September 5, 2001

Mr. M. Reddemann Site Vice President Kewaunee and Point Beach Nuclear Plants Nuclear Management Company, LLC 6610 Nuclear Road Two Rivers, WI 54241

SUBJECT: POINT BEACH NUCLEAR PLANT NRC INSPECTION REPORT 50-266/01-11; 50-301/01-11

Dear Mr. Reddemann:

On August 7, 2001, the NRC completed an inspection at your Point Beach Nuclear Plant. The enclosed report documents the inspection findings which were discussed on August 8, 2001, with Mr. A. Cayia and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). The issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this Non-Cited Violation, you should provide a response with the basis for you denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region III; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the NRC Resident Inspector at the Point Beach facility.

M. Reddemann

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

Original signed by Roger D. Lanksbury

Roger D. Lanksbury, Chief Branch 5 Division of Reactor Projects

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

Enclosure: Inspection Report 50-266/01-11; 50-301/01-11

cc w/encl: R. Grigg, President and Chief Operating Officer, WEPCo R. Anderson, Executive Vice President and Chief Nuclear Officer T. Webb, Licensing Manager D. Weaver, Nuclear Asset Manager F. Cayia, Plant Manager J. O'Neill, Jr., Shaw, Pittman, Potts & Trowbridge K. Duveneck, Town Chairman Town of Two Creeks D. Graham, Director **Bureau of Field Operations** A. Bie, Chairperson, Wisconsin **Public Service Commission** S. Jenkins, Electric Division Wisconsin Public Service Commission State Liaison Officer

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/s/ Roger D. Lanksbury

Roger D. Lanksbury, Chief Branch 5 Division of Reactor Projects

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

Enclosure: Inspection Report 50-266/01-11; 50-301/01-11

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- Town of Two Creeks
- D. Graham, Director
- Bureau of Field Operations
- A. Bie, Chairperson, Wisconsin
- Public Service Commission
- S. Jenkins, Electric Division
- Wisconsin Public Service Commission
- State Liaison Officer

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M. Reddemann

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: License Nos:	50-266; 50-301 DPR-24; DPR-27
Report No:	50-266/01-11; 50-301/01-11
Licensee:	Nuclear Management Company, LLC
Facility:	Point Beach Nuclear Plant, Units 1 & 2
Location:	6610 Nuclear Road Two Rivers, WI 54241
Dates:	July 1 through August 7, 2001
Inspectors:	P. Krohn, Senior Resident Inspector R. Powell, Resident Inspector
Approved by:	Roger D. Lanksbury, Chief Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000266-01-11, IR 05000301-01-11, on 07/01 - 08/07/2001; Nuclear Management Company, LLC; Point Beach Nuclear Plant, Units 1 & 2. Surveillance Testing.

The report covers a 5½-week routine baseline inspection conducted by resident inspectors. The inspection identified one Green finding, which was a Non-Cited Violation. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector-Identified Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified that the licensee failed to take effective corrective action to preclude repetition of the failure to comply with Technical Specification limiting condition for operation requirements directing testing of redundant standby emergency diesel generator power supplies within 24 hours. A Non-Cited Violation of 10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Action," was identified.

The finding was of very low safety significance because, in both cases of Technical Specification non-compliance, the redundant standby emergency diesel generators were tested satisfactorily, indicating that no actual loss of safety function occurred. (Section 1R22.2)

B. <u>Licensee-Identified Findings</u>

None.

Report Details

Summary of Plant Status:

Unit 1 was operated at or near 100 percent power throughout the inspection period except for a short period on July 3, 2001, when power was reduced to 90 percent due to fish intrusion in the pump house forebay. Unit 1 remained at or near 100 percent power until July 19 when a Technical Specification (TS) required shutdown was initiated following the loss of the safety-related inverter power supplies to the Unit 1 white instrument bus. In accordance with TS requirements, Unit 1 commenced a shutdown and reached 30 percent power prior to recovery of a safety-related inverter power supply. Unit 1 was then returned to full power operations. Later that same day, power was reduced to 55 percent due to main feed pump 1P-28B motor shaft axial oscillations. Unit 1 was returned to 100 percent power on July 22, following main feed pump inboard bearing replacement and remained at full power for the remainder of the period.

