Point Beach 2
2Q/2003 Plant Inspection Findings

Initiating Events

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: FIN Finding
Inadequate and Untimely Corrective Actions For Flooding of Manholes Containing Cables
One finding of very low risk significance was identified by the inspectors for the licensee's failure to establish timely and adequate corrective actions to address the flooding of manholes which contained both safety and non-safety related systems, structures, and components. The inspectors identified that the licensee had not implemented effective corrective actions to address long-standing problems with flooding in manholes and had deferred the implementation of corrective actions with insufficient basis. The finding was more than minor because, if left uncorrected, it would become a more significant concern since the lack of effective corrective actions to inspect and pump out water in manholes could affect safety-related cables routed through manholes such as those for service water pumps. Additionally, some of the cables routed in manholes provide power to safety-related buses from the licensee's offsite power systems. Hence, the loss of such power, due to cable failures, could result in momentary loss of power to the bus and the inability to re-energize the affected buses from the normal power source. This issue was categorized as a finding of very low risk significance since the identified water intrusion conditions had not caused any safety-related equipment failures at this time. No violation of NRC requirements occurred.
Inspection Report# : 2002013*(pdf)*

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: FIN Finding
Insufficient Preparation for Cold Weather Conditions
A finding of very low significance was identified for not sufficiently coordinating and being adequately prepared for the onset of cold weather prior to November 1, 2002, a point at which the Point Beach Nuclear Plant had experienced 30 hours of below freezing temperatures over 6 nights. The primary cause of this finding was related to the cross-cutting area of human performance. Despite beginning freeze protection activities at an appropriate time, lack of coordination between licensee departments resulted in incomplete preparations prior to the onset of freezing temperatures. The inspectors determined that the issue was more than minor because it increased the likelihood of those events that upset plant stability during power operations and would, if left uncorrected, become a more significant safety concern in subsequent years if more safety-related systems were to be affected. The finding was of very low safety significance because no safety-related functions or mitigating systems were rendered inoperable. No violation of NRC requirements occurred.
Inspection Report# : 2002013*(pdf)*

Mitigating Systems

Significance: G Jun 30, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Failure to Implement Risk Management Actions for Components Made Unavailable by Pre-Planned Work Activities
The inspectors identified a Non-Cited Violation of 10 CFR 50.65(a)(4) for failure to implement required risk management actions during calibration of volume control tank level transmitters during September 2002 and January 2003. The primary cause of this finding was related to the cross-cutting area of human performance in that probabilistic risk assessment, production planning, and on-shift personnel had not utilized the full capabilities of the risk assessment tool to recognize the unavailability of components associated with pre-planned work activities. The finding is greater than minor because, if left uncorrected, it would become a more significant safety concern if risk assessments that had not considered the impact of equipment and components rendered unavailable by pre-planned activities resulted in high risk levels without compensatory risk management analyses in place. The finding is of very low significance because it was not a design or qualification deficiency, did not represent an actual loss of the safety function, and did not involve internal or external initiating events.
Inspection Report# : 2003003*(pdf)*

Significance: G Mar 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Emergency Diesel Generator Safety-Related Protective Relay Calibration Procedure Inadequacies
The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requirements for inadequate emergency diesel generator (EDG) safety-related protective relay calibration procedures which contained quantitative acceptance criteria limits that did not correspond to vendor recommended values. The primary cause of this finding was related to the cross-cutting area of human performance. Despite multiple opportunities for procedure writers, technical reviewers, relay technicians, maintenance work planners, electrical maintenance first-line supervisors, and operations personnel to have identified these errors, each of the four procedures used to calibrate the EDG safety-related protective relays were found to contain similar quantitative acceptance criteria errors. This finding was more than minor because it: 1) affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events, and 2) if left uncorrected, would become a more significant safety concern in subsequent years if out-of-specification EDG safety-related protective relay settings affecting equipment operability and electrical distribution system coordination were left in service and not corrected. The finding was determined to be of very low risk significance since the inadequate procedures did not result in a design or qualification deficiency, an actual loss of the safety function, or involve internal or external initiating events.
Inspection Report# : 2003002*(pdf)*

