October 30, 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 50-266/01-13; 50-301/01-13

Dear Mr. Reddemann:

On September 30, 2001, the NRC completed an inspection at your Point Beach Nuclear Plant. The enclosed report documents the inspection findings which were discussed on October 3, 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. Specifically, this inspection was a routine review of plant activities by the resident inspectors and regional inspectors who conducted reviews of radiation protection access control to radiologically significant areas, the radioactive environmental monitoring program, the occupational exposure control effectiveness performance indicator, and the maintenance rule program. In addition, the inspection included a review of the Unit 2 shutdown because of a large influx of fish into the circulating water and service water forebay.

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 the very low safety significance and because the issue 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 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.

Since September 11, 2001, the Point Beach Nuclear Plant has assumed a heightened level of security based on a series of threat advisories issued by the NRC. Although the NRC is not aware of any specific threat against nuclear facilities, the heightened level of security was recommended for all nuclear power plants and is being maintained due to the uncertainty about the possibility of additional terrorist attacks. The steps recommended by the NRC include increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with local law enforcement and military authorities, and limited access of personnel and vehicles to the site.

The NRC continues to interact with the Intelligence Community and to communicate information to the Nuclear Management Company, LLC. In addition, the NRC has monitored maintenance and other activities which could relate to the site's security posture.

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 (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 50-266/01-13; 50-301/01-13

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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
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Potts & Trowbridge
K. Duveneck, Town Chairman
Town of Two Creeks
D. Graham, Director
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A. Bie, Chairperson, Wisconsin
Public Service Commission
S. Jenkins, Electric Division
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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:	50-266/01-13; 50-301/01-13
Licensee:	Nuclear Management Company, LLC
Facility:	Point Beach Nuclear Plant, Units 1 & 2
Location:	6610 Nuclear Road Two Rivers, WI 54241
Dates:	August 8 through September 30, 2001
Inspectors:	P. Krohn, Senior Resident Inspector R. Powell, Resident Inspector A. Dunlop, Reactor Engineer R. Schmitt, Radiation Specialist
Approved by:	Roger D. Lanksbury, Chief Branch 5 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000266-01-13, IR 05000301-01-13, on 08/08-09/30/2001, Nuclear Management Company, LLC, Point Beach Nuclear Plant, Units 1 & 2. Event Follow-up.

This report covers a 7-week routine resident inspection, baseline radiation protection inspections, and a baseline maintenance rule inspection. The inspections were conducted by resident and regional specialist inspectors. One Green finding, involving a Non-Cited Violation, was identified concerning the operation of service water system strainers. 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. 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 a Non-Cited Violation (10 CFR Part 50, Appendix B, Criterion V), in that, the licensee failed to provide adequate written instruction to prevent excessive fouling of the service water header strainers. As a result, a condition adverse to quality was self-revealed on September 20, 2001, when auxiliary operators identified, while taking logs, that both the north and south header strainers were excessively fouled. The excessive fouling resulted in the service water system being in a configuration that was beyond design basis analyses.

The Non-Cited Violation was considered of low risk significance since, for the plant and environmental conditions at the time of discovery, no actual loss of safety function occurred or would have occurred. (Section 4OA3.1)

A. Licensee-Identified Findings

No findings of significance were identified.

Report Details

Summary of Plant Status

Unit 1 began the inspection period at 100 percent power and remained at 100 percent until August 25, 2001, when power was reduced to 55 percent due to problems with the main feed pump 1P-28B inboard bearing. Unit 1 was returned to 100 percent power on September 1, following bearing replacement and remained at full power for a few hours before power was reduced to 70 percent due to reactor coolant pump 1P-1B seal flow problems. Unit 1 remained at 70 percent until September 5, when a shutdown was initiated for seal package replacement. Unit 1 was again made critical on September 16 and was subsequently synchronized to the offsite electrical distribution grid later that day. Unit 1 was removed from the grid late on September 16 when the turbine was manually tripped due to the generator hot gas differential temperature exceeding procedural limits. Following proper venting of the condensate cooler, the Unit was resynchronized to the offsite electrical distribution grid on September 17 and reached 100 percent power on September 18, 2001. Unit 1 was operated at or near 100 percent for the remainder of the inspection period.