Unit 2 was operated at or near 100 percent power throughout the inspection period except for a brief period on July 2, 2001, when power was reduced to 78 percent due to low electrical grid load conditions and a few hours on July 3, 2001, when power was reduced to 90 percent due to fish intrusion in the circulating water pump house forebay.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events and Mitigating Systems

- 1R01 Adverse Weather (71111.01)
- a. <u>Inspection Scope</u>

The inspectors reviewed licensee hot weather preparations to verify readiness for summer operations. Specifically, the inspectors focused on preparations for severe weather and tornadoes. The inspectors toured and inspected the switchyard and surrounding areas for loose debris and equipment which, in a storm, could contribute to a loss-of-offsite power event. The inspectors also reviewed design basis tornado assumptions to verify that the Unit 1 and Unit 2 primary containment facades would remain intact if a tornado struck the site. The inspectors located and examined several facade panel clips to verify the design basis assumption that two thirds of the panels would be lost in a tornado thereby assuring facade structural integrity and availability of the refueling water storage tank as a reactor coolant system inventory source. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed a partial walk-down of the Service Water (SW) system to verify that valves and breakers were in the proper position to perform their safety-related function. The inspectors also performed the SW system walk-down to monitor the potential effects of the fish infestation that occurred in late June and early July, 2001, on the safety-related SW supply system. The inspectors used the SW safeguards lineup checklist and SW system drawings to accomplish the inspection. Finally, the inspectors evaluated other elements, such as material condition, housekeeping, and component labeling. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

- 1R05 Fire Protection (71111.05)
- a. Inspection Scope

The inspectors walked down the following areas to assess the overall readiness of fire protection equipment and barriers:

- Fire Zone 336, Instrument Rack Room
- Fire Zone 337, HVAC [Heating, Ventilation, and Air Conditioning] Equipment Room

Emphasis was placed on the control of transient combustibles and ignition sources, the material condition of fire protection equipment, and the material condition and operational status of fire barriers used to prevent fire damage or propagation. Area conditions/configurations were evaluated based on information provided in the licensee's "Fire Protection Evaluation Report," dated August 1999.

The inspectors looked at fire hoses, sprinklers, and portable fire extinguishers to verify that they were installed at their designated locations, were in satisfactory physical condition, and were unobstructed. The inspectors also evaluated the physical location and condition of fire detection devices. Additionally, passive features such as fire doors, fire dampers, and mechanical and electrical penetration seals were inspected to verify that they were located per Fire Protection Evaluation Report requirements and were in good physical condition. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

1R12 <u>Maintenance Rule Implementation</u> (71111.12)

a. <u>Inspection Scope</u>

The inspectors reviewed the licensee's implementation of the maintenance rule requirements to verify that component and equipment failures were identified, entered, and scoped within the maintenance rule and that select structures, systems, or components were properly categorized and classified as (a)(1) or (a)(2) in accordance with 10 CFR 50.65. The inspectors reviewed maintenance work orders, (a)(1) corrective action plans, and a sample of condition reports (CRs) to verify the licensee was identifying issues related to the maintenance rule at an appropriate threshold, and corrective actions were appropriate. Additionally, the inspectors reviewed the licensee's performance criteria to verify that the criteria adequately monitored equipment performance, and reviewed licensee changes to performance criteria to verify they were reflected in the licensee's probabilistic risk assessment. Specific systems reviewed were:

- Circulating Water
- Instrument Air

The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation (71111.13)

a. <u>Inspection Scope</u>

The inspectors reviewed the licensee's evaluation of plant risk, scheduling, configuration control, and performance of maintenance associated with planned and emergent work activities and verified that scheduled and emergent work activities were adequately managed. In particular, the inspectors reviewed the licensee's program for conducting maintenance risk safety assessments to verify that the licensee's planning, risk management tools, and the assessment and management of on-line risk were adequate. The inspectors also reviewed licensee actions to address increased on-line risk when equipment was out-of-service for maintenance, such as establishing compensatory actions, minimizing the duration of the activity, obtaining appropriate management approval, and informing appropriate plant staff to verify that the actions were accomplished when on-line risk was increased due to maintenance on risk-significant structures, systems, or components. The following specific activities were reviewed:

• The maintenance risk assessment for work planned for the week beginning July 8, 2001. This included work involving emergency diesel generator (EDG) limiting conditions for operation (LCOs), charging pumps, and risk significant

surveillance testing of the safety injection and residual heat removal systems. Emergent items included continued fish intrusion concerns.

- The maintenance risk assessment for work planned for the week beginning July 15, 2001. This included scheduled work on the station blackout gas turbine (G-05), the electric-driven fire pump, the Unit 1 'B' coolant charging pump, and a Unit 1 reactor water storage tank level transmitter. The inspectors verified that scheduled surveillance testing on safeguards electrical bus undervoltage relays, SW pumps, accident fan cooler units, and steam generator atmospheric steam dumps had been included in the risk assessment to assure that the overall risk profile was properly characterized. The inspectors also considered emergent work associated with failure of the Unit 1 'white' 125-volt direct current/120-volt alternating current instrument bus inverter, 1-DY-03, to verify that no unintended risk configurations had occurred. Finally, the inspectors considered the risk impact of nine work tasks which, having not been completed as scheduled in previous work weeks, had been inserted into the week under review.
- The maintenance risk assessment for work planned for the week of July 29, 2001. This included work associated with the Unit 2 component cooling water pumps and the G-02 EDG SW modification. Emergent work included unplanned unavailability of the station blackout gas turbine, G-05, and schedule modifications due to high electrical grid load alerts in eastern Wisconsin caused by the weather.

The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. <u>Findings</u>

No findings of significance were identified.

- 1R15 Operability Evaluations (71111.15)
- .1 Zebra Mussel Fouling
- a. Inspection Scope

During June 2001, the licensee performed a chemical treatment of the service and circulating water systems to limit zebra mussel growth and intrusion in plant equipment. The inspectors reviewed the effects of the chemical treatment on the two safety-related components most susceptible to zebra mussel fouling and plugging, the EDG oil coolers and the containment fan coils (CFCs). The inspectors directly observed the amount of zebra mussel fouling of EDG oil coolers HX-055A-1(2) and HX-055B-1(2) to assess diesel generator operability. As required in Operating Instruction OI-155, the inspectors verified that the licensee continued with thermographic inspections of the Unit 1 and Unit 2 'C' and 'D' CFCs and ultrasonic flow inspections. For the components examined, the inspectors verified that the zebra mussel plugging was less than the maximum allowable acceptance criteria and that the design functions associated with the EDGs

and CFCs remained operable. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. <u>Findings</u>

No findings of significance were identified.

- .2 EDG G-04 Common Cause Evaluation
- a. Inspection Scope

On August 5, 2001, EDG G-04 failed monthly surveillance testing due to voltage control problems. The inspectors reviewed the technical adequacy of the common cause evaluations, subsequently performed by the licensee, to verify that the opposite train EDGs (G-01 and G-02) were not subject to a common cause failure mechanism. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

- 1R16 Operator Workarounds (OWAs) (71111.16)
- .1 Cumulative Effect of OWAs
- a. Inspection Scope

The inspectors reviewed the cumulative effect of OWAs to determine the total impact of these workarounds on plant operations. Specifically, the inspectors considered the interactions between OWAs associated with erratic steam dump operation, water intrusion into the Unit 2 facade sump indicating submersion of selected electrical cables, manual operator action required to reseat crossover steam dump valves, the inability to use two Unit 2 letdown system orifices at higher reactor coolant system pressures, and an extreme sensitivity of the Unit 1, 'B' reactor coolant pump (RCP) number two seal to temperature and pressure changes. The inspectors also reviewed OWA meeting minutes from April, May, June, and July 2001, to determine if the licensee had been conducting periodic reviews of OWAs and considering the total impact of workarounds on plant operations. The inspectors reviewed probabilistic risk assessment personnel involvement in the periodic workaround reviews to determine if the licensee was attempting to gain possible risk insights concerning the cumulative effect of OWAs. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