Significance: G Mar 31, 2003
Identified By: NRC
Item Type: FIN Finding
G-05 Gas Turbine Generator Return-To-Service Prior to Completion of Troubleshooting and Maintenance Activities
The inspectors identified a finding of very low risk significance finding concerning the return to service of the G-05 gas turbine (GT) generator prior to completion of troubleshooting efforts involving starting diesel oil samples and certain maintenance activities. The primary cause of this finding was related to the cross-cutting area of human performance in that lack of interdepartmental communications and coordination caused the GT to be inappropriately returned to service on March 3, 2003, despite starting diesel analyses that indicated advanced oil degradation and the onset of bearing

damage and no return-to-service testing requirements having been defined in the maintenance department troubleshooting plan. The inspectors determined that the issue was more than minor because it affected the availability, reliability, and capability of the G-05 GT, a mitigating system. The finding was of very low safety significance since the inappropriate return-to-service did not result in a design or qualification deficiency, an actual loss of the safety function, or involve internal or external initiating events. No violation of NRC requirements occurred.
Inspection Report# : 2003002*(pdf)*

Significance: G Mar 31, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Reoccurring Facade Freeze Protection System Deficiencies
A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified through a self-revealing event on February 11, 2003, when one of the main control board indications associated with Unit 1 'B' main steam line pressure began reading higher that the other two. The higher pressure indicated the formation of an ice plug associated with pressure transmitter 1PT-483, a transmitter providing input to the engineering safeguards system. The primary cause of this finding was related to the cross-cutting area of human performance in that lack of facade freeze protection system coordination and training in the areas of lagging deficiencies and facade freeze system operations resulted in the removal of one of the three main steam line pressure inputs to the engineering safeguards system, a system relied upon to mitigate the consequences of a design basis accident. The inspectors determined that the facade freeze protection issues were more than minor because: 1) they had affected the availability, reliability, and capability of an input to the engineering safeguards system, a system relied upon to mitigate the consequences of a design basis accident; and 2) if left uncorrected, they would become a more significant concern in subsequent years if freezing of sensing lines resulted in the inability to mitigate the consequences of an accident. The finding was determined to be of very low risk significance since the facade freeze protection issues did not result in a design or qualification deficiency, an actual loss of the safety function, or meet any of the internal or external event screening criteria.
Inspection Report# : 2003002*(pdf)*

Significance: G Mar 24, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
NCV of 10 CFR Part 50, Appendix B, Criterion VI, for the failure to distribute temporary procedure changes to procedure sets in emergency resonse facilities
The inspectors identified two issues that were treated as one Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion VI, "Document Control." First, emergency and abnormal procedures in two emergency response facilities were not included as part of the temporary change distribution process. Second, no controls were in place to ensure that the scope of distribution of temporary procedure changes was appropriate. The finding was of very low risk significance because the licensee distributed the documents to the facilities prior to any facility activation and the need to use the procedures. Based upon the results of these inspections, we have concluded that the Red inspection finding, which involved the potential common mode failure of the AFW pumps due to inadequate operator response to a loss of instrument air (IA), will not be treated as an old design issue. As detailed in Section 6.06.a of Manual Chapter 0305, there are four criteria that must be met for the NRC to classify a problem as an old design issue and thus allow the NRC to not consider the finding in its assessment of Point Beach's overall performance. The inspections identified that the criterion pertaining to corrective action was not met in that the implementation of corrective action associated with your evaluation of the AFW/IA issue did not prevent recurrence of another, separate potential common mode failure of the AFW pumps. The failure to implement thorough and complete corrective actions became apparent during our review of the October 2002 AFW recirculation line orifice plugging issue and the identification of other problems related to AFW design. These problems included the use of a nonsafety-related power supply for relays associated with

the proper operation of the AFW recirculation line air-operated flow control valves and the single electrical bus dependencies of three of the four recirculation line air-operated flow control valves and three of the four service water supply motor-operated valves. Because the AFW/IA Red finding did not meet the criteria for consideration as an old design issue, Point Beach is in the Multiple/Repetitive Degraded Cornerstone Column of the Action Matrix of Manual Chapter 0305.
Inspection Report# : 2002015*(pdf)*

Significance: G Mar 24, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
NCV of 10 CFR Part 50, Appendix B, Criterion V, for inadequate procedure for calibration of auxiliary feedwater flow meter
The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for a procedure which directed the use of a flow instrument for the turbine-driven AFW pump recirculation line in a range for which it was not calibrated. The finding was of very low risk significance because follow-up calibration indicated that the instrument was reliable in the range in which it was to be used, and the inspectors concluded that it could have been used to accurately determine the AFW flow.
Inspection Report# : 2002015*(pdf)*

