

March 8, 2001

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

SUBJECT: POINT BEACH NUCLEAR PLANT - INSPECTION  
REPORT 50-266/01-03(DRP); 50-301/01-03(DRP)

Dear Mr. Reddemann:

On February 12, 2001, the NRC completed a baseline inspection at your Point Beach Nuclear Plant. The results of this inspection were discussed on February 12, 2001, with you and other members of your staff. The enclosed report presents the results of that inspection.

This 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, there was one finding of very low safety significance (No Color) identified in the report. The issue was entered into your corrective action program and is discussed in the summary of findings and the body of the report.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if you provide one, will be available **electronically** for public inspection in the NRC Public Document Room **or** from the Publicly Available Records System

M. Reddemann

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Sincerely,

***/RA/***

Roger D. Lanksbury, Chief  
Reactor Projects Branch 5

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

Enclosure: Inspection Report 50-266/01-03(DRP);  
50-301/01-03(DRP)

cc w/encl: R. Grigg, President and Chief  
Operating Officer, WEPCo  
M. Wadley, Chief Nuclear Officer, NMC  
J. Gadzala, 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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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

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

Report No: 50-266/01-03(DRP); 50-301/01-03(DRP)

Licensee: Nuclear Management Company, LLC

Facility: Point Beach Nuclear Plant, Units 1 & 2

Location: 6610 Nuclear Road  
Two Rivers, WI 54241

Dates: January 1 through February 12, 2001

Inspectors: J. Lara, Senior Resident Inspector, Kewaunee  
R. Powell, Resident Inspector  
M. Kunowski, Regional Inspector  
D. Jones, Regional Inspector  
W. Scott, Regional Inspector  
R. Winter, Regional Inspector  
D. Chyu, Regional Inspector

Approved by: R. Lanksbury, Chief  
Reactor Projects Branch 5  
Division of Reactor Projects

# NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

<b>Reactor Safety</b>	<b>Radiation Safety</b>	<b>Safeguards</b>
<ul style="list-style-type: none"><li>● Initiating Events</li><li>● Mitigating Systems</li><li>● Barrier Integrity</li><li>● Emergency Preparedness</li></ul>	<ul style="list-style-type: none"><li>● Occupational</li><li>● Public</li></ul>	<ul style="list-style-type: none"><li>● Physical Protection</li></ul>

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW, or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.

## SUMMARY OF FINDINGS

IR 05000266-01-03, IR 05000301-01-03, on 01/01-02/12/2001, Nuclear Management Company, LLC, Point Beach Nuclear Plant, Units 1 & 2. Resident Inspector Report.

The inspection was conducted by the resident inspectors and regional inspectors. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process." Findings for which the Significance Determination Process does not apply are indicated by "no color" or by the severity level of the applicable violation.

### A. Inspector-Identified Findings

#### Cornerstone: Mitigating Systems

NO COLOR. The inspectors identified that 16 valves in the Unit 2 safety injection system were locked closed instead of just closed as required by plant procedure. The failure to maintain valve position in accordance with applicable plant procedure did not affect the operability, availability, or reliability of the safety injection system and was not evaluated using the Significance Determination Process. However, the inspectors determined that the extent of the status control errors, the repetitive nature of locked valve problems, and the failure of previously identified corrective actions constituted extenuating circumstances in accordance with Manual Chapter 0609. The finding was assigned to Unit 2. (Section 4OA5)

### B. Licensee-Identified Findings

Violations of very low significance which were identified by the licensee have been reviewed by the inspector. Corrective actions taken or planned by the licensee appear reasonable. These violations are listed in Section 4OA7 of this report.

## Report Details

Summary of Plant Status: Unit 1 operated at or near 100 percent power throughout the inspection period except for January 6, 2001, when reactor power was reduced to 94.5 percent for condenser steam dump testing and from February 3-4 when power was reduced to 69.5 percent for turbine stop valve and crossover steam dump valve testing.

