

November 16, 2005

CAL 3-04-001

Mr. Dennis L. Koehl  
Site Vice President  
Point Beach Nuclear Plant  
Nuclear Management Company, LLC  
6590 Nuclear Road  
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2 - NRC PROBLEM  
IDENTIFICATION AND RESOLUTION INSPECTION REPORT  
NO. 05000266/2005012 AND 05000301/2005012

Dear Mr. Koehl:

On October 6, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an expanded-size baseline team inspection at your Point Beach Nuclear Plant, Units 1 and 2. The enclosed report documents the inspection findings, which were discussed on October 6 with you and members of your staff.

The inspection examined activities conducted under your license as they relate to the identification and resolution of problems; to your progress in implementing commitments documented in the Confirmatory Action Letter (CAL), dated April 21, 2004; and your compliance with the Commission's rules and regulations, and with the conditions of your operating licenses. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

In the Annual Assessment Letter for 2002 (dated March 4, 2003), we first notified the Nuclear Management Company that the NRC staff identified a substantive cross-cutting issue in the area of problem identification and resolution (i.e., corrective action program). Subsequently, in the post-95003 inspection CAL, the NRC identified the corrective action program as one of five areas of regulatory concern. Because of this focus on your corrective action program, we conducted an augmented problem identification and resolution inspection in 2004 and special inspection reviews in 2004 and 2005 of your actions to improve the program as part of your commitments to the CAL. To further aid in our assessment of your program, the inspection documented in the enclosed report was also augmented above the baseline.

Based on the samples selected for review, the inspectors identified three NRC-identified findings of very low safety significance, two of which involved violations of NRC requirements. However, because the violations were of very low safety significance and because the issues were entered into your corrective action program, the NRC is treating these violations as Non-Cited Violations (NCVs) consistent with Section VI.A of the NRC Enforcement Policy.

In addition, nine Action Plan steps of your Excellence Plan were reviewed during the inspection. The reviews were assessments of steps that you had considered closed. We concluded that all nine of the steps were closed appropriately.

We will use the results of this inspection as an input to our ongoing assessment of the CAL corrective action program area of regulatory concern.

If you contest the subject or severity of an NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Point Beach Nuclear Plant facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and any response you provide will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records System (PARS) component of NRC's document 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/*

Mark A. Satorius, Director  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000266/2005012; 05000301/2005012  
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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-266; 50-301

License Nos: DPR-24; DPR-27

Report No: 05000266/2005012; 05000301/2005012

Licensee: Nuclear Management Company, LLC

Facility: Point Beach Nuclear Plant, Units 1 and 2

Location: 6610 Nuclear Road  
Two Rivers, WI 54241

Dates: September 12 through October 6, 2005

Inspectors: S. Freeman, Senior Resident Inspector, Sequoyah (Team Leader)  
G. Gibbs, Resident Inspector, Point Beach  
D. Karjala, Resident Inspector, Prairie Island  
C. Brown, Reactor Engineer, Region III  
B. Schin, Senior Reactor Engineer, Region II

Approved by: P. Loudon, Chief  
Branch 5  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000266/2005012, 05000301/2005012; Nuclear Management Company; on 9/12/2005 - 10/6/2005; Point Beach Nuclear Plant, Units 1 & 2; biennial baseline inspection of the identification and resolution of problems. Two violations were identified in the area of problem identification and one finding in the area of extent-of-condition.

This report covered a 2-week, expanded-size baseline inspection of problem identification and resolution (Inspection Procedure (IP) 71152). The inspection was conducted by five inspectors: one Region II senior resident inspector, two Region III resident inspectors, one Region II senior reactor engineer, and one Region III reactor engineer. Three Green findings, two of which were also Non-Cited Violations (NCVs) of NRC requirements, were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### Identification and Resolution of Problems

The team determined that the licensee was capable of adequately identifying and correcting problems; however, there was room for improvement. While the licensee was identifying plant problems at an appropriately low level, the team was able to identify several deficiencies that had not been entered into the program. Two Non-Cited Violations of very low safety significance were associated with these deficiencies. The team also identified a vulnerability in the corrective action program governing procedure that could allow conditions adverse to quality to bypass the corrective action process.

For the most part, the licensee appropriately prioritized and evaluated the problems entered into the program; however, there were several exceptions. The team noted that, while site management had the vision and knowledge of how the corrective action program should work, this had not been fully received by the plant staff who implement the program on a day-to-day basis. This was based on examples where the primary method for evaluating problems, for example, root cause and extent-of-condition evaluations, appeared to be insufficiently addressing problems that were later detected by one of several secondary, oversight processes. The team also found examples of lack of rigor in root cause, apparent cause, and extent-of-condition evaluations. One finding was associated with these examples. For root cause evaluations, the examples contrasted with an observation of a recent licensee self-assessment that concluded that root cause evaluations were a strength. The NRC inspectors' observation in this area, however, was similar to the results of a recent review by the licensee's nuclear oversight (quality assurance) organization.

In the area of effectiveness of corrective actions, the team determined that actions taken by the licensee for problems entered into the corrective action program were effective. However, the team found several examples of problems with correcting previous NRC-identified Non-Cited

Violations. A basic assumption of the NRC policy for using Non-Cited Violations is that the corrective action program will appropriately correct the problems leading up to a violation, including actions necessary to address root causes and, where warranted, prevent recurrence.

From interviews conducted during this inspection, the team concluded that workers at Point Beach felt free to input nuclear safety findings into the corrective action program. However, results of the most recent safety culture survey indicated a significant decline in the general trust environment since the previous survey, that several significant employee perceptions affected the results of the survey, and that some specific departments needed management attention. The team observed that, while actions taken by site management to address the trust issue may work in principle, there were a number of plant employees who did not think the actions would be effective. The team also observed that there did not seem to be any planned actions to address the specific departments as called for in the survey.

## **A. Inspector-Identified and Self-Revealed Findings**

### **Cornerstone: Mitigating Systems**

- Green. The team identified a Green Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," for failure to enter into the corrective action program vendor information with the potential to degrade safety-related equipment. Specifically, in June 2005, no corrective action program document was written after the licensee was notified by the reactor head vendor about potential problems resulting from the method of storage in the containment. The licensee subsequently entered the issue into its corrective action program. As part of the corrective actions, the licensee counseled plant personnel in the reactor head replacement project about the need to enter such issues into the corrective action program.

This finding was more than minor because a more significant safety concern could occur if similar vendor issues were not entered into the corrective action program. The finding was of very low safety significance because the vendor subsequently determined that the head storage had been acceptable, no safety function was lost, no Technical Specification train or maintenance rule safety function was lost, and there were no external event concerns. The inspectors also determined that a primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in the area of identification, because the licensee failed to promptly identify a condition adverse to quality. (Section 4OA2.a.(2)(ii))

- Green. The team identified a Green Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion III, "Design Control," for the failure, from around 1994 to the date of the inspection, to translate emergency diesel generator licensing and design bases into emergency and abnormal operating procedures. One emergency operating procedure and one abnormal operating procedure on each unit did not contain the diesel generator ratings and directed operators to place loads on the diesel generators that could exceed the licensing basis load limit. The licensee subsequently entered the issue into its corrective action program. As part of the corrective actions, the licensee revised the procedures to incorporate the appropriate information.



This finding was more than minor because it involved the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective. Exceeding the licensing basis limit for diesel generator loading could affect the capability of the diesel generator to respond to a design basis accident, concurrent with a loss of offsite power and a single failure. The finding was of very low safety significance because this was a design deficiency with no loss of safety function. (Section 4OA2.a.(2)(iv))

- Green. The team identified a Green finding for the failure, in around July 2005, to perform an adequate extent-of-condition review following problems with auxiliary feedwater local control stations. After the apparent cause evaluation determined ineffective procedure validation had occurred, the extent-of-condition review did not check other procedures for similar problems. The licensee subsequently entered the issue into its corrective action program. As part of the corrective actions, the licensee was reviewing other procedures for similar problems.