Significance: TBD Mar 24, 2003
Identified By: NRC
Item Type: AV Apparent Violation
Apparent violation of 10 CFR Part 50, Appendix B, Criterion III, for the failure to establish the appropriate design control measures for the installation of orifices to the AFW recirculation lines
An apparent violation was identified, in part, through a self-revealing event when decreased auxiliary feedwater pump recirculation flow was noted during post-maintenance testing. Subsequent licensee and NRC review of the event determined that the licensee had installed incorrectly designed orifices in each of the pump recirculation lines. The orifices, due to small clearances, were susceptible to plugging. The primary causes of this finding were inadequacies in the licensee's design process and the licensee's implementation of the process, including the identification of system design requirements and the development of supporting safety evaluations. The issue has been preliminarily determined to have high safety significance (Red). Following installation of the inadequately designed orifices, the entire auxiliary feedwater system was susceptible to a common mode failure during operations using service water. Failure of auxiliary feedwater during several initiating events could lead to core damage. The installation of the incorrectly designed orifices in the recirculation lines is an apparent violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control."
Inspection Report# : 2002015*(pdf)*

Significance: N/A Mar 24, 2003
Identified By: NRC
Item Type: VIO Violation
The failure to identify the root cause and implement corrective actions for the AFW/IA issue, a significant condition adverse to quality, so as to prevent recurrence.
A violation was identified for the licensee's failure to implement adequate corrective actions to effectively address a previous Red finding and preclude recurrence (Inspection Report 50-266/01-17; 50-301/01-17). Specifically, the licensee failed to identify potential common mode failures that existed involving power supplies to the recirculation line air-operated valve and other system components. In addition, the licensee's corrective actions for the potential common mode failure associated with a loss of instrument air did not preclude repetition. Specifically, the licensee's corrective actions, to upgrade the safety function of the air-operated recirculation valve, failed to ensure that successful operation of the recirculation line air-operated valve was dependent only on safety-related support systems. Following

the corrective actions, successful operation of the valve was still dependent upon nonsafety-related power to an interposing relay. Additionally, the corrective actions failed to discover a single failure mechanism involving a system orifice modification. The issue was more than minor because the failure to implement appropriate corrective actions resulted in the auxiliary feedwater system continuing to rely on nonsafety-related support systems and to be susceptible to a single event causing a total system failure. The failure of nonsafety-related support systems and single event failures are an expected condition during several design basis accidents and should not cause a safety system to fail. The failure of the licensee to implement adequate corrective actions is a violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action." This violation is associated with a previously identified RED finding (IR 50-266;50-30/01-17).
Inspection Report# : 2002015*(pdf)*

Significance: G Sep 30, 2002
Identified By: NRC
Item Type: FIN Finding
Conduct of a Partial G02 EDG Safety Injection Test Based on an Inadequate Assessment
The inspectors identified a finding of very low safety significance (Green) concerning the conduct of a partial G02 emergency diesel generator safety injection test while in Mode 1 based on an incomplete and inadequate assessment required by Technical Specification surveillance requirement 3.8.1.5. The finding was determined not to involve a violation of regulatory requirements due to the simplicity of the test and the quality of the pre-job briefing, which effectively met the Technical Specification requirements. The finding was determined to be of very low risk significance since the inadequate assessment did not result in a design or qualification deficiency, an actual loss of the safety function, or involve internal or external initiating events.
Inspection Report# : 2002010*(pdf)*

Significance: G Sep 30, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Untimely Development and Approval of (a) (1) Action Plan for Gas Turbine, G05
The inspectors identified a Non-Cited Violation of 10 CFR 50.65(a)(1) concerning the failure to set (a)(1) goals and monitor against the established goals for the G05 gas turbine (GT), a risk significant maintenance rule component relied upon to meet station blackout and certain Appendix R requirements. The issue of failing to set G05 GT (a)(1) goals and monitor against the established goals was more than minor since actual G05 GT equipment problems occurred. However, since the G05 equipment problems were not attributable to a 10 CFR 50.65(a)(1) violation, rather, a maintenance rule violation occurred as a consequence of the G05 GT problems, the performance deficiency could not be processed through the Manual Chapter 0609, "Significance Determination Process." Therefore, in accordance with Appendix B to Inspection Manual Chapter 0612, this maintenance rule violation was considered to be of very low safety significance.
Inspection Report# : 2002010*(pdf)*