Unit 2 operated at or near 100 percent power throughout the inspection period except for February 7 when a reactor trip, due to a turbine trip caused by a generator lockout initiated by the stator ground relay circuitry, occurred. On February 8, the reactor was made critical following completion of the post-trip review. On February 9, the unit was synchronized to the offsite electrical distribution grid.

### **1. REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R04 Equipment Alignments

##### .1 Component Cooling Water (CCW), Unit 2 Partial System Walkdown

###### a. Inspection Scope

The inspectors performed a partial system walkdown of CCW to verify system operability. The CCW system was selected due to its risk significance. The inspectors used Checklist (CL) 2-CL-CC-001, "Component Cooling, Unit 2," Revision 4, and system drawings to accomplish the inspection.

The inspectors verified the correct position of control switches, breakers, and valves associated with the CCW system using system diagrams and CLs. The inspectors also verified appropriate control room switch positions and valve configurations. Finally, the inspectors evaluated other elements such as material condition, housekeeping, and component labeling.

Additionally, the inspectors reviewed the following documents:

- Design Basis Document 02, "Component Cooling Water System," Revision 0

###### b. Findings

No findings of significance were identified.



.2 Safeguards Service Water (SW) System, Unit 2 Partial System Walkdown

a. Inspection Scope

The inspectors performed a partial system walkdown of Unit 2 safeguards SW system to verify system operability. The SW system was selected due to its risk significance and on-going system modification work. The inspectors used CL 10J, "Safeguards Service Water System Checklist, Unit 2," Revision 18, and system drawings to accomplish the inspection.

The inspectors verified the correct position of breakers and valves associated with the service water system using system diagrams and CLs. Additionally, the inspectors evaluated other elements such as material condition, housekeeping, and component labeling.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

.1 Fire Area Walkdowns

a. Inspection Scope

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

- D06 - 125 Volts Direct Current (VDC) Battery Room, Fire Zone 306
- D05 - 125 VDC Battery Room, Fire Zone 307
- G-02 Emergency Diesel Generator Room, Fire Zone 309
- G-03 Switchgear Room Diesel Generator Building, Fire Zone 773

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," August 1999.

The inspectors verified that fire hoses, sprinklers and portable fire extinguishers were installed at their designated locations, were in satisfactory physical condition, and were unobstructed and verified 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 verified to be located per Fire Protection Evaluation Report requirements and to be in good physical condition.

b. Findings

No findings of significance were identified.

.2 Annual Fire Drill Observation

a. Inspection Scope

On January 10, 2001, the inspectors observed the fire brigade respond to a simulated fire in Fire Zone 301, Unit 1 Turbine Hall, to evaluate the readiness of licensee personnel to prevent and fight fires. Aspects of the response which were reviewed by the inspectors included:

- Proper use of self-contained breathing apparatus
- Proper use of protective clothing
- Verification that fire hoses were capable of reaching all necessary fire hazard locations and were laid out without flow constrictions
- Entry into the simulated fire area in a controlled manner
- Sufficient fire fighting equipment available at the scene for the fire brigade to properly perform fire fighting duties
- Fire brigade leader communications effectiveness
- Radio communications effectiveness
- Effective smoke removal operations
- Use of pre-planned fire fighting strategies
- Adherence to the pre-planned drill scenario and success in meeting drill objectives

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspectors reviewed the licensee's implementation of the maintenance rule requirements to ensure 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 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 verified licensee changes to performance criteria were reflected in the licensee's probabilistic risk assessment. Specific systems reviewed were:

- 345 kiloVolts
- 13.8 kiloVolts
- 125 VDC
- Main Steam
- Gas Turbine
- Instrument Air

Additionally, the inspectors reviewed the following documents:

- "1999 Annual Report for the Maintenance Rule," dated March 30, 2000
- Nuclear Power Business Unit Procedure Manual (NP) 7.7.4, "Scope and Risk Significant Determination for the Maintenance Rule," Revision 6
- NP 7.7.5, "Determining, Monitoring and Evaluating Performance Criteria for the Maintenance Rule," Revision 6
- NP 7.7.6, "Work Order Review and MPFF [Maintenance Preventable Functional Failure] Determination For The Maintenance Rule," Revision 3