Unit 2 was operated at or near 100 percent power throughout the inspection period except for a brief period from September 2 through September 3, 2001, when power was reduced to 65 percent for turbine stop valve testing.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Emergency Preparedness

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

The inspectors performed a partial system walk-down of the Unit 1 ‘B’ Train Emergency Diesel Generator (EDG) (G-03), while G-03 was aligned to provide emergency alternating current power to both Units 1 and 2 'B' Train safeguards busses during a period of extended unavailability of the normal Unit 2 'B' Train EDG, G-04. The inspectors used licensee checklists during the walk-downs and used selected portions of system electrical, fuel oil, lubricating oil, and starting air drawings to accomplish the inspection.

The inspectors walked down G-03 to verify the correct position of control switches, breakers, louvers, dampers, and valves associated with G-03 and ventilation, heating, fuel oil transfer, and engine control power alignments associated with G-03 support systems. The inspectors also performed walk-downs in the control room to verify appropriate switch positions and valve configurations. 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 assessment of this area.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Walk-down of Selected Fire Zones

a. Inspection Scope

The inspectors walked down the following areas to assess the overall readiness of fire protection equipment and barriers and the implementation of compensatory measures during repair of the KB-01 fire header:

- Unit 2 Charging Pump Rooms, Fire Zones 163, 164, and 165
- Motor Control Center 2-B32 Room, Fire Zone 166
- Unit 2 Turbine Hall, Fire Zones 583 and 588
- Control Building, Heating, Ventilation and Air Conditioning Equipment Room, Fire Zone 337

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 in the licensee's Fire Protection Evaluation Report.

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 evaluated the physical location and condition of fire detection devices and inspected passive features, such as fire doors, fire dampers, and mechanical and electrical penetration seals, to verify that they were located per Fire Protection Evaluation Report requirements and were in good physical condition. The inspectors also reviewed the tagout boundary for the KB-01 repair to verify that all affected areas were identified and compensatory measures established. Additionally, the inspectors performed inspections of compensatory measures, such as the staging of wheeled fire extinguisher (Ansul) units, the staging of additional fire hoses, and the establishment of fire rounds, to verify that they were implemented properly.

Finally, the inspectors reviewed Condition Report (CR) 01-2894, "Cover Plate Missing From Electrical Pull Box," which was initiated as a result of this inspection activity. The documents listed at the end of the report were used by the inspectors during assessments of this area.

b. Findings

No findings of significance were identified.

.2 Observation of Unannounced Fire Drill

a. Inspection Scope

The inspectors observed an unannounced drill concerning a fire in the Auxiliary Feedwater Pump (AFWP) room on August 23, 2001. The drill was observed to evaluate the readiness of licensee personnel to prevent and fight fires. The inspectors considered licensee performance in donning protective clothing/turnout gear and self-contained breathing apparatus, deploying firefighting equipment and fire hoses to the scene of the fire, entering the fire area in a deliberate and controlled manner, maintaining clear and concise communications, checking for fire victims and propagation of fire and smoke into other plant areas, smoke removal operations, and the use of pre-planned fire fighting strategies in evaluating the effectiveness of the fire fighting brigade. In addition, the inspectors attended the post-drill debrief to evaluate the licensee's ability to self-critique fire fighting performance and make recommendations for future improvement.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Loss of Containment Sump Recirculation

a. Inspection Scope

The inspectors performed quarterly observations of licensed operator simulator training. On August 22, 2001, the inspectors observed licensed operator training involving the simulated loss of containment sump recirculation capability following a large-break loss-of-coolant accident.

The inspectors evaluated crew performance for the clarity and formality of communication; the ability to take timely action in the safe direction; the prioritizing, interpreting, and verifying of alarms; the correct use and implementation of procedures, including alarm response procedures; timely control board operation and manipulation, including high-risk operator actions; and the group dynamics. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.2 Loss of All Alternating Current Power

a. Inspection Scope

The inspectors performed quarterly observations of licensed operator simulator training. On September 27, 2001, the inspectors observed licensed operator training involving

Emergency Contingency Action Procedure ECA 0.0, "Loss of All AC Power," Revision 29.