Significance: G Sep 30, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Use of Steam Generator Narrow Range Level Detector During Cold Shutdown Plant Conditions
The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requirements for an inadequate shutdown emergency procedure which failed to account for the impact of varying water density differences on the steam generator narrow range level detector variable leg when transitioning from hot to cold plant conditions. Specifically, safety-related shutdown emergency procedures contained operator

instructions that could have caused the top of the steam generator U-tubes to become uncovered, thereby affecting the ability of the steam generators to function as a heat sink for removing reactor decay heat. The finding was of very low risk significance since NRC senior risk analysts determined that the discrepancy associated with the steam generator narrow range level indication would not have appreciably impacted steam generator heat removal capabilities.
Inspection Report# : 2002010*(pdf)*

Significance: G Aug 09, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Emergency Operating Procedures Incorrectly Translated From Design Basis of the Safety Injection System
The inspectors identified a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings." Several specific emergency operating procedure (EOP) deficiencies were identified during the inspection. The finding was considered to be greater than minor because the failure of licensee personnel to take appropriate actions under post-accident conditions could have resulted in system operating modes that had not been analyzed, and could have affected the performance of safety-related components and had a credible impact on safety. Because there was no actual failure of safety-related components associated with the mitigating systems cornerstone, the finding is considered to be of very low safety significance
Inspection Report# : 2002009*(pdf)*

Significance: G Aug 09, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Corrective Actions Were Inadequate to Ensure Accurate Calculations For RWST Water Level
The inspectors identified a Non-Cited Violation (10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action") where the licensee failed to take adequate corrective actions to resolve previously identified problems with the plant's engineering calculations concerning refueling water storage tank (RWST) water levels. The finding was considered to be greater than minor because licensee personnel failed to correct repetitive RWST calculation errors, which resulted in the propagation of erroneous RWST elevation vs. level data into inputs to other calculations. Inaccurate level indications were provided to the control room operators during performance of emergency operating procedures (EOPs). The failure to provide the operator with accurate RWST level indications during the performance of EOPs during a potential loss of coolant accident could have adversely affected the performance of safety-related components and had a credible impact on safety. Because there was no actual failure of safety-related components associated with the mitigating systems cornerstone, the finding is considered to be of very low safety significance
Inspection Report# : 2002009*(pdf)*

Significance: R Feb 28, 2002
Identified By: Licensee
Item Type: VIO Violation
POTENTIAL COMMON MODE FAILURE OF AUXILIARY FEEDWATER PUMPS DUE TO INADEQUATE PROCEDURAL GUIDANCE
Units 1 and 2. The licensee identified a potential common mode failure of the auxiliary feedwater pumps due to operator actions specified in plant procedures. The team identified that procedural guidance provided to operators was inadequate to prevent such a common mode failure. In addition, the team identified that the licensee had seven opportunities, from 1981 through 1997, to identifiy the problem and take appropriate corrective actions. After considering the information developed during the inspection and the information the licensee provided at the April 29, 2002, regulatory conference, the NRC concluded that a violation of 10 CFR Part 50, Appendix B, Criterion XVI, was appropriate for two of the originally proposed seven examples. The failures to provide adequate procedural guidance

and to take appropriate corrective actions are both a violation of 10 CFR Part 50, Appendix B, Criteria V and XVI. This issue has been determined to have high safety significance (Red). A common mode failure of the auxiliary feedwater pumps would result in substantially reduced mitigation capability for safely shutting down the plant in response to certain transients. The significance was determined to be high largely due to the relatively high initiating event frequencies associated with the involved transients and the high likelihood of improper operator actions due to the procedural inadequacies. The final significance determination for the Red finding and Notice of Violation were issued to the licensee in a letter dated July 12, 2002. Inspection Report 50-266/02-15; 50-301/02-15, issued April 2, 2003, documented the NRC decision that this finding is not an Old Design Issue.
Inspection Report# : 2001017*(pdf)*
Inspection Report# : 2003003*(pdf)*