.2 <u>1B RCP Sensitivity to Temperature and Pressure Changes</u>

a. <u>Inspection Scope</u>

The inspectors reviewed OWA 1-01C-001 to identify potential effects on the function of mitigating systems, or the ability of operators to respond to an event and implement abnormal and emergency operating procedures. Operator Workaround 1-01C-001 concerned the Unit 1, 'B' RCP number two seal which, having displayed extreme sensitivity to temperature and pressure changes, caused control room operators to frequently enter Abnormal Operating Procedure (AOP) 1B, "Reactor Coolant Pump Malfunction." Small adjustments to volume control tank level, changes in seal injection temperature, reactor water make-up blends to adjust reactor coolant system boron concentrations, changes in primary containment air circulation patterns when changing CFC configurations, and changes in the duration of component cooling water heat exchanger blowdown times were a portion of the perturbations that the inspectors considered in evaluating the impact of this OWA. The inspectors interviewed selected operations and engineering personnel and reviewed the OWA definitions in Nuclear Power Business Unit Procedure (NP) 2.1.4 in determining whether the licensee had correctly classified this workaround. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

- .3 Failure of Crossover Steam Dump Valves to Automatically Reseat Following System Actuation
- a. <u>Inspection Scope</u>

The inspectors reviewed OWA 0-00C-001 OS to identify any potential effect on the function of mitigating systems, or the ability of operators to respond to an event and implement abnormal and emergency operating procedures. Operator Workaround 0-00C-001 concerned automatic reseating of crossover steam dump Valves 1DV-2, 1DV-4, 2DV-1, and 2-DV-2 following system actuation as a result of a main generator trip or load reject event. Following system actuation, operators had been required to use manual reheat steam or station air to reseat the steam dump valves to prevent loss of condenser vacuum. The inspectors interviewed selected engineering personnel to verify that actions were planned to correct and eliminate failure of the crossover steam dump valves to reseat. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

1R19 <u>Post-Maintenance Testing</u> (71111.19)

.1 Unit 1 Charging Pump 1P-2B

a. Inspection Scope

The inspectors observed post-maintenance testing activities conducted in accordance with Inservice Test Procedure (IT) 21, "Charging Pumps and Valves Test (Quarterly) Unit 1," Revision 10, following 1P-2B seal replacement to verify that the test was adequate for the scope of the maintenance work which had been performed and that the testing acceptance criteria were clear and demonstrated operational readiness consistent with design and licensing basis documents. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

.2 Unit 2 Reactor Trip Breaker 'B'

a. Inspection Scope

The inspectors observed post-maintenance testing activities conducted in accordance with Routine Maintenance Procedure (RMP) 9026-3, "Reactor Trip and Bypass Breaker Routine Maintenance," to verify that the test was adequate for the scope of the maintenance work which had been performed and that the testing acceptance criteria were clear and demonstrated operational readiness consistent with design and licensing basis documents. The inspectors verified that the trip breakers were properly racked into the electrical cubicles to ensure proper functioning in the event actuation was required. The inspectors also compared the licensee's post-maintenance testing with vendor recommendations in the component technical manual to verify that all vendor recommended post-maintenance testing had been completed. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

.3 <u>G-02 SW Supply</u>

a. Inspection Scope

The inspectors observed post-maintenance testing activities conducted in accordance with Individual Work Plan (IWP) 00-103-01, "Service Water Upgrades to Emergency Diesel Generator G02." The inspectors verified that, following system modifications, the portions of the SW system associated with EDG G-02 were leak tight and capable of performing their design functions. The inspectors also examined selected pipe supports and hangars to verify seismic adequacy of the modified SW piping. Finally, the inspectors reviewed system pressure testing requirements to verify American Society of