The inspectors verified crew performance in terms of the clarity and formality of communication; the ability to take timely action in the safe direction; the prioritizing, interpreting, and verifying of alarms; the correct use and implementation of procedures, including alarm response procedures; timely control board operation and manipulation, including high-risk operator actions; and the group dynamics. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation (71111.12)

.1 Biennial Maintenance Rule

a. Inspection Scope

The objective of the inspection was to:

- Verify that the periodic evaluation was completed within the time restraints defined in 10 CFR 50.65, the maintenance rule (once per refueling cycle, not to exceed 2 years); verifying that the licensee reviewed its goals, monitoring, preventive maintenance activities, industry operating experience, and made appropriate adjustments as a result of that review;

- Verify that the licensee balanced reliability and unavailability during the previous refueling cycle, including a review of safety significant structures, systems, and components (SSCs);

- Verify that (a)(1) goals were met, corrective actions were appropriate to correct the defective condition, including the use of industry operating experience, and (a)(1) activities and related goals were adjusted as needed; and

- Verify that the licensee established (a)(2) performance criteria, examined any SSCs that failed to meet their performance criteria, or reviewed any SSCs that have suffered repeated maintenance preventable functional failures, including a verification that failed SSCs were considered for (a)(1).

The inspectors examined the periodic evaluation reports completed for the years 1999 and 2000. To evaluate the effectiveness of (a)(1) and (a)(2) activities, the inspectors examined (a)(1) action plans, justifications for returning SSCs from (a)(1) to (a)(2), and a number of CRs (contained in the list of documents at the end of this report). In addition, the CRs were reviewed to verify that the threshold for identification of problems was at an appropriate level and the associated corrective actions were appropriate. The majority of these CRs were related to the following systems:

- Service Water (SW)
- Feedwater and Condensate
- Emergency Diesel Generator (EDG)
- Auxiliary Feedwater

In addition, the inspectors reviewed a nuclear oversight audit and an engineering self-assessment that addressed the maintenance rule program. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.2 Resident Inspector Review of Selected Maintenance Rule Systems

a. Inspection Scope

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 SSCs were properly categorized and classified as (a)(1) or (a)(2) in accordance with 10 CFR 50.65. The inspectors reviewed station logs, maintenance work orders (WOs), (a)(1) corrective action plans, selected surveillance test procedures, and a sample of CRs to verify that the licensee was identifying issues related to the maintenance rule at an appropriate threshold and that corrective actions were appropriate. Additionally, the inspectors reviewed the licensee's performance criteria to verify that the criteria adequately monitored equipment performance and to verify that changes to the criteria were reflected in the licensee's probabilistic risk assessment. Specific components and systems reviewed were:

- Gas Turbine
- Service Air
- Plant Level Performance Criteria

Finally, the inspectors reviewed CR 01-2697, "Maintenance Rule Unavailability Time Inaccurate for Gas Turbine," which was initiated as a result of this inspection activity. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

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

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 to verify 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 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, to verify that the actions were accomplished when on-line risk was increased due to maintenance on risk-significant SSCs. When risk-significant equipment was taken out-of-service, the inspectors reviewed selected tagouts to verify that no unintentional equipment had been removed from service which would increase the assumed risk profile. The following specific activities were reviewed:

- The maintenance risk assessment for work planned for the week beginning August 5, 2001. This included planned maintenance on the Unit 2 'C' charging pump and EDG G-02. Emergent work activities included the failure of EDG G-04 during surveillance and post-maintenance testing.

- The maintenance risk assessment for work planned for the week beginning August 27, 2001. This included planned maintenance on the Unit 1 'A' charging pump, testing of the bearing cooling requirements for the 'A' electrically-driven AFWP, P-38A, and planned maintenance on the Unit 2 turbine-driven AFWP, 2P-29. Emergent work activities included the replacement of the Unit 1 'B' main feed pump inboard bearings and the continued EDG G-04 unavailability.