This finding was more than minor because if left uncorrected, it could eventually result in failing to promptly identify conditions adverse to quality. The finding was of very low safety significance because no safety function was lost, no technical specification train or maintenance rule safety function was lost, and there were no external event concerns. The inspectors also determined that a primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in the area of evaluation, because the licensee failed to adequately evaluate a condition adverse to quality. (Section 4OA2.b.(2)(iv))

**B. Licensee-Identified Violations**

None.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA2 Problem Identification and Resolution

##### a. Effectiveness of Problem Identification

##### (1) Inspection Scope

The team reviewed a sample of more than 7500 corrective action program documents (CAPs) initiated since September 2004. This sampling included items from the various cornerstones of safety, to determine if they were appropriately characterized and entered into the licensee's corrective action program for evaluation and resolution. To do this, the team reviewed NRC-identified operating experience, industry-identified operating experience, and daily CAP screening lists to verify complete, accurate, and timely identification of problems commensurate with safety and ease of discovery. Specifically, the team reviewed the licensee's response to Generic Letter (GL) 2003-01, "Control Room Habitability," and various information notices to verify that NRC identified problems were entered into the corrective action program; licensee responses to Part 21 notices and Westinghouse Technical Bulletins to verify industry identified problems were properly entered into the program; and issues raised by the licensee's Offsite Review Committee to verify that the concerns were properly entered into the program. The team also reviewed the CAP screening team lists and attended several screening team meetings to verify that conditions adverse to quality (CAQs) were properly entered into the corrective action program and that no unidentified problems were apparent in the CAPs. Specific items reviewed are listed in the Attachment.

Finally, the team reviewed the July 2005 Point Beach Corrective Action Program Self-Assessment Report, and Nuclear Oversight (NOS-the quality assurance group) Report 2004-004-3-016 on the corrective action program to compare the results against self-revealing and NRC-identified issues.

##### (2) Assessment

The team determined that the licensee was identifying plant problems at an appropriately low level and entering them into the corrective action program. However, the team identified a vulnerability in the corrective action program governing procedure that could allow conditions adverse to quality to bypass the corrective action process. The team also identified several deficiencies that had not been previously identified by the licensee, and thus not entered into the program.

##### (i) Procedure Vulnerability

Nuclear Plant Procedure (NP) 5.3.1, "Action Request Process," Revision 27, provided the administrative guidance for entering problems and deficiencies into the corrective action program and used the action request (AR) as the main vehicle to track progress

through the program. The procedure specified that an AR could take two separate paths as it worked through the process. In the first, used for a CAQ, the AR (now called a CAP) would receive an operability screen and a cause evaluation screen before being assigned to a work group, and would receive a closeout review by a designated CAP owner, and possibly an oversight group, after work completion. In the second, used for routine work activities, the AR (non-CAP AR) would be assigned directly to a work group for completion. As part of the non-CAP AR process, Step 6.3 of NP 5.3.1 required a second check to determine if a CAP was needed. However, the team noted that this second check was conducted by the same individual that initiated the non-CAP AR. The licensee had identified, via the self-assessment, a similar condition in the software used to track ARs and had taken corrective action to have the CAP screening team review the new non-CAP ARs on a daily basis; however, the team determined that this did not address the vulnerability mentioned here. At the close of the inspection, the team had not identified any significant cases where a CAQ had been tracked using a non-CAP AR. The licensee initiated CAP067455 to address this concern.

(ii) Vendor Information Not Entered into Corrective Action Program

Introduction: The team identified a Green, Non-Cited Violation (NCV) for the licensee's failure to enter into the corrective action program vendor information with the potential to degrade safety-related equipment. Specifically, no CAP was written after the licensee was notified by the reactor head vendor about potential problems resulting from the method of storage in the containment.

Description: The head replacement outage on Unit 2 in the spring of 2005 was delayed for several weeks until head lift analysis and licensing issues were adequately resolved. On June 14, 2005, the vendor for the new head informed the licensee of a potential problem with storing the new head in the containment without a nitrogen blanket. The vendor indicated that this had the potential for corrosion that could lead to a malfunction of the control rod drive mechanisms (CRDMs). This information was received at Point Beach on June 15, 2005. Procedure NP 5.3.1, Step 4.6, defined a CAQ, among other things, as a problem with the potential to affect the operational aspects of nuclear safety which reduced the ability of a component to perform its intended safety function. The CRDMs performed the safety function of controlling reactivity. Even though this step would also require a CAP to be initiated when a CAQ was identified, none was written until the licensee was questioned by the team.

Analysis: The team identified this finding as part of the review of CAP065666, which dealt with a rod drop incident on Unit 2, when the root cause evaluation could not definitely rule out the possibility that the vendor-identified storage issue caused the CRDM malfunction that led to the dropped rod. Because of this, and because a more significant safety concern would occur if similar vendor issues were not entered into the corrective action program, this issue is more than minor. This finding affected the Mitigating Systems cornerstone because the CRDMs control reactivity. However, because the vendor subsequently determined that the head storage had been acceptable, no safety function was lost, no TS train or maintenance rule safety function was lost, and there was no external event concerns, this finding was determined to be of very low safety significance (Green). The issue was placed in the licensee's corrective action program as CAP067412. As part of the corrective action the licensee counseled

plant staff in the reactor head replacement group on the need to enter such issues into the corrective action program and the vendor technical information program. The inspectors also determined that a primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in the area of identification, because the licensee failed to promptly identify a condition adverse to quality.

Enforcement: 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," required, in part, that CAQs be promptly identified and corrected. Contrary to this, on June 15, 2005, the licensee failed to identify a potential problem with storage of the Unit 2 head as a CAQ. Because this violation was of very low significance (Green) and because it has been entered into the corrective action program as CAP067412, it is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000266/2005012-01; 05000301/2005012-01).

(iii) Effects of Elevated Temperatures on Control Room Instruments

Introduction: The team identified an unresolved item (URI) related to the effects of elevated control room temperatures on instrument accuracies and accident mitigation during a design basis loss of coolant accident (LOCA). This will remain unresolved pending NRC review of licensee evaluations on control room instruments.

Description: The Final Safety Analysis Report (FSAR) Section 9.8, Control Room Ventilation System, stated that during a design basis LOCA concurrent with a loss of offsite power and a single failure, the control room ventilation fans would not be automatically loaded onto an emergency diesel generator (EDG). Further, the fans may not be manually started by operators for as long as two hours, to limit EDG loading. During this time, control room temperature could increase to 112 degrees Fahrenheit (EF). The FSAR further stated that, because the instrumentation and associated circuitry located in the control room was generally rated for an ambient temperature range of 40EF to 120EF, it could be concluded that this equipment would perform its function during a two hour loss of control room ventilation. This was based on licensee Technical Specifications (TSs), which required only two (of four) operable EDGs for two units. Consequently, during a LOCA concurrent with a loss of offsite power and a single failure, one EDG could be operating to supply electrical power to two units. That one EDG could not support accident loads on one unit plus shutdown loads on the other unit and also power the control room ventilation system.

Because elevated temperatures could affect the accuracy of control room instruments, the team reviewed the following licensee calculations to verify that they included the effects of elevated control room temperatures on instrument accuracies:

- PBNP-IC-08, "Pressurizer Level Instrument Uncertainty/Setpoint," Revision 2,
- PBNP-IC-12, "Low and High Pressurizer Pressure Reactor Trip Instrument, Revision 2,
- PBNP-IC-17, "Low Range Containment Pressure Instrument Loop Uncertainty/Setpoint Calculation," Revision 0.

The team found that assumptions in licensee instrument loop uncertainty calculations for selected control room instruments that could be used during a LOCA (reactor coolant system pressure, containment pressure, and pressurizer level) included control room temperature at 75EF ± 10EF, with negligible effect on instrument inaccuracies. The calculations did not evaluate the effects of elevated control room temperatures up to 112EF on instrument accuracies. Increased instrument inaccuracies during a design basis LOCA could potentially affect mitigation of the event.