Mechanical Engineers Code construction requirements were satisfied. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

- 1R22 <u>Surveillance Testing</u> (71111.22)
- .1 <u>SW Pump Inservice Testing</u>
- a. Inspection Scope

The inspectors reviewed and observed functional testing of the 'A', 'B', and 'C' SW pumps to verify operability. The testing was accomplished in accordance with safety-related IT-07A(B)(C), "Service Water Pump Quarterly." The inspectors reviewed the test procedures for appropriateness, observed significant portions of the tests, and verified that procedure adherence was consistent with regulatory requirements and standards. The inspectors also verified that the impact of the testing had been properly characterized during the pre-job briefing; that all testing prerequisites were satisfied; that test data were complete and appropriately verified; and that all acceptance criteria were satisfied. The inspectors observed closure of the north and south SW header cross-connect valves and verified TS LCOs were appropriately entered. Vibration trend data and instrument calibrations were reviewed to verify no pumps were demonstrating decreasing performance characteristics. Following completion of the test, the inspectors performed walk-downs to verify that equipment was returned to a condition in which it could perform its safety-related function. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

.2 (Closed) Unresolved Item (URI) URI 50-266/01-10-03: Corrective actions for failure to follow TS action statement. On November 1, 2000, the licensee staff identified a failure to comply with TS 15.3.7.B.1.g. Specifically, TS 15.3.7.B.1.g. required redundant standby emergency power supplies to be started within 24 hours before or after the normal power supply or emergency power supply to Unit 1 A06/B04 or Unit 2 A05/B03 safeguards busses being taken out-of-service. On October 30, the normal emergency power supply (EDG G-02) to the Unit 2 safeguards Bus A05/B03 was declared out-of-service, due to the disabling of the control circuit for automatic start of the Train 'A' SW pumps on G-02 breaker closure to Bus 2A05. The circuit was disabled for a planned modification of a direct current power distribution panel. Contrary to the requirements of TS 15.3.7.B.1.g., the redundant standby emergency power supply (G-04) was not started within 24 hours of G-02 being declared out-of-service. A Non-Cited Violation ((NCV) 301/01-07-03) was identified for this failure.

On June 24, 2001, the G-03 EDG tripped from full load during monthly surveillance testing. On June 25, 2001, the inspectors noted that TS 15.3.7.B.1.g. required the redundant engineered safety features be operable and the required redundant standby emergency power supplies (G-01 and G-02) be started within 24 hours before or after entry into the same LCO, and every 72 hours thereafter. Technical specifications provided further clarification, stating that if the standby emergency power LCO (TS 15.3.7.B.1.g.) was initially entered due to a standby emergency power failure (G-03) and the LCO was exited within 24 hours (TS LCO 15.3.7.B.1.g. was exited when G-04 was re-aligned to supply emergency power to safeguards Bus 1A06), then an evaluation must be completed as soon as possible within 24 hours of the entry into the LCO. The evaluation was to show that the redundant power supplies (G-01 and G-02) were not susceptible to that failure by common cause. As an alternate, the TS also allowed that the redundant standby emergency power supplies be started, to prove that failure by common cause did not exist, within 24 hours of entry into the LCO. Contrary to the requirements of TS 15.3.7.B.1.g., EDGs G-01 and G-02 were not started to demonstrate that failure by common cause did not exist until 29 and 26 hours respectively, following the G-03 EDG trip, nor was an evaluation performed. An NCV (NCV 50-266/01-10-02) was identified for this finding.

The inspectors compared the root cause analysis and corrective actions taken as a result of the November 2000 TS noncompliance with the June 2001 TS noncompliance event. While the LCO entry conditions for each event were different, the inspectors concluded that the root cause for both events was a failure of the control room licensed operators to comply with TS requirements concerning testing of redundant standby emergency power sources. The inspectors also noted that the training conducted as a result of the November 2000 event was narrowly focused, since it did not address the basis for the LCO action statement. Additionally, the inspectors noted that implementation of a second corrective action from the November 2000 TS noncompliance event, Operations Department briefings to reinforce both the need for greater attention to proper questioning, validating, and verifying techniques and their application, was inadequate. This second corrective action was inadequate since, during the June 2001 event, at least three control room crews (each with licensed reactor operator and senior reactor operator personnel), failed to question the sequence of events and identify the appropriate TS requirements until brought to their attention by the inspectors.

