee's flooding licensing basis; installation of additional flood level alarms where necessary, and evaluation or modification of service water (SW) piping to properly qualify it as seismic.

The inspectors determined that the finding was more than minor because it was associated with the Design Control attribute of the Mitigating System cornerstone and affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the inadequate design resulted in an unanalyzed condition and loss of safety function of the RHR system while the plants were in Modes 4, 5, and 6, when relying on the RHR system for decay heat removal. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, "Mitigating Systems Screening Questions," dated June 19, 2012. The inspectors answered "yes" to question 2 of the screening questions because the finding represented a loss of safety function. Thus the inspectors consulted the Region III Senior Risk Analysts (SRAs) who performed a detailed risk evaluation and determined that the finding was of very low safety significance (Green). The inspectors determined that the associated finding did not have a cross-cutting aspect because the finding was not

reflective of current performance.

Inspection Report# : [2015003](#) (*pdf*)

Significance:  Sep 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Perform a Written Safety Evaluation for FSAR Changes

The inspectors identified a Severity Level IV NCV of 10 CFR 50.59(d)(1), “Changes, Tests, and Experiments,” and an associated finding of very low safety significance for the licensee’s failure to perform a safety evaluation to demonstrate that the removal of statements from the FSAR did not require a license amendment. Specifically, the licensee failed to perform a safety evaluation to determine whether removing an FSAR statement, which defined the RHR pump cubicle design flood height as seven feet, could be performed without a license amendment. The licensee entered the deficiency in their CAP as Action Request (AR) 02069425 by which the licensee intends on re-evaluating the 1996 FSAR change.

The inspectors determined that the finding was more than minor because the finding, if left uncorrected, would become a more significant safety concern. Specifically, inappropriately removing the information from the FSAR allowed the licensee to decrease the design basis flood protection height of the RHR compartments and significantly reduced the available time to isolate the leaking RHR pump seal. Violations of 10 CFR 50.59 are dispositioned using the traditional enforcement process instead of the SDP because they are considered to be violations that potentially impede or impact the regulatory process. In addition, the associated violation was determined to be more than minor because the inspectors could not reasonably determine that the changes would not have ultimately required NRC prior approval. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, “Significance Determination Process,” Attachment 0609.04, “Initial Characterization of Findings,” dated June 19, 2012, and Appendix A, “The Significance Determination Process for Findings At-Power,” Exhibit 2, “Mitigating Systems Screening Questions,” dated June 19, 2012. The inspectors concluded that the finding was of very low safety significance (Green), because the inspectors answered “No” to the Mitigating Systems screening questions. The inspectors determined that the associated finding did not have a cross cutting aspect because the finding was not reflective of current performance.

Inspection Report# : [2015003](#) (*pdf*)

Significance:  Aug 28, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Evaluate Containment spray system for Potential Gas Intrusion (Section 1R17.1b)

Green. The inspectors identified a finding of very low safety significance, and an associated NCV of Title 10, Code of Federal Regulations, Part 50, Appendix B, Criterion III, “Design Control,” for the licensee’s failure to evaluate for potential gas intrusion from the spray additive tank into the containment spray (CS) system during the injection phase of a design-basis accident. As part of immediate corrective actions, the licensee entered the concern in the Corrective Action Process as AR 2068569, and performed an evaluation which determined no air entrainment is expected to occur during the injection phase.

The performance deficiency was determined to be more than minor because it was associated with the Mitigating Systems cornerstone attribute of equipment performance, and affected the cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, air intrusion into the CS system could affect the operability of the CS pumps by causing degraded performance and/or air binding of the pumps. The finding screened as having very low safety significance. Specifically, the finding was a deficiency affecting the design or qualification of a mitigating structure, system, or

component (SSC), however, based on the evaluation performed by the licensee the SSC maintained its operability. Based on the timeframe of the violation the inspectors did not identify a cross-cutting aspect associated with this finding. (Section 1R17.1b)

Inspection Report# : [2015010](#) (pdf)

Significance:  Jul 10, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Demonstrate the Functionality of a Credited Safe Shutdown Component (Section 40A2.2b.(2))

The inspectors identified a finding of very low safety significance and an associated NCV of license condition 4.F for the licensee's failure to demonstrate the capabilities of systems needed to perform a design function for Appendix R cold shutdown. Specifically, none of the licensee's tests, inspections, or maintenance activities demonstrated that CC-722A, the component cooling water pump suction cross tie valve, was capable of being opened as required in AOP 10B, "Safe to Cold Shutdown in Local Control." The licensee corrective actions included entering the issue into their CA program, declaring CC-722A non functional, and commencing four-hour fire rounds.