Barrier Integrity

Significance: G Dec 28, 2002
Identified By: NRC
Item Type: NCV NonCited Violation
Pressurizer Safety Valve Failed to Lift at Test Pressure
The inspectors identified a Non-Cited Violation of Technical Specification 3.4.10 for the operation of Unit 2 from December 2000 to April 2002 with one inoperable pressurizer safety valve. The primary cause of this finding was related to the cross-cutting area of human performance, in that, inattention to the job-at-hand resulted in a vendor reassembling the valve such that it would not have lifted at the required setpoint. The inspectors determined that the issue was more than minor because it affected the functionality of the reactor coolant system pressure boundary, a physical barrier designed to protect the public from radionuclide releases caused by accidents or events. However, the finding was of very low risk significance since the change in core damage frequency as a result of having operated with the inoperable safety valve was determined to be less than 1E-6/year.
Inspection Report# : 2002013*(pdf)*

Emergency Preparedness

Significance: N/A Apr 15, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Decreased an Emergency Plan Commitment Without Prior NRC Approval
In October 1998, the licensee decreased its Emergency Plan's effectiveness without prior NRC approval due to an inadequate 10 CFR 50.54(q) review of six Emergency Response Organization (ERO) positions, which the licensee re-categorized from being 30 minute response positions to be 60 minute response positions. These six positions were re-established as 30 minute response positions in late January 2003. This Severity Level IV violation is being treated as a NCV consistent with Section VI.A.1 of the NRC Enforcement Policy.
Inspection Report# : 2002014*(pdf)*

Significance: G Mar 31, 2003
Identified By: NRC
Item Type: FIN Finding

Emergency Notification System Power Failure
The inspectors identified one finding of very low risk significance for not having adequate configuration control and not providing sufficient drawings and instructions to maintenance and operations personnel during an emergency notification telephone system battery charger failure and subsequent replacement activities. The primary cause of this finding was related to the cross-cutting area of human performance in that a lack of understanding of the basic system configuration and the absence of associated drawings and operating instructions resulted in unnecessary periods of system unavailability. The inspectors determined that the issue was more than minor because: 1) it affected the emergency preparedness cornerstone equipment and communications system attribute, and 2) if left uncorrected, would become a more significant safety concern if emergency response facility communication system modifications were made without the licensee's knowledge such that a reduction in emergency planning effectiveness occurred. Based on the answers to the Inspection Manual Chapter 0609, Appendix B, "Emergency Preparedness Significance Determination Process," screening questions, the inspectors determined that the issue was of very low safety significance. No violation of regulatory requirements occurred
Inspection Report# : 2003002*(pdf)*

Occupational Radiation Safety

Significance: G Jun 30, 2003
Identified By: NRC
Item Type: NCV NonCited Violation
Need for a Unit 2 Containment Cooling Fan Discharge Damper Temporary Modification Not Identified in a Timely Manner
The inspectors identified a Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for not taking appropriate and timely corrective actions to fully assess and correct degraded conditions associated with the safety-related Unit 2 containment cooling fan backdraft damper, 2W-1D2-A, during thermal performance testing activities on March 20, 2003. The primary cause of this finding was related to the cross-cutting area of human performance. Despite the involvement of the test coordinator, control room operating supervisor, and system engineer, incomplete communications and coordination resulted in damper parts on the cooling fan plenum floor not being fully identified as components affecting operation of the safety-related damper. The condition adverse to quality was identified 13 days later when, on April 2, 2003, a mechanic passing through a radiologically controlled machine shop, identified the damper counterweight amongst other controlled material. The finding was more than minor because: 1) it affected the reactor safety barrier integrity cornerstone objective of maintaining the functionality of primary containment, in that the reliability and availability of the Unit 2, ‘D' containment cooling fan, a risk significant large-early-release component, was affected, and 2) if left uncorrected, would become a more significant safety concern if components relied upon to perform safety-related functions were returned to service prior to fully assessing and correcting degraded conditions. The finding was determined to be of very low risk significance since the degraded backdraft damper did not represent a degradation of the radiological barrier function of the control room, auxiliary building, or spent fuel pool; did not represent degradation of the barrier function of the control room against smoke or a toxic atmosphere; and did not represent an actual open pathway in the physical integrity of reactor containment or an actual reduction of the atmospheric pressure control function of the reactor containment.
Inspection Report# : 2003003*(pdf)*

Public Radiation Safety

Physical Protection

Miscellaneous

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