This finding was considered to be more than minor and was viewed as a precursor to a more significant event, in that, in both instances, availability of opposite train standby emergency power sources was not demonstrated or evaluated within the TS-prescribed time frame. Additionally, the issue affected the operability and reliability of a train in a mitigating system, emergency alternating current power. This finding was, however, of very low safety significance (Green) because, in both cases of TS non-compliance, the redundant standby EDGs were test satisfactorily indicating that no actual loss of safety function occurred. The failure to comply with TS requirements for starting redundant standby emergency power supplies per TS 15.3.7.B.1.g. in June 2001 was a repeat of the November 2000 event. Criterion XVI, "Corrective Action," of 10 CFR Part 50, Appendix B, required that measures be established to assure that conditions adverse to quality were promptly identified and corrected. In the case of significant conditions adverse to quality, measures were required to assure that the cause of the condition

was determined and corrective action taken to preclude repetition. The failure to comply with TS requirements for starting redundant standby emergency power supplies was considered a significant condition adverse to quality since the failure had the potential to adversely affect both trains of emergency alternating current power. The actions taken as a result of the November 2000 TS noncompliance were inadequate in that they did not preclude repetition of the same TS noncompliance that occurred in June 2001. This violation of 10 CFR Part 50, Appendix B, Criterion XVI is being treated as an NCV (NCV 50-266/01-11-01; 50-301/01-11-01), consistent with Section VI.A. of the NRC Enforcement Policy. This violation is in the licensee's corrective action system as Condition Report 01-2526, "Ineffective Corrective Action - Failure to Test Redundant Emergency Diesel Generator."

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

Cornerstones: Mitigating Systems

Safety System Functional Failure Performance Indicator

a. Inspection Scope

The inspectors reviewed Units 1 and 2 second quarter 2001 Performance Indicator data for Safety System Functional Failures using the definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Indicator Guideline," Revision 0.

The inspectors reviewed Licensee Event Reports and operator log entries to identify the number of safety system functional failures that occurred during the previous four quarters and compared the result with the reported data. The inspectors also reviewed the licensee's basis for excluding events and conditions identified in Licensee Event Reports as safety system functional failures.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up (71153)

Loss of Unit 1 White Instrument Bus Safety-Related Power Supplies

a. Inspection Scope

At 7:00 p.m. on July 18, 2001, the Unit 1 white instrument bus experienced an automatic transfer from the safety-related (DY0C) to the nonsafety-related (Y-15) alternating current power source. The alternate safety-related inverter to the Unit 1 white instrument bus, DY0C, had been aligned to the bus since July 3, 2001, when the normal inverter, 1DY03, was taken out-of-service. When DY0C failed, TS 15.3.7.B.1.j. required

that the white instrument bus inverter loads be transferred back to an operable safetyrelated inverter (either DY0C or 1DY03) within 8 hours or be in hot shutdown within the next six hours and cold shutdown within the next 44 hours. Since neither safety-related inverter had been restored by 3:00 a.m. on July 19, the licensee proceeded to take Unit 1 to hot shutdown. White instrument bus inverter, 1DY03, was restored at 7:07 a.m. on July 19 and the Unit 1 power decrease was stopped at 30 percent reactor power.

Upon notification from the control room staff of the alternate Unit 1 white instrument bus safety-related inverter failure, the inspectors responded to the site to review the licensee's troubleshooting plans and attempts to restore a safety-related white instrument bus inverter power supply. The inspectors reviewed licensee considerations and efforts to determine the cause of the DYOC inverter failure to verify that the licensee had considered the possibility of common-cause failure of other safety-related inverter power supplies. The inspectors also monitored the performance of the 'B' RCP number two seal during the Unit 1 down power to verify that previously displayed sensitivities to pressure and temperature changes did not complicate the progression towards hot shutdown conditions. Finally, the inspectors reviewed operator actions to verify that the requirements of AOP 24 and AOP 21 had been completed. The documents listed at the end of the report were used by the inspectors during the assessment of this area.

b. Findings

No findings of significance were identified.