Analysis: The licensee failure to consider the effects of elevated control room temperatures on instrument inaccuracies following a design basis LOCA could potentially affect mitigation of the event. If the inaccuracies were large enough, and if left uncorrected, this would be more than minor. However, this issue could have no more than very low safety significance (Green) because of the licensee's administrative controls on EDGs. These controls limited EDG outages so that only one EDG would be out-of-service at any one time. Licensee information showed that more than one EDG was out-of-service at the same time for only about five total hours during the last three years. If a LOCA started with at least three EDGs operable, and one subsequently failed, then the two remaining EDGs would provide sufficient electrical power for operators to promptly restart the control room ventilation system. Consequently, the control room temperatures would not become elevated.

The licensee entered this issue into the corrective action program as CAP067405 and CAP067700. As stated in these CAPs, the licensee planned to include an evaluation of elevated control room temperatures, that could occur during a design basis LOCA, in the current review and upgrade of instrumentation and control (I&C) calculations. This issue will remain unresolved pending NRC review of the results of licensee's revised instrument loop uncertainty calculations and evaluation of how the increased instrument inaccuracies due to elevated control room temperatures could affect accident mitigation. This is identified as URI 05000266/2005012-02; 0500301/2005012-02.

(iv) Diesel Generator Loading Could Exceed Licensing Basis

Introduction: The team identified a Green, NCV for failure to translate EDG licensing and design bases into emergency and abnormal operating procedures (EOPs and AOPs). One EOP and one AOP on each unit did not contain the EDG ratings and directed operators to place loads on the EDGs that could exceed the licensing basis.

Description: When the licensee installed EDGs G-03 and G-04 in 1994, the NRC Safety Evaluation Report (SER) that approved TS changes (SER 94-0030, dated October 24, 1994), assumed that the worst case loading for any of the four EDGs would occur on EDG G-03 and G-04 during the injection phase of a design basis LOCA with the other unit in cold shutdown. The assumed loading was 2902 kiloWatts (kW) lasting for less than one-half hour. This was more than the 2000-hour rating of 2848 kW but less than the 200-hour rating of 2951 kW. After the first half-hour, the loading would reduce to 2581 kW, less than the 2000-hour rating. As part of the loading of EDGs G-03 and G-04, the control room ventilation fans were not intended to automatically start but rather were to be manually started during the recirculation phase.

During review of corrective actions for FIN 05000266/2005003-03, the team noted that EOP-0, Reactor Trip and Safety Injection Unit 1 [2], instructed the operators to start containment accident fans and control room ventilation fans after verifying automatic actions. Additionally, the EOP directed operators to monitor EDG loading, in accordance with AOP-22, EDG load management, later in the procedure. The team determined that, if the operators followed EOP-0 as written, the control room ventilation fans would be started during the injection phase of the LOCA and an additional unanalyzed 20 kW would be placed on the running EDG. The licensee performed an operability evaluation and, while concluding EDGs would perform their safety function, determined that this situation would result in a worst case total load of 2969 kW on EDG G-04. That would exceed the licensing basis 200-hour rating of 2951 kW. To correct the situation, the licensee initiated CAP067349 and revised the procedures to include the correct licensing basis limits and EDG ratings.

Analysis: This finding was more than minor because it involved the design control attribute of the Mitigating Systems cornerstone and affected the cornerstone objective. Exceeding the licensing basis limit for EDG loading would affect the capability of the EDG to respond to a design basis LOCA, concurrent with a loss of offsite power and a single failure. Because there was no loss of safety function, the team determined that the finding was of very low safety significance (Green).

Enforcement: 10 CFR Part 50, Appendix B, Criterion III, "Design Control," required, in part, that measures be established to assure that the design basis be correctly translated into procedures and instructions. Contrary to this, as of September 28, 2005, the licensee had not correctly translated the licensing basis for the EDGs into EOP-0 and AOP-22. Because this violation was of very low significance (Green) and because it has been entered into the corrective action program as CAP067349, it is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000266,301/2005012-03).

**b. Prioritization and Evaluation of Issues**

(1) Inspection Scope

The team reviewed NP 5.3.1 to determine the various licensee requirements for prioritizing and evaluating issues. Following that review, the team reviewed corrective action program documents, including: CAPs, operability determinations (OPRs), root cause evaluations (RCEs), apparent cause evaluations (ACEs), condition evaluations (CEs), maintenance rule evaluations (MREs), corrective actions (CAs), corrective actions to prevent recurrence (CATPRs), and other actions (OTHs). The team verified that these documents were consistent with these requirements and the significance of the problem described. The team also reviewed each of these type documents to verify that classification and prioritization of problems was commensurate with the safety significance, that root and contributing causes were appropriately identified, and that consideration was given for extent-of-condition, generic implications, common cause, and previous occurrences. Specifically, the team reviewed the following that had been initiated since September 2004: the follow-up CAP for a sample of NRC violations; a sample of CAPs in the top two significance levels; a sample of CAPs with RCEs; and a

sample of CAPs associated with the corrective action program, licensee event reports (LERs), Part 21 reports, Westinghouse technical bulletins, and Offsite Review Committee concerns. The team also reviewed corrective action documents associated with nine completed steps from the licensee excellence plan associated with the Confirmatory Action Letter (CAL) dated April 21, 2004. Specific items reviewed are listed in the Attachment.

Finally, the team reviewed the July 2005 Point Beach Corrective Action Program Self-Assessment Report, and Nuclear Oversight (NOS—the quality assurance group) Report 2004-004-3-016 on the corrective action program to compare the results against the team's observations about licensee prioritization and evaluation of issues.

(2) Assessment

For the most part, the team found that the licensee appropriately prioritized and evaluated the problems entered into the program. However, there were several exceptions. The team concluded that, while site management had the vision and knowledge of how the corrective action program should work, this had not been fully received by the plant staff who implement the program on a day-to-day basis. The team based this conclusion on examples where the primary method for evaluating problems, for example, root cause and extent-of-condition evaluations, appeared to insufficiently address problems that were later detected by one of several secondary, oversight processes. While the secondary processes resulted in the needed corrective actions being taken, the team noted that the potential for delay in implementing effective corrective actions existed with the secondary processes. The team also found examples of lack of rigor in root cause, apparent cause, and extent-of-condition evaluations. For root cause evaluations, the examples contrasted with an observation of a recent licensee self-assessment that concluded that root causes evaluations were a strength. The NRC inspectors' observation in this area, however, was similar to the comments regarding root cause evaluations from NOS Report 2004-004-3-016.

(i) Problems Detected by Oversight

The evaluation of CAP064491, which resulted from NCV 05000301/2005004-05 and dealt with 300 gallons lost from the Unit 2 refueling water storage tank. This CAP identified a status control issue with valve alignment conflicts and that the electronic tagging module conflict check feature in the Shift Operations Management System (SOMS) was limited in capabilities. The CAP did not address why operations staff had an incorrect understanding of the SOMS conflict determination capability nor did it address the extent-of-condition for system status control issues. This was later caught in a Department Roll Up Meeting (DRUM) review by the operations manager and added to an ACE and CAP for a different status control issue.

CAP062122, which resulted from NCV 05000301/2005003-01 and dealt with a leaking air fitting on the Unit 2 turbine-driven auxiliary feedwater pump, was initially evaluated using a CE but later reopened to include an ACE. This initial CE identified three corrective actions, one of which was to evaluate the need to provide training to the instrumentation and control (I&C) department on the significance and safety function of the backup pneumatic supply for the auxiliary feedwater (AFW) pumps. The licensee's

curriculum review committee in training decided separately that I&C training was not needed but the basis for this decision was not documented. The I&C supervisor had found similar problems during a maintenance department self-assessment and commented to the committee.