- The Unit 1 Cycle 27 maintenance outage safety assessment. The inspectors reviewed the licensee's projection of key safety functions and monitored risk evaluations throughout the outage.

The documents listed at the end of the report were used in the review.

b Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-routine Plant Evolutions (71111.14)

.1 Unit 1 Maintenance Outage for Reactor Coolant Pump (RCP) Seal Replacement

a. Inspection Scope

The inspectors observed work activities associated with the Unit 1 maintenance outage, which began on September 6, 2001. The inspectors assessed the adequacy of operations activities during the plant cooldown and heatup, and other outage related activities, such as configuration management. Additionally, the inspectors reviewed maintenance activities for implementation of risk management, preparation of contingency plans for loss of key safety functions, conformance to approved site procedures, and compliance with Technical Specifications (TSs). The following major activities were observed or performed:

- outage planning meetings
- unit cooldown and depressurization
- unit heatup and pressurization
- blocking of Safety Injection
- walk-downs of residual heat removal systems
- walk-downs of selected shutdown inventory addition makeup paths
- walk-downs of Reactor Coolant System boundary integrity prior to increasing reactor vessel inventory
- walk-downs to verify that all debris which could inhibit mitigating the effects of a design basis accident were removed from the primary containment
- inspection of the Unit 1 reactor cavity including observations of the reactor pressure vessel head for indications of boric acid
- other general outage activities, including foreign material exclusion controls and safety shutdown assessments

The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.2 Operating Crew Response to High Electrical Generator Differential Temperatures During Unit 1 Startup Activities

a. Inspection Scope

The inspectors reviewed the operating crew response to exceeding an electrical generator hot gas differential temperature limit during Unit 1 startup activities on September 17, 2001, to determine the appropriateness of crew actions. Specifically, the inspectors considered procedural compliance and conservative decision making practices when reviewing the crew's decision to manually trip the turbine despite the procedural guidance of Operating Procedures (OPs) OP1C, Step 3.8.7.c, and OP 2A, Step 2.8.6.c, which directed a manual trip of both the reactor and the turbine. The inspectors reviewed the associated emergent temporary procedure change notice, 10 CFR 50.59 screening and safety evaluation, Unit 1 incident investigation manual turbine trip report, and conduct-of-operations guidance in determining the appropriateness of the crew's decision to deviate from safety-related, continuous-use and reference-use procedure requirements.

b. Findings

At the end of the inspection period, the licensee’s root cause evaluation of the manual turbine trip had not been completed. Pending completion and inspector review of the root cause evaluation report, operator response to exceeding the Unit 1 electrical generator hot gas differential temperature limit without tripping the reactor as directed by operating plant procedures was considered an Unresolved Item (URI) (URI 50-266/01-13-01).

1R15 Operability Evaluations (71111.15)

.1 Liquid Process Radiation Monitors With Inlet and Outlet Detector Flow Lines Reversed

a. Inspection Scope

The resident inspectors reviewed information concerning the reversal of several radiation monitoring system (RMS) liquid well sample lines to understand the potential effects on operability. With the inlet and outlet lines reversed, the internal configuration of the sample wells was altered, potentially preventing the well from being completely filled with liquid while in operation. The concern was that a partially filled sample well represented a condition different from that in which the RMS detectors were calibrated and could have had a non-conservative effect on RMS liquid effluent detection sensitivity. The inspectors reviewed the licensee's initial response and subsequently interviewed Radiation Protection Department personnel to understand the effects of the sample line reversal on RMS detector sensitivity. The inspectors also considered the component cooling water and residual heat removal heat exchanger tube leak history and the licensee's practice of batch, instead of continuous liquid releases, to the environment. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.2 Review of Unit 1 'B' RCP Number Two Seal Performance After Number One Seal Flow Indicated Zero Gallons Per Minute (gpm)