4OA6 Meeting(s)

End-of-Cycle Assessment Public Meeting

On July 9, 2001, the NRC held a public meeting with the licensee at the Point Beach Energy Information Center. The purpose of the meeting was to discuss Point Beach plant's performance for the period from April 2, 2000, to April 1, 2001. Slides which were presented at the meeting are attached to this report.

Exit Meeting

The resident inspectors presented the routine inspection results to Mr. A. Cayia and other members of licensee management at the conclusion of the inspection on August 8, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

Attachments: As Stated

KEY POINTS OF CONTACT

Licensee

- M. E. Reddemann, Site Vice President
- A. Cayia, Plant Manager
- J. Strharsky, Acting Operations Manager
- V. M. Kaminskas, Maintenance Manager
- S. J. Thomas, Radiation Protection Manager
- T. Webb, Licensing Manager
- R. G. Mende, Director of Engineering
- D. D. Schoon, System Engineering Manager

<u>NRC</u>

B. A. Wetzel, Point Beach Project Manager, NRR

ITEMS OPENED, CLOSED, AND DISCUSSED

NCV	Ineffective Corrective Actions for Failure To Follow Technical Specification Action Statements Concerning Common Cause Failure Testing of Emergency Diesel Generators
NCV	Ineffective Corrective Actions for Failure To Follow Technical Specification Action Statements Concerning Common Cause Failure Testing of Emergency Diesel Generators
URI	Corrective Actions for Failure to Follow Technical Specification Action Statement
NCV	Failure to Test the Unit 'B' Safeguards Train Redundant Standby Emergency Power Supplies Within Technical Specification Time Requirement
NCV	Failure to Comply With Limiting Condition for Operation Action Statement to Start Redundant Standby Emergency Power Supply
	NCV NCV NCV

LIST OF ACRONYMS USED

AOP CFC CFR CR	Abnormal Operating Procedure Containment Fan Coil Code of Federal Regulations Condition Report
DRP	Division of Reactor Projects
EDG	Emergency Diesel Generator
IT	Inservice Test Procedure
IWP	Individual Work Plan
LCO	Limiting Condition for Operation
NCV	Non-Cited Violation
NP	Nuclear Power Business Unit Procedure
NRC	Nuclear Regulatory Commission
OWA	Operator Workaround
RCP	Reactor Coolant Pump
RMP	Routine Maintenance Procedure
SDP	Significance Determination Process
SW	Service Water
TS	Technical Specification
URI	Unresolved Item
WO	Work Order

LIST OF DOCUMENTS REVIEWED

1R01 Adverse Weather

Design Basis Document T-41 [Module B]	Hazards - Severe Weather and Tornadoes	Revision 0
CR 98-2802	Pumphouse Structural Adequacy Calculation for Tornado Loading	
AOP 13C	Severe Weather Conditions	Revision 11
1R04 Equipment Alignr	<u>ment</u>	
Checklist 10B	Service Water Safeguards Lineup	Revision 49
Operating Instruction (OI) 70	Service Water System Operation	Revision 31
Design Basis Document (DBD)-12	Service Water	Revision 1
1R05 Fire Protection		
Fire Protection Evaluation Report, Volume 3	Fire Zone: 336 - Instrument Rack Room	August 1999
Fire Protection Evaluation Report, Volume 3	Fire Zone: 337 - HVAC [Heating, Ventilation, and Air Conditioning] Equipment Room	August 1999
1R12 Maintenance Rul	e Implementation	
Calculation 98-0169	Probabilistic Risk Assessment of Maintenance Rule Availability Performance Criteria and Reliability Performance Criteria	Revision 1
	2000 Annual Report for the Maintenance Rule	March 26, 2001
	1999 Annual Report for the Maintenance Rule	March 30, 1999
	Maintenance Rule (a)(1) Action Plan for the Instrument Air System	April 25, 2000