The evaluation for CAP064386 (RCE000280), which dealt with an adverse trend in compliance with NP 8.4.10, "Exclusion of Foreign Material From Plant Components and Systems," on foreign material exclusion (FME) controls revealed that there were 95 CAPs written on FME before CAP064386 yet the trending program had not identified the trend. This was identified by NOS.

(ii) Lack of Rigor in Root Cause and Apparent Cause Evaluations

The inspectors reviewed several RCEs where the appropriate causes were identified or adequate corrective actions were identified to correct the original problem, but the root cause methodology employed did not include the more appropriate barrier analysis and/or change analysis:

- RCE000268, pertaining to a health physics procedure non-compliance.
- RCE000276, which evaluated the cause of NCV 05000266/2005004-04; 05000301/2005004-04 pertaining to correcting previously identified problems in implementing Generic Letter 88-17, "Loss of Decay Heat Removal."
- RCE000280, pertaining to FME controls.
- RCE000281, pertaining to procedure revision.

RCE000271 dealt with a steam leak in containment from a steam flow transmitter root valve. The evaluation determined the root cause to be a code acceptable material defect in the valve body or improper welding that failed under vibration. The corrective action was to install a support for the condensing pot. The team initially concluded that the corrective action did not address the identified cause, however after discussions with involved persons the team concluded that the action did address all causes. The documentation was not clear on the relationship between the cause and the corrective action.

ACE001819, which evaluated the cause of NCV 05000266/2004008-03; 05000301/2004008-03, dealt with the apparent cause for failure to test molded case circuit breakers. The team concluded that, while testing of the breakers had been restored, the evaluation did not fully explain why testing was inactivated for an extended period of time. The evaluation determined that a component maintenance program for molded case circuit breakers was appropriately placed on administrative hold, but that the required preventive maintenance callups had not been activated. The evaluation determined the cause to be lack of management support and oversight but concluded that management attention was now appropriately focused and therefore no further corrective actions were needed. The team determined that lack of management attention was not a cause. The evaluation did not explain why there was a lack of management attention or why the process itself did not ensure that assigned corrective actions were implemented. After further discussions, the licensee determined that the reason the preventive maintenance callups were not activated was because licensee personnel failed to follow the preventive maintenance process described in NP 10.2.6,



“Preventive Maintenance Scheduling and Administration,” Revision 8. The team determined that, even though the original evaluation did not fully determine the cause for failure to test molded case circuit breakers, there was no safety impact because the breaker program was the only one affected and that had been corrected.

ACE001855 dealt with the loss of a 345-kiloVolt (kV) offsite power line and the loss of several battery chargers. The team noted that the main body of the evaluation appeared to be narrowly focused on the cause of the lost power line and not that AOP 0.0, “Vital DC System Malfunction,” Revision 26, contained inadequate guidance on the battery chargers. However, an attachment to the evaluation appeared to address the AOP. This team concluded this was another case of unclear documentation.

ACE001883, which resulted from NCV 05000301/2005003-01 and was discussed in the previous section, dealt with a leaking air fitting on the Unit 2 turbine-driven AFW pump. When the apparent cause evaluation was completed it identified that I&C personnel thought they had heard an air leak and expanded their post-maintenance leak check. However, the evaluation did not address why the expanded checks were unsuccessful in discovering the leak. Because of this, the team noted that the licensee missed an opportunity to address any inappropriate human performance aspects of the maintenance and prevent future problems. The team concluded that corrective actions to perform post-maintenance pressure drop tests subsequent to air system maintenance would ensure the tightness boundary of the safety-related air system components.

(iii) Self-Assessment on Root Cause Evaluations

The licensee corrective action program self-assessment, dated July 18, 2005, indicated that root cause evaluation quality was a strength based on alignment with the NMC Root Cause Evaluation Manual and the use of certified individuals on root cause teams. The licensee’s sample included five root cause evaluations that were recent at the time. The team reviewed ten root cause evaluations, including two of those used in the self-assessment, and found one example where the licensee did not fully address the cause in the report (RCE000276) and several more where there was room for improvement. In addition to NRC observations, NOS Report 2004-004-3-016, dated January 3, 2005, indicated that root cause analysis was satisfactory with opportunity for improvement. Because of these observations, and because “strength” implies very little or no need for improvement, the team determined the licensee’s self-assessment “strength” on root cause evaluations to be overly positive.

(iv) Inadequate Extent-of-Condition Review

Introduction: The team identified a Green finding for failure to perform an adequate extent-of-condition review following problems with AFW local control stations. After the apparent cause evaluation determined ineffective procedure validation had occurred, the extent-of-condition review did not check other procedures for similar problems.

Description: On July 20, 2005, during a test of the motor-driven AFW local control stations, the recirculation valve for AFW pump P-38A did not open as expected. Operators immediately shut down the pump and later confirmed its operability from the control room. In reviewing the incident, the licensee learned that the valve had

responded as designed for local operation but that the test procedure, 0-PT-AF-003, "Test of Motor-Driven Auxiliary Feedwater Pumps Local Control Switches," was incorrect in expecting the valve to open. Procedure 0-PT-AF-003 had been developed from AOP-10, "Control Room Inaccessibility," Revision 0, as a means to test not only the AFW local control stations but also to validate the AOP, therefore AOP-10 was incorrect also. The licensee determined that the cause was a lack of proper validation and lack of an engineering review on AOP-10.

In reviewing the apparent cause evaluation, ACE001904, the team found that the extent-of-condition review determined that AOP-10 was the only procedure that used the motor-driven AFW local control stations and limited corrective actions to revising AOP-10. The team determined that this did not address the identified cause because there could be other procedures that had been improperly validated or approved without interdisciplinary review. The licensee subsequently wrote CAP067350 and found that 16 additional AOPs were validated in the same manner as AOP-10. The licensee initiated CA064845 to validate these AOPs using the latest validation process.

Analysis: Failure to perform an adequate extent-of-condition review, if left uncorrected, would eventually result in failing to promptly identify CAQs. Because AOPs are used to mitigate transients, the team considered this finding to affect the Mitigation System cornerstone. Because no safety function was lost, no TS train or maintenance rule safety function was lost, and there was no external event concerns, this finding was determined to be of very low safety significance (Green). The inspectors also determined that a primary cause of this finding was related to the cross-cutting aspect of problem identification and resolution in the area of evaluation, because the licensee failed to adequately evaluate a condition adverse to quality.

Enforcement: 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," requires that CAQs be promptly identified and corrected. Any missed problems in procedures as a result of the inadequate extent-of-condition review discussed in this issue would be a violation of the criterion. However, because no missed problems have been identified, the team determined there was no violation of NRC requirements. Therefore this finding is identified as FIN 05000266/2005012-04; 05000301/2005012-04.

**c. Effectiveness of Corrective Actions**

(1) Inspection Scope

For each CAP reviewed in this inspection, the team verified that the specified corrective actions were effective in fixing the problems described and were completed in a timely manner commensurate with the safety significance of the problem. The team specifically reviewed all Level A CAPs, which the licensee considered to be significant CAQs, to ensure that they identified the causes and implemented corrective actions to prevent recurrence. The team also reviewed a sample of CAPs associated with NCVs that have been identified since September 2004 because a basic assumption of the NRC policy for using NCVs has been that the licensee's corrective action program will correct the problem leading to the violation, including, where warranted, actions to prevent recurrence. Specific items reviewed are listed in the Attachment.

The team also reviewed nine completed steps from the licensee's Excellence Plan associated with the April 21, 2004, Confirmatory Action Letter (CAL) to assess their appropriateness, focus, and if possible, their effectiveness.