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

a. Inspection Scope

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 and verified that the licensee's planning, risk management tools, and the assessment and management of online risk were adequate. The inspectors also verified that licensee actions to address increased online risk during periods 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, were accomplished when online risk was increased due to maintenance on risk-significant structures, systems, or components. The following specific activities were reviewed:

- The inspectors reviewed the maintenance risk assessment for performing Routine Maintenance Procedure 2RMP 9036-3, "2DY-01 Red Channel Instrument Bus Static Inverter Maintenance Procedure," Revision 8, with the inverter aligned to the Unit 2 red channel instrument bus.
- The inspectors reviewed the maintenance risk assessment for work planned for the week of January 14, 2001. This included work associated with the G-03 Emergency Diesel Generator (EDG) overhaul.
- The inspectors reviewed the maintenance risk assessment for work planned for the week of January 21, 2001. This included work associated with the SW west header isolation valve installation.

Additionally, the inspectors reviewed the following CRs as part of the inspection scope:

- CR 01-0023, "Safety Monitor Malfunction"
- CR 01-0207, "Yellow Safety Monitor Entries Missed"
- CR 02-0210, "Risk Condition Not Identified"
- CR 00-0226, "Safety Monitor Trend"

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions

a. Inspection Scope

The inspectors observed preparations for and performance of the February 8, 2001, Unit 2 startup conducted in accordance with Operating Procedure 1B, "Reactor Startup," Revision 40. The inspectors verified the pre-evolution briefing properly characterized the evolution and adequately addressed precautions, limitations, and operating experience. Additionally, the inspectors independently verified that the initial conditions for reactor startup were met. Finally, the inspectors observed the reactor startup to verify the evolution was conducted in accordance with the written procedure.

b. Findings

No findings of significance were identified.

## 1R15 Operability Evaluations

### a. Inspection Scope

The inspectors verified that the subject operability evaluations addressed the applicable current licensing basis requirements and commitments, and provided an adequate basis for justifying operability. Independent reviews included a discussion with licensee personnel and reviews of design and licensing basis documentation. The inspectors reviewed the following operability evaluations:

- CR 01-0039, "Service Water Pump Expansion Joints"
- CR 00-2817, "Electrical Maintenance Inspection on G-04 found slipping runout out of the tolerance band"
- CR 00-4175, "Bearing Oil for 2P-29-T was incorrectly placed in the overspeed trip mechanism housing instead of the outboard bearing reservoir"

### b. Findings

No findings of significance were identified.

## 1R19 Post-Maintenance Testing (PMT)

### .1 Unit 2 Main Generator Voltage Regulator Testing

#### a. Inspection Scope

The inspectors reviewed and observed the following post-maintenance testing activities associated with the Unit 2 main generator voltage regulator. Testing was conducted in accordance with Point Beach Test Procedure PBTP 103, "Unit 2 Main Generator Voltage Regulator Checkout and Testing," Revision 0.

During PMT observations, the inspectors verified that the test was adequate for the scope of the maintenance work which had been performed. The inspectors also verified that the impact of the testing had been properly characterized during the pre-job briefing; the test was performed as written and all testing prerequisites were satisfied; and that the test data was complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the test, the inspectors verified that the test equipment was removed, and that the equipment was returned to a condition in which it could perform its safety function.

#### b. Findings

No findings of significance were identified.

.2 1RH-626, Residual Heat Removal (RHR) Heat Exchanger Bypass Flow Control Valve PMT

a. Inspection Scope

The inspectors reviewed stroke testing of the Unit 1 RHR heat exchanger bypass flow control valve, 1RH-626. The inspectors reviewed the following documents:

- Routine Maintenance Procedure 9141, "Air-Operated Valve Testing and Adjustment," Revision 1
- IT 03, "Low Head Safety Injection Pumps and Valves (Quarterly) Unit 1," Revision 41

During PMT observations, the inspectors verified that the test was adequate for the scope of the maintenance work which had been performed, and that the testing acceptance criteria was clear and demonstrated operational readiness consistent with the design and licensing basis documents. The inspectors also verified that the test was performed as written: that all testing prerequisites were satisfied; and that the test data was complete, appropriately verified, and met the requirements of the testing procedure. Following the completion of the test, the inspectors verified that the system was returned to a condition in which it could perform its safety function.