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 1	July 8, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 2	July 8, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 1	July 15, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 2	July 15, 2001
PBNP [Point Beach Nuclear Plant] Unit 1 Cycle 27/Unit 2 Cycle 25	E-1 report for P05A1	July 11, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 1	July 29, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 2	July 29, 2001
1R15 Operability Evaluat	tions	
OI 155	Chemical Treatment of Service Water for Zebra Mussels	Revision 7
OI 155 Attachment A	Thermography PMT [Post-Maintenance Test] of C & D Containment Fan Coolers and UT [Ultrasonic] Flow Check of A, B, C, and D Motor Coolers - Unit 1	July 21, 2001
OI 155 Attachment A	Thermography PMT [Post-Maintenance Test] of C & D Containment Fan Coolers and UT [Ultrasonic] Flow Check of A, B, C, and D Motor Coolers - Unit 2	July 21, 2001
Zebra Mussel Report	Emergency Diesel Generator Heat Exchanger HX-055A-1	July 20, 2001
Zebra Mussel Report	Emergency Diesel Generator Heat Exchanger HX-055A-2	July 20, 2001
Zebra Mussel Report	Emergency Diesel Generator Heat Exchanger HX-055B-1	July 21, 2001
Zebra Mussel Report	Emergency Diesel Generator Heat Exchanger HX-055B-2	July 21, 2001
CR 01-2502	DG, G-04 Load Unexpectedly Dropped	August 5, 2001

CR 01-2504	G-04 Significant Generator Vibration	August 6, 2001
1R16 Operator Workar	ounds	
	Operator Workaround Summary	July 18, 2001
NP 2.1.4	Operator Workarounds	Revision 0
	Operator Workaround Meeting Minutes	April 4, 2001
	Operator Workaround Meeting Minutes	May 7, 2001
	Operator Workaround Meeting Minutes	June 7, 2001
	Operator Workaround Meeting Minutes	July 10, 2001
0-00C-001 OS	Failure of Crossover Steam Dump Valves to Automatically Reseat Following System Actuation	
1-01C-001	1B Reactor Coolant Pump Seal Sensitivity to Temperature and Pressure Changes	
Point Beach Design Basis Document Program	Discussion Paper - Turbine Load Limit with Inoperable Crossover Steam Dump	April 28, 1995
Engineering Work Request (EWR) 01-050	Crossover Steam Dump Reseat System Upgrade	
CR 01-0640	Flaw In Reseat Steam Logic	March 1, 2001
1R19 Post-Maintenance	e Testing	
IT 21	Charging Pumps and Valves Test (Quarterly) Unit 1	Revision 10
RMP 9026-3	Reactor Trip and Bypass Breaker Routine Maintenance	Revision 1
2RMP 9026B	Removal and Installation of Reactor Trip Breaker 2-52/RTB	Revision 0
	Westinghouse Maintenance Program Manual for Westinghouse Type DB-50 Reactor Trip Circuit Breakers and Associated Switchgear	Revision 0
IWP 00-103-01	Service Water Upgrades to Emergency Diesel Generator G02	Revision 0

1R22 Surveillance Testing

IT-07A	P–32A Service Water Pump (Quarterly)	Revision 7
IT-07B	P-32B Service Water Pump (Quarterly)	Revision 7
IT-07C	P-32C Service Water Pump (Quarterly)	Revision 8
FSAR Chapter 9.6	Service Water System	Revision dated June 2001
CR 01-2526	Ineffective Corrective Action - Failure to Test Emergency Diesel Generator	August 8, 2001
40A3 Event Follow-up		
CR 01-2370	Loss of Spare Inverter Results in U1 Shutdown	July 18, 2001
AOP 21	PPCS [Primary Plant Computer System] Malfunction	Revision 1
AOP 24	Instrument Malfunction	Revision 0