(2) Assessment

The team determined that, generally, the licensee was taking corrective actions that were appropriate and focused and were effective in correcting identified problems and in preventing recurrence. However, the team found several examples of problems with correcting performance issues documented as NCVs in previous NRC inspection reports:

- NCV 05000301/2005004-05 was discussed in the prioritization and evaluation section. After an NCV was identified by NRC inspection for status control items that resulted in losing 300 gallons from the Unit 2 refueling water storage tank, at least two more status control events where the licensee interrupted work or test activities occurred before the licensee recognized that the problem with the refueling waters storage tank incident was the same issue.
- NCV 05000266/2005004-04; 05000301/2005004-04, which dealt with correcting previously identified problems in implementing Generic Letter 88-17 commitments, was also discussed in the prioritization and evaluation section. The team had no issues with corrective actions for this NCV; however, this was a repeat occurrence from a previous NCV indicating that the licensee did not fix the problems that led to the initial violation.
- NCV 05000266/2004008-03; 05000301/2004008-03 dealt with molded case circuit breaker testing program problems. The licensee did not fully determine the cause for this issue until the team began asking questions that prompted them to look further.
- NCV 05000301/2005003-01 dealt with a leaking air fitting on the Unit 2 turbine-driven AFW pump. The team noted that the licensee missed an opportunity to address any inappropriate human performance aspects of the pump maintenance and prevent future problems.

(3) Confirmatory Action Letter Items

(I) <u>Action Plan</u>	<u>Title</u>	<u>Step</u>
OP-10-004	CAP Resolutions Effectively Address Problems	14

This action step was intended to perform an effectiveness review to ensure that improvements to the corrective action program resulted in corrective actions that remain effective.

Implementation of Action Plan Step

The licensee performed an effectiveness review with a team of three subject matter experts from Hudson, Monticello, and Point Beach during October 25 - November 12, 2004. The effectiveness review concluded that the actions taken have been effective. The team reviewed the effectiveness review report, corrective action program performance indicators, and five root cause evaluation reports to verify effectiveness of the corrective action program. The licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(ii)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-005	Improve CAP Trending and Use of Trending	12

This action step was intended to perform an effectiveness review to determine how well corrective action program trend reports are used by managers and supervisors to correct emerging issues.

Implementation of Action Plan Step

The licensee completed an effectiveness review on July 13, 2005. The effectiveness review concluded that trend reports were increasingly identifying potential declining trends, and bringing them to the attention of managers and supervisors. The review also identified that actions taken in response to the potential trends were not always effective and participation was inconsistent. These issues were entered into the corrective action program. The team reviewed the effectiveness review report, trend reports from 2003, 2004, and 2005, and the CAPs that resulted from the potential trends that were identified to verify that the licensee was reviewing the corrective action program data to identify potential emerging adverse trends. The licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(iii)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-005	Improve CAP Trending and Use of Trending	13

This action step was intended to perform a closeout effectiveness review to assure that periodic reports are issued and reviewed by plant management and that declining performance trends are identified, and actions are taken to correct performance.

Implementation of Action Plan Step

The licensee performed a final effectiveness review from February 1 to February 15, 2005. The effectiveness review concluded that actions taken were effective with the exception of incorporating CAP trends into training and the use of adverse trend trigger thresholds in the maintenance and radiation protection

departments. Those issues were entered into the corrective action program. The team reviewed the effectiveness review report, trend reports from 2004 and 2005, and the CAPs that resulted from the potential trends that were identified to verify that the licensee was identifying potential adverse trends and taking action to address them. The licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(iv)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-006	Effective Root Cause Evaluations	12

This action step was intended to perform an effectiveness review to assess whether actions taken to implement the use of multi-disciplinary teams for the performance of root cause evaluations are being utilized where appropriate.

Implementation of Action Plan Step

The licensee performed an effectiveness review with four individuals from Palisades, Braidwood, and Point Beach from May 24 to May 28, 2004. The effectiveness review concluded that the actions taken have been effective. The team reviewed the effectiveness review report, root cause evaluation scores, root cause evaluation manual, and team certifications. The licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(v)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-006	Effective Root Cause Evaluations	14

This action step was intended to establish a continuing/refresher training course for root cause evaluators.

Implementation of Action Plan Step

The licensee prepared a lesson plan and presentation, and conducted root cause evaluator refresher courses on February 23 and February 28, 2005. The team reviewed the lesson plan, course presentation materials, attendance records, and student feedback records. The licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(vi)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-006	Effective Root Cause Evaluations	15

This action step was intended to perform an effectiveness review to assess whether actions implemented have improved the quality of root cause evaluations.

Implementation of Action Plan Step

The licensee performed an effectiveness review with a team of three people from Kewaunee, Point Beach, and a consulting company. The effectiveness review concluded that the actions taken have been effective. The team reviewed the effectiveness review report, performance indicator data, and root cause evaluator certification records. The licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(vii)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-010	Operating Experience (OE) Improvement Plan	19

The purpose of this step was to conduct an effectiveness review of actions taken to improve the OE program. This review was performed in June of 2004, as scheduled, and raised several issues with closure package quality. During the previous NRC Problem Identification and Resolution inspection, in 2004, the NRC inspectors noted that the effectiveness review was inadequate and difficult to review. Subsequently, the licensee reviewed the effectiveness review and wrote a CAP. The CAP (CAP061061) stated that the effectiveness review itself provided little insight as to the impact, or lack of impact, of improvements that had been made in the OE program.

Implementation of Action Plan Step

The information from CAP061061 briefly described above was utilized as lessons-learned for a subsequent effectiveness review, EFR015588. Input from the Excellence Team was incorporated prior to performing EFR015588 to satisfy Action Plan Item OP-10-010, Step 23, "Perform an effectiveness review of the implementation of CA032717 within the Maintenance organization as well as the effectiveness of the PBNP Excellence Plan." NRC Special Inspection Report 05000266/2005014; 05000301/2005014 documented NRC review of Item OP-10-010, Step 23 of the PBNP Excellence Plan. The report concluded the licensee completed the Action Plan Action Step as committed in the March 22, 2004, letter and as incorporated into the CAL. The team did not identify any significant problems with actions taken to complete this step.

(viii)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-010	Operating Experience (OE) Improvement Plan	22

The purpose of this step was to implement a new electronic method for access of OE for pre-job briefs for maintenance personnel. This item was previously reviewed during a special inspection to review the licensee's progress in meeting the commitments documented in the CAL. NRC Special Inspection Report 05000266/2005014; 05000301/2005014 documented a June 2005 review of this item indicating the Action Step had not been completed by the committed due date. The report indicated that problems identified with implementation of the database during the January 2005 effectiveness review had not yet been addressed.

Implementation of Action Plan Step

As of August 31, 2005, the database had been populated with 3825 records. There were 1124 procedures with completed pre-job briefs and 2701 non-procedural inputs to the database. Each work group identified work-off curves to monitor completion of the initial scope database population. The maintenance group addressed medium- and high-risk call-ups scheduled through the end of 2005 and all I&C procedures (except for measuring and test equipment-related procedures). For the operations department, 203 “canned” pre-job briefs were input into the database; the radiation protection group selected 25 job files for the database and 9 additional radiation protection tasks for input; and the engineering group selected 64 medium- and high-risk work activities and 49 activities based on U1R29 tasks and work orders. As of August 31, 2005, the initial scope population described above had been completed. The team did not identify any significant problems with actions taken to complete this step.

(ix)	<u>Action Plan</u>	<u>Title</u>	<u>Step</u>
	OP-10-011	Improve Effectiveness of Self-Assessments	9

This action step involved assessing the effectiveness of the licensee’s Continuous Performance Improvement Process. This process included three parts: self-assessments, bench-marking, and job observations. Self-assessments were described in NP 13.1.1, “Self-Assessment Program,” Revision 15; NP 13.4.1, “Focused Self-Assessment Planning, Conduct, and Reporting,” Revision 2; NP 13.5.1, “Snapshot Evaluation,” Revision 1; and NP 13.9.1, “Integrated Assessment Scheduling,” Revision 1. Bench-marking and job observations were described in NP 13.7.1, “Bench-marking Process,” Revision 2; and NP 13.6.1, “Human Performance Observation Program,” Revision 5.