Finally, the inspectors reviewed CR 01-0114, "Step Missed While Performing Test," which was initiated as a result of this inspection activity and was reviewed as part of the inspection scope.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

.1 Post-Accident Containment Sump Valves

a. Inspection Scope

The inspectors reviewed stroke testing of the Unit 1 post-accident containment sump valves, 1SI-850A and 1SI-850B. The inspectors reviewed the following documents:

- IT-40, "Safety Injection Valves (Quarterly)," Revision 38
- Work Order 9931208, "Perform Static Test of Valve per CR 00-0407"
- CR 00-0407, "Post-Accident Containment Sump Valves Not Tested as Described in Final Safety Analysis Report"
- Point Beach Calculation 2000-0018, "Hydraulic Pressure Requirements for SI-850A&B"

- Point Beach Final Safety Analysis Report, Section 10.2, “Auxiliary Feedwater System,” dated June 2000

The inspectors reviewed the procedures for completeness and sufficient detail and verified that the testing acceptance criteria were clear and demonstrated operational readiness consistent with design and licensing basis documents. The inspectors also verified that all testing prerequisites were satisfied, the test was performed as written, and the test acceptance criteria were satisfied. Following completion of the test, the inspectors verified that equipment was returned to a condition in which it could perform its safety-related function.

b. Findings

No findings of significance were identified.

.2 EDG G-02

a. Inspection Scope

The inspectors reviewed and observed the monthly surveillance testing of EDG G-02. The inspectors reviewed the following documents:

- Technical Specification Test TS-82, “Emergency Diesel Generator G-02 Monthly,” Revision 56
- Point Beach Final Safety Analysis Report Section 8.8, “Diesel Generator (DG) System,” dated June 2000

The inspectors reviewed the test procedures for completeness and sufficient detail, observed significant parts of the performance of the test, and verified that procedure adherence was consistent with regulatory requirements and standards. The inspectors also verified that all testing prerequisites were satisfied; and that test data were complete and appropriately verified. Following completion of the test, the inspectors verified that equipment was returned to a condition in which it could perform its safety-related function.

b. Findings

No findings of significance were identified.

### .3 Unit 1 Reactor Protection System Logic Testing

#### a. Inspection Scope

The inspectors reviewed and observed the monthly surveillance logic testing of the Unit 1 reactor protection system. The inspectors reviewed the following documents:

- Instrumentation and Control Procedure 1ICP 02.003, "Reactor Protection System Logic Monthly Surveillance Test," Revision 5
- Instrumentation and Control Procedure 1ICP 02.003A-1, "Reactor Protection System Logic Train A Monthly Surveillance Test," Revision 11

The inspectors reviewed the test procedures for completeness and sufficient detail, observed significant parts of the performance of the test, and verified that procedure adherence was consistent with regulatory requirements and standards. The inspectors also verified that all testing prerequisites were satisfied and that test data were complete and appropriately verified. Following completion of the test, the inspectors verified that equipment was returned to a condition in which it could perform its safety-related function.

#### b. Findings

No findings of significance were identified.

### 1R23 Temporary Plant Modifications

#### a. Inspection Scope

The inspectors reviewed the licensee's approved temporary modification (TM) 00-036, "Install Temporary Power From 1C-20 to C-001 and From 2C-20 to C-001." The scope of the TM was to supply power to control room control panel annunciators to allow de-energizing 125 VDC Panel D-26 to search for a ground on the DC system. The inspectors reviewed the TM safety evaluation, performed a walkdown of applicable portions of the 125 VDC system, and verified that the system design function would be maintained with the TM installed when system operability was required.

#### b. Findings

No findings of significance were identified.