a. Inspection Scope

The inspectors reviewed the degrading performance of the Unit 1 'B' RCP number two seal when, on August 30, 2001, the number two seal opened causing the number one seal return flow to indicate 0 gpm for 7 minutes. Prior to the Unit 1 shutdown on September 6, 2001, for seal replacement, the inspectors observed three other occurrences of indicated number one seal return flow going to 0 gpm for short periods of time. In each case, the inspectors reviewed licensee engineering evaluations, compliance with TS reactor coolant system (RCS) leakage requirements, abnormal OP guidance, and vendor RCP seal operating criteria to verify that the number one seal remained fully operable and no challenges to the RCS pressure boundary existed. To verify continued seal operability, the inspectors verified that the number one seal parameters returned to normal within short periods of time following each perturbation and that in each case, the cause of the transient was understood. Finally, the inspectors reviewed a temporary procedure change to verify that vendor guidance had been properly included into RCP abnormal OPs. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.3 Non-conservatisms in Iodine Spiking Calculations for Steam Generator Tube Rupture (SGTR) and Main Steam Line Break (MSLB) Accidents

a. Inspection Scope

The inspectors reviewed the operability determination performed for CRs 01-2759 and 01-1854 to understand the impact of non-conservative vendor assumptions on the Final Safety Analysis Report (FSAR) radiological dose analyses for SGTR and MSLB accidents. The inspectors reviewed the operability determination and associated calculations to verify that parameters affecting radiological dose at the site boundary and low population zone for the SGTR and MSLB accidents had been revised to include reasonable and adequate conservatisms and assumptions. The inspectors reviewed Code of Federal Regulations 10 CFR Part 100 dose limits and compared these to the licensee dose results to verify that the new SGTR sand MSLB dose values at the site boundary and low population zone continued to represent a small fraction of the allowable off-site thyroid dose limits. Also, the inspectors compared this issue against a list of other active operability determinations to verify that no conflicting assumptions or compensatory measures existed between current operability determinations. The inspectors verified that the SGTR and MSLB accident dose results remained bounded by the FSAR large-break loss-of-coolant accident dose values to ensure no unintended dose consequences to control room operators would occur as a result of the non-conservative vendor assumptions. Finally, the inspectors reviewed licensee administrative controls to limit letdown flow to less than 43 gpm when average coolant temperature was greater than 500 degrees Fahrenheit to verify that the revised calculations remained bounding for current operating practices. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.4 Control Room Ventilation System Chilled Water Pump Differential Pressure Reading Exceeded Acceptance Criteria During Inservice Testing

a. Inspection Scope

During the performance of quarterly control room ventilation system inservice testing on September 19, 2001, chilled water Pump 0P-112A developed differential pressure outside of the allowable acceptance criteria for the pump of 26.8 to 30.6 pounds per square inch differential (psid). The pump developed a differential pressure of 31.5 psid during the test. The inspectors interviewed the testing engineer and reviewed design basis requirements for the pump to determine operability. In addition, the inspectors considered degraded chilled water pump effects on the ability to maintain control room envelope temperatures and the associated effects on charcoal bed isotopic removal efficiencies during design basis accidents. The inspectors also reviewed the application of American Society of Mechanical Engineers Code acceptance criteria in establishing operability to determine if licensee Code commitments had been properly applied. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

.5 Valve 1SI-850A (Unit 1, 'A' Residual Heat Removal Pump Primary Containment Sump Suction) Peak Opening Hydraulic Pressure

a. Inspection Scope

During the performance of quarterly safety injection system valve testing on September 19, 2001, Valve 1SI-850A failed to meet peak hydraulic opening pressure acceptance criteria. The inspectors reviewed the technical adequacy of the licensee's determination that the valve was operable but degraded. Additionally, the inspectors reviewed the adequacy of specified compensatory measures and verified that the measures were properly implemented. The documents listed at the end of the report were used by the inspectors during this review.