Implementation of Action Plan Step

The licensee had completed a self-assessment of the effectiveness of the Continuous Performance Improvement Process and had concluded that all of the goals were generally being met. One exception was that some quantity (e.g., number of job observations) and timeliness goals had not been met during an outage. The team noted that all of the goals involved quantity (e.g., number of job observations, bench-marking trips, or self-assessments during a month) or timeliness (e.g., of completing required reports). The goals that were reviewed by the licensee’s self-assessment did not involve improvements or corrective actions that resulted from the self-assessments, bench-marking, or job observations.

The team independently reviewed departmental records of two departments (operations and engineering) that documented the results of their self-assessments, bench-marking, and job observations. The team also discussed the results with representatives of the two departments. The team found that the results did include many potential improvements and needed corrective actions. Further, identified nonconforming or degraded conditions were being entered into the corrective action program. In addition, a summary of the results was being compiled as a Department Roll-Up Meeting (DRUM) Report and a quarterly summary for all departments, entitled “DRUM Summary Report,”

which went to the plant manager. The DRUM was controlled by NP 13.10.1, "Department Roll-Up Meeting (DRUM) Manual - Department Performance Trending," Revision 4. Overall, the team did not identify any significant problems with the effectiveness of the Continuous Performance Improvement Process.

**d. Assessment of Safety-Conscious Work Environment**

(1) Inspection Scope

As part of the interviews that occurred during this inspection the team attempted to assess whether or not licensee personnel were reluctant to raise safety concerns. The team also interviewed the site employee concerns program manager and, because factors other than direct retaliation could result in a reluctance to raise safety concerns, the team reviewed the results of the Safety Culture Survey that was completed in December 2004. The team leader discussed the results of the survey with the site vice president and members of his staff serving on the safety culture action committee to address those results.

(2) Assessment

The team noted that, overall, licensee personnel were willing to raise safety concerns. However, the team did have several observations worth noting as a result of the safety culture survey review. First, the safety culture survey identified a significant decline in the general trust environment at Point Beach between January 2003 and December 2004, several significant employee perceptions that affected the results, some specific departments that needed management attention to address significantly declined rating trends, and pointed out that management attention was needed to address the underlying causes of the low ratings. Second, even though the safety culture action committee had taken some steps to address the trust issues and employee perceptions, the team noted that some people at the site did not believe these actions would be very effective. Finally, the team noted that there did not seem to be any planned actions to address the culture in specific departments. The licensee indicated that department managers were free to take their own initiative, that the site strategic vision (entitled "Picture of Excellence") was intended to drive expectations, and that the new formalized operational decision making process would address the underlying causes of the declining culture in various departments. However, the team concluded that this fell short of the "management attention" called for by the survey.

4OA6 Meetings

On September 30, 2005, the team presented the preliminary inspection results to Mr. D. Koehl and members of his staff, who acknowledged the findings. The licensee did not identify any information, provided to or reviewed by the team and likely to be included in the inspection report, as proprietary.

On October 6, 2005, the team presented the final inspection results to Mr. D. Koehl and members of his staff.



4OA7 Licensee-Identified Violation

None.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee

M. Arnold, Regulatory Specialist  
A. Capristo, Business Support Manager  
G. Casadonte, Fire Protection Coordinator  
B. Cole, Internal Assessment Manager  
F. Forrest, Nuclear Oversight Manager  
B. Grazio, Regulatory Affairs Manager  
C. Hill, Assistant Operations Manager  
C. Hornak, Strategic Business Planning Manager  
C. Jilek, Maintenance Rule Coordinator  
D. Koehl, Site Vice-President  
M. Lorek, Plant Manager  
J. McCarthy, Director-Site Operations  
G. Packard, Operations Manager  
L. Peterson, Design Engineer Manager  
S. Pfaff, Corrective Action Program Coordinator  
C. Richardson, Design Engineer  
L. Schofield, Regulatory Affairs Engineer  
J. Schweitzer, Site Engineering Director  
G. Sherwood, Engineering Programs Manager  
C. Sizemore, Training Manager  
W. Smith, Outage and Scheduling Manager  
J. Strharsky, Planning and Scheduling Manager  
N. Stuart, Maintenance Manager  
G. Young, Employee Concerns Manager

#### Nuclear Regulatory Commission

H. Chernoff, Point Beach Project Manager, NRR  
M. Kunowski, Senior Project Engineer, Reactor Projects Branch 5  
P. Loudon, Chief, Reactor Projects Branch 5

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

05000266/2005012-01; 05000301/2005012-01	NCV	Corrective Action Violation for Failure to Enter a Potential Condition Adverse to Quality Into the Corrective Action Program (Section 4OA2.a.(2)(ii))
05000266/2005012-02; 05000301/2005012-02	URI	Effect of Elevated Temperatures on Control Room Instruments Not Considered in Calculations (Section 4OA2.a.(2)(iii))
05000266/2005012-03; 05000301/2005012-03	NCV	Design Control Violation for Failure to Incorporate Diesel Information Into Procedures (Section 4OA2.a.(2)(iv))
05000266/2005012-04; 05000301/2005012-04	FIN	Inadequate Extent-of-Condition Evaluation for an Inadequate Abnormal Operating Procedure (Section 4OA2.b.(2)(iv))

### Closed

05000266/2005012-01; 05000301/2005012-01	NCV	Corrective Action Violation for Failure to Enter a Potential Condition Adverse to Quality Into the Corrective Action Program (Section 4OA2.a.(2)(ii))
05000266/2005012-03; 05000301/2005012-03	NCV	Design Control Violation for Failure to Incorporate Diesel Information Into Procedures (Section 4OA2.a.(2)(iv))
05000266/2005012-04; 05000301/2005012-04	FIN	Inadequate Extent-of-Condition Evaluation for an Inadequate Abnormal Operating Procedure (Section 4OA2.b.(2)(iv))

### Discussed

05000266/2005003-03	FIN	Overload and Trip of Nonsafety-Related Bus (Section 4OA2.a.(2)(iv))
05000301/2005004-05	NCV	Inadvertent Refueling Water Storage Tank Inventory Loss (Sections 4OA2.b.(2)(I) and 4OA2.c.(2))
05000301/2005003-01	NCV	Air Leak on AFW Recirculation Flow Control Valve (Sections 4OA2.b.(2)(I), 4OA2.b.(2)(ii), and 4OA2.c.(2))
05000266/2005004-04; 05000301/2005004-04	NCV	Failure to Implement Adequate Corrective Actions to Preclude Repetition of a Significant Condition Adverse to Quality (Sections 4OA2.b.(2)(ii) and 4OA2.c.(2))
05000266/2004008-03; 05000301/2004008-03	NCV	Failure to Implement a Molded-Case Circuit Breaker Test Program (Sections 4OA2.b.(2)(ii) and 4OA2.c.(2))

## LIST OF DOCUMENTS REVIEWED

The following is a list of licensee documents reviewed during the inspection, including documents prepared by others for the licensee. Inclusion of a document on this list does not imply that NRC inspectors reviewed the entire documents, but, rather that selected sections or portions of the documents were evaluated as part of the overall inspection effort. In addition, inclusion of a document on this list does not imply NRC acceptance of the document, unless specifically stated in the body of the inspection report.

### Calculations

N-91-016; PBNP Diesel Generator Loading Analysis; Revision 2

CN-CRA-96-119; Point Beach Large LOCA Offsite and Control Room Dose Analysis; Revision 1

CN-CRA-96-104; Point Beach SGTR Offsite and Control Room Doses; Revision 2

PBNP-IC-08; Pressurizer Level Instrument Uncertainty/Setpoint; Revision 2

PBNP-IC-12; Low and High Pressurizer Pressure Reactor Trip Instrument; Revision 2,

PBNP-IC-17; Low Range Containment Pressure Instrument Loop Uncertainty/Setpoint Calculation; Revision 0.