The inspectors determined the finding to be more than minor because the failure to demonstrate the capabilities of systems needed to perform a design function for Appendix R safe shutdown was associated with the Mitigating Systems Cornerstone attribute of Protection Against External Events (Fire) and affected the cornerstone objective of preventing undesirable consequences (i.e., core damage). 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 affected the ability to reach and maintain safe shutdown, 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 finding would not prevent the reactor from reaching and maintaining hot shutdown. This finding has a cross-cutting aspect of Resolution (P.3), in the area of problem identification and resolution, because the licensee did not take effective corrective actions to address the issue in a timely manner. Specifically, in 2007, the licensee identified that they had not been testing the valve as specified in their Fire Protection Evaluation Report and as of July 2015 had still not corrected it. (Section 40A2b.(2))

Inspection Report# : [2015007](#) (pdf)

Significance:  Jun 30, 2015

Identified By: Self-Revealing

Item Type: NCV Non-Cited Violation

Inadequate Measures to Control Spare Firing Card Assemblies

A finding of very low safety significance and associated NCV of 10 CFR Part 50, Appendix B, Criterion XV, "Nonconforming Materials, Parts, or Components," was self-revealed for the licensee's failure to establish measures to ensure non-conforming tantalum electrolytic capacitors that were part of an assembly and that were beyond their recommended shelf-life would not be installed in safety-related equipment in the plant. The licensee's corrective actions included repair of the D-107 battery charger, and updating maintenance and procurement requirements with component shelf-life information.

The finding was determined to be more than minor since the failure to ensure the quality of spare parts, if left uncorrected, could lead to a more significant safety concern. Specifically, the failure to control circuit boards which contained tantalum electrolytic capacitors that were beyond their shelf-life was self-revealed when the D-107 safety-related battery charger failed three days after the circuit boards were installed. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment

0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At-Power," Exhibit 2, Mitigating Systems Screening Questions, dated June 19, 2012. The inspectors concluded that the finding was of very low safety significance (Green), because the inspectors answered "No" to the Mitigating Systems screening questions. This finding has a cross-cutting aspect of Change Management (H.3), in the area of Human Performance, for the licensee's failure to use a systematic process for implementing changes so that nuclear safety remained the overriding priority. (Section 1R12.1)

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Jun 30, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Control Transient Combustibles During Service Water Pumphouse Maintenance

A finding of very low safety significance and associated NCV of Technical Specification (TS) 5.4.1.h was identified by the inspectors for the failure to control transient combustible material in accordance with the licensee's Fire Protection Program requirements. Specifically, the licensee installed a power cord in the north side of the service water pump room that was subsequently extended also into the south side of the service water pump room across a transient combustible exclusion boundary with no prior evaluation. The licensee's corrective actions included immediately removing the power cord from the fire exclusion zone and standing-down the work group for a brief of the event and a review of the requirements for transient combustibles.

The inspectors determined the finding was more than minor because the failure to identify the transient combustibles was associated with the Mitigating Systems Cornerstone attribute of Protection Against External Events (Fire) and affected the cornerstone objective of preventing undesirable consequences (i.e., core damage). 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.B, because the inspectors assigned a "Low" degradation rating to the single cable that crossed through the exclusion zone. This finding has a cross-cutting aspect of Field Presence (H.2), in the area of human performance, because the licensee's leadership did not ensure that oversight of work activities, including contractors and supplemental personnel was provided such that nuclear safety was supported.

Inspection Report# : [2015002](#) (*pdf*)

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: FIN Finding

Failure to Process Vendor Technical Information

A finding of very low safety significance was identified by the inspectors for the failure to follow site procedure NP 7.2.13, "Processing of Vendor Technical Information." Specifically, the licensee failed to process a vendor technical bulletin in accordance with NP 7.2.13. The technical bulletin provided relevant information related to the inspection, adjustment, and replacement of an electrical connector located in some of the licensee's safety-related battery chargers. Procedure NP 7.2.13 ensured that relevant vendor correspondence received by the licensee was analyzed to identify specific actions needed to operate and maintain the plant safely. Licensee corrective actions included conducting a condition evaluation, which concluded that a lack of understanding of current vendor technical document process expectations may exist within key departments. The licensee plans to perform information sharing to increase awareness of expectations for processing vendor documents.

The finding was determined to be more than minor because, if left uncorrected, the finding had the potential to lead to

a more safety significant concern. Specifically, if a degraded connector was not identified and corrected during safety-related battery charger maintenance, the charger may fail to limit current and open the supply breaker to the battery charger. The inspectors determined the finding could be evaluated using the SDP in accordance with IMC 0609, "Significance Determination Process," Attachment 0609.04, "Initial Characterization of Findings," dated June 19, 2012, and Appendix A, "The Significance Determination Process for Findings At Power," Exhibit 2, Mitigating Systems Screening Questions, dated June 19, 2012. The inspectors concluded that the finding was of very low safety significance (Green), because the inspectors answered "No" to the Mitigating Systems screening questions. This finding has a cross-cutting aspect of Operating Experience (P.5), in the area of Problem Identification and Resolution, for the failure to systematically and effectively collect, evaluate, and implement relevant internal and external operating experience in a timely manner.