#### 4. OTHER ACTIVITIES

##### 4OA1 Performance Indicator Verification

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

###### a. Inspection Scope

The inspectors reviewed reported fourth quarter 2000 data for the High Pressure Injection System and Residual Heat Removal System Unavailability performance indicators for Unit 1 and Unit 2 using the performance indicator definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Indicator Guideline," Revision 0.

The inspectors reviewed station log entries and system engineer data sheets for periods of system unavailability. The inspectors verified that planned and unplanned unavailability hours were characterized correctly in determining performance indicator results. The inspectors also verified performance indicator data through independent calculations.

###### b. Findings

No findings of significance were identified.

##### 4OA3 Event Follow-up

- .1 (Closed) Licensee Event Report (LER) 266/2000-011-00: Loss of 120 Volts Alternating Current Vital Instrument Bus During Inverter Maintenance. As discussed in Section 1R14.2 of NRC Inspection Report 50-266/00-17(DRP); 50-301/00-17(DRP), on December 2, 2000, the Unit 1 white instrument bus was inadvertently de-energized during maintenance activities on Inverter 1DY03. The inspectors review of this LER did not identify any new issues. This LER is closed.
- .2 (Closed) LER 301/2000-006-00: Failed Fuse in Intermediate Range Nuclear Detector Results in Reactor Scram. On December 14, 2000, Unit 2 was in the process of starting up following a refueling outage. During the start up, Unit 2 tripped as a result of a blown fuse in an intermediate range nuclear instrument channel. Licensee testing and troubleshooting did not identify any condition that would have blown the fuse. The fuse was replaced and the intermediate range channel subsequently functioned properly.

The inspectors responded to the reactor scram as documented in Section 1R14.3 of NRC Inspection Report 50-266/00-17(DRP); 50-301/00-17(DRP). Based on the inspectors' observations and a review of this LER, the inspectors determined that the scram was uncomplicated, all systems responded as expected, no human performance errors complicated the event response, and no emergency core cooling systems were challenged. The inspectors review of this LER did not identify any new issues. This LER is closed.

- .3 (Closed) LER 266/2000-003-00; 301/2000-003-00: Inadequate Control of Cable Spreading Room High Energy Line Break Barrier. On February 15, 2000, the licensee's quality assurance organization identified that a 4½-inch pipe built into and penetrating a wall of the cable spreading room, used for temporary running of cables into the room, was being controlled as a fire barrier impairment but not as a high-energy line break barrier impairment. The pipe had not been included in the licensee's procedure on high energy line break barriers.

The inspectors determined that since the failure of a main steam line which runs near the pipe could have created a harsh environment in the cable spreading room and the eventual loss of safety-related inverters, that the uncontrolled pipe penetration could have resulted in a credible impact on safety. However, because there was no steam line break and because the cable spreading room ventilation remained operable during the time the pipe was open, to mitigate steam intrusion into the room if a break had occurred, the finding was considered to be of very low safety significance (Green) and is dispositioned in Section 4OA7 of this report. This issue was entered into the licensee's corrective action system as CR 00-0543. This LER is closed.

- .4 Closed LER (50-266/2000-008-00; 301/2000-008-00): Inadequate Procedural Guidance for Spurious Operation of Valves During Appendix R Alternate Shutdown. The licensee identified that during post-fire safe shutdown conditions, the procedures for achieving and maintaining safe shutdown conditions did not appropriately consider spurious operation of safety injection Valves SI-851A/B, RHR to containment sump isolation. Spurious opening of these valves during hot standby conditions could lead to draining of the refueling water storage tank (RWST) volume to the containment sump.

To ensure adequate volume in the RWST, Valves SI-856A/B, located upstream of SI-851A/B, needed to be closed within 15 minutes of the spurious opening of SI-851A/B. Abnormal Operating Procedure (AOP) 10A, "Safe Shutdown-Local Operation," however, did not direct the operators to close the upstream valves until about 30 minutes into the procedure. If both SI-851A and SI-851B were to spuriously open at time zero, the time to drain the RWST to below the required inventory was determined to be 15 minutes. If only one valve spuriously opened, the drain down would occur in about 30 minutes. Since no single failure could cause both valves to spuriously open at the same time, the time to drain the RWST to below the required inventory was bounded between 15-30 minutes.