### CAPs Generated During the Inspection

CAP000617; Potential CAP Corrective Action Bypass Reported (Hudson CAP)

CAP000844; Potential Problem Identification & Resolution Process Outside of CAP (Hudson CAP)

CAP066869; MCCB's Previously Not Included in PM Program

CAP066979; Vendor Procedure Error Associated With Offsite MCCB Functional Testing

CAP067011; 50.59 EVAL Assessment of Control Room HVAC Mode Change Potentially Inadequate

CAP067026; Timing of Control Room Ventilation restoration following a Loss of Power

CAP067030; Lack of Guidance for Administration of Protective Clothing to CR Operators

CAP067039; Incorporation of Radiological Analysis Assumptions in Implementing Procedures

CAP067049; Question Regarding Adequate Documentation of ACE 1819

CAP067349; EOP-0 and AOP-22 diesel loading concerns during a design base accident

CAP067350; NRC Identified ACE Weaknesses

CAP067352; NRC Questions Regarding Identification of Assumptions in Vendor Calculations

CAP067397; Root Cause Investigation Technique Utilization

CAP067402; Calculation process improvement opportunity

CAP067405; Control Room Temperature Effects on Instrument Uncertainties

CAP067407; Briefing for CA 063225 Not Provided to All Required Personnel

CAP067412; Vendor Identified Issue Not Entered into Point Beach VTIP or CAP Process

CAP067413; Adequacy of Corrective Actions - NRC Observation

CAP067415; Procedural errors being tracked by Non-CAP ARs

CAP067418; Inadequate Resolution of NCVs

CAP067445; NRC Information Notice Question (34) During PI&R Inspection

CAP067455; NRC Comments On Non-CAP Action Requests  
CAP067700; Elevated Control Room Temperature Effects on Instrument Uncertainties

### **CAPs**

CAP064138; Low Attendance at March Engineering DRUM  
CAP062484; Corrective Action Program Non-Compliance  
CAP061352; Significance Level of RCE 255 Not Changed After Being Re-Screened  
CAP063375; Departmental DRUM Reports Not Completed  
CAP065160; Corrective Actions for an INPO AFI Subsequently Vacated  
CAP063704; Station may Become Desensitized to Overdue CAP Items  
CAP065666; Unit 2 Dropped Rod, Bank D Rod C-7  
CAP061570; Failure of Auto CCW Pump Start Results in AOP and Emergency Plan Entry  
CAP061591; Loss of Security CCTVs due to Fiber Failure  
CAP066142; 1P-2C, Charging Pump Unavailability in Excess of Maintenance Rule Criteria  
CAP061444; Potential Lower Level Databases Tracking Conditions Adverse to Quality  
CAP065843; Revision Needed to AOP-10, Control Room Inaccessibility  
CAP065842; AFW Pump Recirculation Valve AF-4007 Fails to Open During 0-PT-AF-003  
CAP062915; CARB Attendance Conflict for CARB Member/CAP Coach  
CAP066104; Revised Westinghouse Data and its Affects on SI Pumps  
CAP061781; Postulated Debris in Fire Water May Challenge TDAFP Operability  
CAP062162; Flooding Concerns With AFW Pump Room  
CAP066072; Battery Charger D-07 Exceeded Maintenance Rule Unavailability  
CAP062863; Placement of Structures Into Maintenance Rule (a)(1) Status  
CAP066419; Conclusion of 50.59 Screening SCR 2002-0377  
CAP060839; OJT/TPE Discrepancies in Operations  
CAP060789; 10 CFR 50.59/72.48 Screening Assessment Results  
CAP060341; Operator Action to not Overfill Ruptured SG  
CAP064491; IT-515B and ORT-6 conflict  
CAP066228; W-12A, G01 EDG Room Exhaust Fan Breaker, 1B52-329H, found in off position  
CAP064865; U2 RHR Decay Heat Removal Alignment Tags Not Rehung Expediently  
CAP062122; Unplanned TSAC Entry Due to Air Leak on 2P-29 AFWP Mini Recirc valve  
CAP055261; Need Contingency Plan for RCP Vibration Monitoring System Failure  
CAP053610; Parts Obsolescence  
CAP022659; RCP Vibration Monitors Obsolete  
CAP067240; Mode Change During Shutdown Due to Steam Dump Operation  
CAP058926; Substantive Cross-Cutting Issues in Human Performance & CAP  
CAP060639; Unit 2 Secondary System Steam Leak  
CAP062363; Loss of 151 345 KV Line  
CAP063088; KNP NRC Resident Questions Regarding U2R27 Shutdown Safety  
CAP063860; Unit 2 RHR Flow Secured During Hanging of Tagout  
CAP064386; Adverse Trend in Non-Compliance With The Requirements of NP 8.4.10 (FME)  
CAP065004; Guidance for Manual Actions Due to a Fire Does Not Match Safe Shutdown Analysis  
CAP057508; MCCB Inactivated Callups  
CAP058949; Functional Testing of Molded Case Circuit Breakers  
CAP058951; Westinghouse Technical Bulletin Not Processed by OE Program  
CAP059003; MCCB Maintenance Not In Accordance With Industry Standards

CAP059058; Functional Testing Anomalies Associated With Molded Case Circuit Breakers  
CAP060476; NRC Information Notice 2004-19, Problems Associated With Back-up Power Supplies  
CAP065765; Revised Westinghouse Motor Data and its Effect on 1P-15A SI Pump  
CAP067499; Approved G03/G04 Load Ratings for LOCA Injection Phase Not in FSAR 8.8

### **Evaluation Documents**

ACE000028; Potential Problem Identification & Resolution Process Outside of CAP  
ACE001803; Functional Testing of Molded Case Circuit Breakers  
ACE001810; MCCB Maintenance Not In Accordance With Industry Standards  
ACE001819; Component Maintenance Program Placed on Hold  
ACE001855; Loss of 151 345 KV Line  
ACE001883; Unplanned TSAC Entry Due to Air Leak on 2p-29 AFW Mini Recirc Valve  
ACE001899; Revised Westinghouse Motor Data and its Affects on 1P-15A SI Pump  
ACE001904; AFW Pump Recirculation Valve AF-4007 Fails to Open During 0-PT-AF-003  
ACE001913; Inoperable Emergency Diesel Generator Aligned to Safeguards Power Supply  
ACE001946; Inadequate Resolution of NCVs

RCE000247; NRC Cross-Cutting Issue - PI&R  
RCE000248; NRC Cross-Cutting Issue - Human Performance  
RCE000268; Health Physics Procedure HP 2.6 Violation  
RCE000271; 2MS-465D, HX-1A SG FT-465 Steam Flow Low Side Root Valve  
RCE000272; Examples Exist that CA's Within the EP Group Have Not Been Sustained  
RCE000276; Planned Orange Path Inappropriately Included in U2R27 Outage Schedule  
RCE000278; Unit 2 RHR Flow Lost During Hanging of Tagout  
RCE000280; Adverse Trend of Non-Compliance With NP 8.4.10, Foreign Material Exclusion Process  
RCE000281; Guidance For Manual Actions Due to a Fire Does Not Match Safe Shutdown Analysis  
RCE000283; Unit 2 Dropped Rod, Bank D Rod C-7  
RCE000284; Revised Westinghouse Motor Data and its Effects on 1P-15A SI Pump

CE014224; MCCB Inactivated Callups  
CE014615; Vendor Guidance Not Contained in Procedure RMP 9307-1

### **Other Corrective Action Program Documents**

MRE000336; Unplanned TSAC Entry Due to Air Leak on 2P-29 AFWP Mini Recirc valve  
MRE000251; MCCB Inactivated Callups

RFT062976; Needs Assessment Worksheet for unplanned TSAC entry due to air leak

OE001872; External Operating Experience  
OE060421; External Operating Experience  
OE023880; External Operating Experience  
OE005167; External Operating Experience

OE059495; Request an OE Evaluation of Westinghouse Technical Bulletin 04-6  
OE060413; Request an OE Evaluation of NRC Information Notice 2004-019, Problems