Inspection Report# : [2015001](#) (*pdf*)

Significance: G Mar 27, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Promptly Correct Conditions Adverse to Quality Regarding Electrical Power Cable Sizing and Protection (Section 1R21.3.b.(1))

Green. The inspectors identified a finding of very-low safety significance, and an associated Non-Cited Violation of Title 10, Code of Federal Regulations (CFR) Part 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to implement timely corrective actions to address the longstanding issue of electrical power cables that have not been verified to be sized or protected in accordance with their design bases, as described in PBNP's Final Safety Analysis Report Section 8.0.1. Specifically, the licensee failed to correct known deficiencies regarding: (1) power cables with operating currents in excess of their current-carrying capacities; (2) power cables that are not protected against overload in accordance with the National Electrical Code; and (3) power cables for which their current-carrying capacities are undetermined. Although various corrective action documents have been initiated since these issues first came to light in the 1990 to 1991 time period, the licensee has not taken appropriate actions to correct the conditions adverse to quality to this date. The licensee entered this finding into their Corrective Action Program as Condition Report (CR) 02035020 and CR 02035680, with recommended actions to perform ampacity analysis for applicable cables, verify cables are protected against overload in accordance with the National Electrical Code, verify cable ampacities are higher than their respective load currents, and perform an evaluation to determine why this issue has not been resolved and address the safety culture aspect.

The inspectors determined the licensee's failure to promptly correct the conditions adverse to quality regarding electrical power cables was a performance deficiency warranting a significance determination. The performance deficiency was determined to be more than minor, and a finding in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," because it was associated with the Design Control attribute of the Reactor Safety, Mitigating Systems Cornerstone, and it adversely affected the cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the finding in accordance with IMC 0609.04, Phase 1, "Initial Screening and Characterization of Findings." The finding screened as having very-low safety significance (Green) because it was a design or qualification deficiency that did not represent a loss of operability or functionality; did not represent an actual loss of safety function on the system or train; did not result in the loss of one or more trains of non-technical specification equipment; and did not screen as potentially risk significant due to seismic, flooding, or severe weather. The inspectors identified a crosscutting aspect associated with this finding in the area of Human Performance, associated with the Design Margin component, because the licensee failed to ensure equipment is operated within design margins, and margins are carefully guarded and changed only through a systematic and rigorous process. [H.6] (Section 1R21.3.b (1))

Inspection Report# : [2015008](#) (*pdf*)

Barrier Integrity

Emergency Preparedness

Occupational Radiation Safety

Significance:  Mar 31, 2015

Identified By: NRC

Item Type: NCV Non-Cited Violation

Failure to Quantify Radionuclides in the Body for Internal Dose Assessments

The inspectors identified a finding of very low safety significance, and an associated NCV of 10 CFR 20.1204 for the licensee's failure to take suitable measurements of quantities of radionuclides in the body for assessing internal dose for occupational exposure control. Immediate corrective actions included an evaluation of previous internal dose assessments to determine the extent of missed dose. Planned corrective actions include a review of procedures to ensure data is not disregarded without sound technical justification, and review of the duration of time for which whole-body counts are performed.

In accordance with IMC 0612, Appendix B, "Issue Screening," the inspectors determined that the performance deficiency was more than minor because it was associated with the program and process attribute of the occupational radiation safety cornerstone, and adversely affected the cornerstone objective of ensuring adequate protection of worker health and safety from exposure to radiation, in that, the failure to adequately assess internal exposure affects the licensee's ability to control and limit radiation exposure. The inspectors also reviewed IMC 0612, Appendix E, "Examples of Minor Issues," and did not find any similar examples. Using IMC 0609, Appendix C, "Occupational Radiation Safety Significance Determination Process," the inspectors determined that the finding was of very low safety significance (Green) because the finding did not involve: (1) as-low-as-reasonably-achievable (ALARA) planning and controls; (2) a radiological overexposure; (3) a substantial potential for an overexposure; or (4) a compromised ability to assess dose. The primary cause of the finding is related to the cross-cutting aspect of resources in the human performance area (H.1). Specifically, procedures governing whole-body counting allow for the discounting of information without a proper technical justification. (Section 2RS4.1)

Inspection Report# : [2015001](#) (*pdf*)

Public Radiation Safety

Security

Although the Security Cornerstone is included in the Reactor Oversight Process assessment program, the Commission has decided that specific information related to findings and performance indicators pertaining to the Security

Cornerstone will not be publicly available to ensure that security information is not provided to a possible adversary. Other than the fact that a finding or performance indicator is Green or Greater-Than-Green, security related information will not be displayed on the public web page. Therefore, the [cover letters](#) to security inspection reports may be viewed.

Miscellaneous

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