The safety significance of not closing SI-856A/B earlier in the abnormal operating procedure was low since the power to SI-851A/B would be secured in accordance with the AOP within about 10-15 minutes, thus ensuring the availability of the RWST inventory. Furthermore, the licensee concluded that another source of borated inventory, the boric acid storage tank, would remain available as a suction source to the charging pump in the event that SI-851A/B spuriously opened. No violation of regulatory requirements occurred since securing power to SI-851A/B within 10 to 15 minutes prevented draining the RWST below the required inventory. The licensee subsequently revised AOP-10A to close SI-856A/B earlier in the procedure.

During cold shutdown conditions, the licensee determined that Procedure AOP-10B, "Safe to Cold Shutdown in Local Control," did not direct the operators to verify closure of

SI-851A/B. When establishing RHR for normal recirculation to continue the plant cool down, the licensee would have to open Valves RH-700 and RH-701. With SI-851 A/B spuriously opened and without adequate detection to inform the operators to close the valves, this configuration could drain the RCS inventory to the containment sump. However, the operators had been trained in normal operating Procedure OP7A to danger tag SI-851A/B shut prior to establishing RHR cooling. In addition, during cold shutdown operations (after 30 hours of soak time), there will be more than the minimum number of operators available to review the configuration. Therefore, the safety significance was minimal and this was not a violation of regulatory requirements. Procedure AOP-10B was subsequently revised to include a caution statement ensuring closure of SI-851A/B prior to aligning RHR for normal cool down operations.

.5 Unit 2 Main Turbine and Reactor Trip at 100 Percent Power

a. Inspection Scope

The inspectors reviewed the circumstances surrounding the trip of the Unit 2 main turbine and reactor on February 7, 2001. The inspectors conducted the review to determine if equipment and personnel responded appropriately and if procedures were followed. As part of the inspection effort, the inspectors interviewed plant staff and reviewed control room logs, plant process computer printouts, main control board indications and switch positions, and Procedure NP 5.3.3, "Incident Investigation and Post-Trip Review," Revision 1. The licensee's initial evaluation identified that a generator lockout was initiated by the stator ground relay circuitry causing the turbine trip which caused the reactor trip. The licensee's investigation and root cause evaluation of the trip was being conducted as part of CR 01-0389.

b. Findings

No findings of significance were identified.

40A5 Other

(Closed) Unresolved Item (URI) URI 50-301/00-17-02(DRP): A total of 16 valves on the Unit 2 Safety Injection System were locked closed instead of just closed as specified by the applicable CL. On December 31, 2000, the inspectors identified 16 valves that were not in the position specified by CL 7A, "Safety Injection System Checklist Unit 2," Revision 15. The valves were locked shut vice shut, but not locked, as required by procedure. The inspectors previously identified a similar issue as documented in Inspection Report 50-266/00-09(DRP); 50-301/00-09(DRP).

The inspectors discussed the use and control of locks with the operations manager and plant manager. The operations manager acknowledged the ineffectiveness of the corrective actions developed in response to the inspector's previously identified issue, as assigned by CR-00-2466, to correct disagreement between plant procedures, drawings, and CLs. Specifically, the inspectors noted that although the Unit 2 CLs were revised and performed during the fall 2000 refueling outage, locks were not removed from valves as required by procedure. The issue has been entered into the licensee's corrective program as part of CR 01-0093. The issue of the ineffectiveness of previous

corrective actions was considered not to be a significant condition adverse to quality, and therefore not a violation of regulatory requirements, since no valves were found in a position preventing plant response to any design or licensing basis function or requirement.