OTH010975; OSRC Action Item #1 (EP Concerns)  
OTH010976; OSRC Action Item #2 (Top 10 List of Engineering Issues)  
OTH010977; OSRC Action Item #3 (Aging and Obsolescence Issues)  
OTH013129; OSRC Meeting 2004-01 - Action Item #5 (NRC Performance Indicators)  
OTH013132; OSRC Meeting 2004-01 - Action Item #8 (Fire Protection)  
OTH013133; OSRC Meeting 2004-01 - Action Item #9 (Lake Grass)  
OTH013135; OSRC Meeting 2004-01 - Action Item #11 (Containment Sump Blockage)  
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OTH024759; OSRC Action Item #23 (Erosion/Corrosion)  
OTH024760; OSRC Action Item #24 (Appendix R Problems)  
OTH024761; OSRC Action Item #25 (Steam Generators0  
OTH024762; OSRC Action Item #26 (Fire Protection Assessment)

CA060839; Corrective Action  
CA059725; Functional Testing of Molded Case Circuit Breakers  
CA059726; Functional Testing of Molded Case Circuit Breakers  
CA060332; Generate a Comprehensive List of Documents on Administrative hold  
CA062212; Revise CMP 1.2, Motors  
CA062696; MCCB Inactivated Callups  
CA063787; MCCB Inactivated Callups  
CA064521; MCCB Inactivated Callups  
CA064676; Question Regarding Adequate Documentation of ACE 1819  
CA064856; Adequacy of Corrective Actions  
CA064870; Question Regarding Adequate Documentation of ACE 1819

OBD000213; MCCB Maintenance Not In Accordance With Industry Standards  
OBD000261; Revised Westinghouse Motor Data and its Effects on 1P-15A SI Pump  
Associated with Backup Power Supplies  
OPR000113; MCCB Maintenance Not In Accordance With Industry Standards; Revision 0  
OPR000113; MCCB Maintenance Not In Accordance With Industry Standards; Revision 1  
OPR000113; MCCB Maintenance Not In Accordance With Industry Standards; Revision 2  
OPR000151; MCCB's Not Previously Included in PM Program  
OPR000157; Emergency Diesel Generators G-01, G-02, G-03, and G-04; Revision 0  
PCR064857; Procedural Errors Being Tracked by Non-CAP ARs  
PCR064858; Procedural Errors Being Tracked by Non-CAP ARs  
VTI Tracking Number 12-012; Non-Locking Stem/Stem Nut Thread  
VTI Tracking Number 12-013; Actuator Output Torque Calculation

## **Drawings**

PB 31MVTL00000416; Heating & Ventilation Temperature Control P&ID (Control Room  
Ventilation System); Revision 16

## Miscellaneous

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IN 2002-34, Failure of Safety-Related Circuit Breakers External Auxiliary Switches  
IN 2003-03; Inadequately Staked Capscrew Renders RHR Pump Inoperable  
IN 2003-08; Potential Flooding Through Unsealed Concrete Floor Cracks  
IN 2004-05; Spent Fuel Pool Leakage to Onsite Groundwater  
IN 2004-09; Corrosion of Steel Containment and Containment Liner  
IN 2004-19; Problems Associated With Backup Supplies to ER Facilities and Equipment  
IN 2005-02; Pressure Boundary Leakage Identified on SG Bowl Drain Welds  
IN 2005-08; Monitoring Vibration to Detect Circ Cracking on RCP Shafts  
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NSAL-03-07; ABB Relays ZPA Ratings  
NSAL-03-09; Steam Generator Water Level Uncertainties  
P21 2004-008-00; Interim Report on ABB Model HK Circuit Breaker  
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TS 3.7.9; Control Room Emergency Filtration System  
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FSAR Table 8.8.1; Emergency Diesel Generator Loading Following a Loss of Coolant Accident,  
Injection Phase  
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FSAR Section 9.8; Control Room Ventilation System  
FSAR Section 14.3.5; Radiological Consequences of Loss of Coolant Accident



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NP 1.1.12; Operational Decision-Making Issue Evaluation Process; August 18, 2004  
NP 5.3.1; Action Request Process; Revision 27  
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NP 5.3.2; External Operating Experience; December 17, 2003  
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NP 7.2.13; Processing of Vendor Technical Information; July 14, 2004  
NP 7.2.14; Vendor Contact Program; April 9, 2003  
NP 7.3.11; Point Beach Lubrication Manual; December 17, 2003  
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Apparent Cause Evaluation Manual; Revision 1  
NMC CAP Trend Code Manual; Revision 2  
LM 2.1; Point Beach Nuclear Plant Lubrication Manual; Revision 33

AOP-22; EDG Load Management; Revision 0  
AOP-22; EDG Load Management; Revision 1  
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Temporary Change 2005-0102 to AOP-22, Unit 1, Revision 3  
Temporary Change 2005-0103 to AOP-22, Unit 2, Revision 5  
EOP-0; Unit 1 Reactor Trip or Safety Injection; Revision 28  
EOP-0; Unit 1 Reactor Trip or Safety Injection; Revision 43  
EOP-0; Unit 2 Reactor Trip or Safety Injection; Revision 44  
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RMP 9370; Bus Inspection and Cleaning; Revision 5  
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RMSASRB CI RE-235; Control Room Noble Gas Monitor; Revision 9  
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## **Vendor Manuals**

WEP-05-209; High Head Safety Injection Pump Spin-Up Time Accident Analysis Evaluation;  
July 16, 2005  
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#JN05P0490; March 15 -24, 2005  
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## **Work Orders**

WO 0416143; U1/HX-1A Visual Examination of SG Drain Cplng and Surrounding Weld  
WO 0416641; U1/HX-1B Visual Examination of SG Drain Cplng and Surrounding Weld

## LIST OF ACRONYMS USED

ABB	Asea Brown Boveri
AC	Alternating Current
ACE	Apparent Cause Evaluation
ADAMS	Agency Wide Access Management System
AFW	Auxiliary Feedwater
AOP	Abnormal Operating Procedure
AR	Action Request
ASME	American Society of Mechanical Engineers
CA	Corrective Action
CAL	Confirmatory Action Letter
CAP	Corrective Action Program Document
CAQ	Condition Adverse to Quality
CARB	Corrective Action Review Board
CATPR	Corrective Action to Prevent Recurrence
CCW	Component Cooling Water
CE	Condition Evaluation
CFR	Code of Federal Regulations
CL	Checklist
CRDM	Control Rod Drive Mechanism
DBD	Design Basis Document
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
DRUM	Department Roll-Up Meeting
ECCS	Emergency Core Cooling System
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
EPRI	Electric Power Research Institute
FME	Foreign Material Exclusion
FSAR	Final Safety Analysis Report
GL	Generic Letter
I&C	Instrumentation and Control
IMC	Inspection Manual Chapter
IP	Inspection Procedure
kV	KiloVolt
kW	KiloWatts
LER	Licensee Event Report
LOCA	Loss of Coolant Accident
LOOP	Loss of Offsite Power
MCCB	Molded-Case Circuit Breaker
MRE	Maintenance Rule Evaluation
MPFF	Maintenance Preventable Functional Failure
NCV	Non-Cited Violation
NMC	Nuclear Management Company
NOS	Nuclear Oversight (Quality Assurance)
NP	Nuclear Plant Procedure
NRC	Nuclear Regulatory Commission

OE	Operating Experience
OPR	Operability Recommendation (Operability Determination)
OTH	Other (Corrective Action Program Document)
PBF	Point Beach Form
PBNP	Point Beach Nuclear Plant
PMT	Post-Maintenance Testing
PWR	Pressurized Water Reactor
RCE	Root Cause Evaluation
RHR	Residual Heat Removal
RMP	Routine Maintenance Procedure
SDP	Significance Determination Process
SI	Safety Injection
SW	Service Water
TS	Technical Specification
URI	Unresolved item
V	Volt