The inspectors performed a risk significance screening of the failure to lock valves in accordance with NRC Inspection Manual Chapter 0609, "Significance Determination Process." Because the failure to lock the valves did not affect the operability, availability, or reliability of the Safety Injection System, the issue was not evaluated using the Significance Determination Process. Due to the extent of the status control errors and the repetitive nature of locked valve problems, the inspectors determined that extenuating circumstances existed and constituted a "no color" mitigating systems finding. The finding (FIN) was assigned to the mitigation cornerstone for Unit 2 (FIN 50-301/01-03-02(DRP)).

#### 40A6 Meetings, including Exit

On February 12, 2001, the inspectors presented the inspection results to Mr. M. Reddemann and other members of licensee management. The licensee acknowledged the findings presented. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

#### 40A7 Licensee Identified Violations

The following finding of very low significance was identified by the licensee and was a violation of NRC requirements which meet the criteria of Section VI of the NRC Enforcement Policy, NUREG 1600 for being dispositioned as Non-Cited Violations (NCV).

If you deny the Non-Cited Violation, you should provide a response with the basis for your 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.

NCV Tracking Number

Requirements Licensee Failed to Meet

NCV 50-266/01-03-01  
50-301/01-03-01

10 CFR Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," requires that activities affecting quality be prescribed by documented instructions, procedures, or drawings appropriate to the circumstance. Contrary to the above, failure to include a 4½" pipe built into and penetrating the wall of the cable spreading room in the licensee's procedure on high energy line break barriers, Administrative Procedure NP 8.4.16, "PBNP [Point Beach Nuclear Plant] High Energy Line Break Barriers," was considered a violation of 10 CFR Part 50, Appendix B, Criterion V requirements. This issue was entered into the licensee's corrective action system as CR 00-0543.

## PARTIAL LIST OF PERSONS CONTACTED

### Licensee

M. E. Reddemann, Site Vice President  
F. Cayia, Plant Manager  
B. J. O'Grady, Operations Manager  
V. M. Kaminskis, Maintenance Manager  
S. J. Thomas, Radiation Protection Manager  
J. Gadzala, Licensing Manager  
R.G. Mende, Director of Engineering  
D. D. Schoon, System Engineering Manager

### NRC

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

## ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

50-266/01-03-01 50-301/01-03-01	NCV	Inadequate Control of Cable Spreading Room High Energy Line Break Barrier (Section 4OA7)
50-301/01-03-02	FIN	16 valves on Unit 2 SI system were locked closed instead of just closed as specified by checklist (Section 4OA5)

### Closed

50-266/2000-011-00	LER	Loss of 120 Volts Alternating Current vital instrument bus during inverter maintenance (Section 4OA3.1)
50-301/2000-006-00	LER	Failed fuse in intermediate range nuclear detector results in reactor scram (Section 4OA3.2)
50-266/2000-003-00 50-301/2000-003-00	LER	Inadequate Control of Cable Spreading Room High Energy Line Break Barrier (Section 4OA3.3)
50-266/01-03-01 50-301/01-03-01	NCV	Inadequate Control of Cable Spreading Room High Energy Line Break Barrier (Section 4OA7)
50-266/2000-008-00 50-301/2000-008-00	LER	Inadequate Procedural Guidance for Spurious Operation of Valves During Appendix R Alternate Shutdown (Section 4OA3.4)

50-301/00-17-02	URI	16 valves on Unit 2 Safety Injection system were locked closed instead of just closed as specified by checklist (Section 4OA5)
50-301/01-03-02	FIN	16 valves on Unit 2 Safety Injection system were locked closed instead of just closed as specified by checklist (Section 4OA5)

Discussed

None

## LIST OF ACRONYMS USED

AOP	Abnormal Operating Procedure
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CL	Checklist
CR	Condition Report
DRP	Division of Reactor Projects
EDG	Emergency Diesel Generator
FIN	Finding
LER	Licensee Event Report
NCV	Non-Cited Violation
NP	Nuclear Power Business Unit Procedure
NRC	Nuclear Regulatory Commission
PI	Performance Indicator
PMT	Post-Maintenance Testing
RHR	Residual Heat Removal
RWST	Refueling Water Storage Tank
SW	Service Water
TM	Temporary Modification
URI	Unresolved Item
VDC	Volts Direct Current