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds (OWAs) (71111.16)

a. Inspection Scope

The inspectors reviewed OWAs 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 OPs. The inspectors interviewed selected operations and engineering licensee personnel and evaluated the following OWA:

- OWA 0-97R-002, "G01/G02/G03/G04 Spurious Air Low Pressure Alarm Comes in Locally at the EDG on Start of the Diesel"

  This OWA discussed low starting air pressure alarms that occurred during EDG starts when the reserve air pressure fell below the alarm setpoint. The inspectors reviewed design basis requirements to verify that, when the low air pressure alarm occurred, sufficient air capacity remained to satisfy all EDG starting requirements. The inspectors also reviewed the licensee's proposed design change to defeat the low starting air pressure alarm during engine operation to ensure that there were no failure-to-run or failure-to-start scenarios that could occur and be unnoticed by operations personnel. The documents listed at the end of the report were used in the assessment of this area.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (PMT) (71111.19)

.1 Unit 1 Charging Pump 1P-2A

a. Inspection Scope

The inspectors reviewed PMT activities conducted in accordance with Inservice Test (IT) IT 21, “Charging Pumps and Valves Test (Quarterly) Unit 1,” Revision 10, following 1P-2A 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 inspectors selected this activity due to three recent charging pump PMT failures. 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 1 Main Feed Pump 1P-28B

a. Inspection Scope

The inspectors reviewed PMT activities conducted in accordance with WO Work Plan 9703885, “Feed Pump Motor Maintenance,” following 1P-28B inboard bearing 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 inspectors selected this activity due to repetitive 1P-28B bearing failures. 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 Reactor Coolant Pump 1P-1B

a. Inspection Scope

The inspectors reviewed PMT activities conducted in accordance with Routine Maintenance Procedure, “Reactor Coolant Pump and Motor Final Restoration and Post Maintenance Testing,” following 1P-1B 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.

1R22 Surveillance Testing (71111.22)

.1 Primary Sampling and Sample Analysis

a. Inspection Scope

The inspectors observed hot leg primary sampling conducted in accordance with Chemistry Analytical Methods and Procedure (CAMP) 600.3, "Primary Side Sampling Procedures: Hot Leg Liquid Sampling - Depressurized Liquid." The inspectors reviewed the procedure for appropriateness, observed the performance of the procedure, and verified that procedure adherence was consistent with regulatory requirements and standards. The inspectors also observed sample analysis conducted in accordance with CAMP 410, "Determination of Radioactive Iodine and Iodine 131 Equivalents in Reactor Coolant."

b. Findings

No findings of significance were identified.

.2 Electric-Driven AFWP and Valve Quarterly Surveillance Test

a. Inspection Scope

The inspectors reviewed design basis requirements and completed documentation for procedure IT 10, "Test of Electrically-Driven Auxiliary Feed Pumps and Valves (Quarterly)," Revision 43, to verify operability of the auxiliary feedwater system. The inspectors referenced and compared the design basis pump flow and valve stroke timing requirements in FSAR Section 10.2, "Auxiliary Feedwater System (AF)," to the surveillance test acceptance criteria in IT 10 to verify that the criteria satisfied the safety-related functions described in the FSAR. The inspectors checked minimum flow recirculation valve back-up nitrogen bottle valve alignments, AFWP suction pressure switch valve alignments, AFWP suction and discharge valve alignments, and pump bearing lubrication oil levels following the surveillance test to verify that the electric-driven AFWPs had been properly returned to service. The inspectors also compared auxiliary feedwater system (AFW) drawings against individual steps in the surveillance test procedure to verify that check valve full-stroke open and shut tests were properly described and executed to verify operability of the check valve being tested. The inspectors reviewed the completed surveillance test procedure to verify that supervisory reviews had been properly completed and all acceptance criteria had been satisfied.

Finally, the inspectors reviewed CR 01-2671, "Error in FSAR Auxiliary Feedwater AFW Statement," and four Document Feedback Forms recommending explicit verification of electrically-driven AFWP recirculation valve closure time delays following pump starts. The CR and Document Feedback Forms were initiated as a result of this inspection

activity and were reviewed as part of the inspection scope. 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 Electric-Driven AFWP Emergency Suction from SW Surveillance Tests

a. Inspection Scope

The inspectors reviewed design basis requirements and completed documentation for procedures IT 10C, "AF-4009, P-38A MDAFWP [Motor-Driven Auxiliary Feedwater Pump] Suction From SW [Service Water] MOV [Motor-Operated Valve] Exercise," Revision 0, and IT 10D, "AF-4016, P-38B MDAFWP Suction From SW MOV Exercise," Revision 0, to verify operability of the AFWP safety-related suction supply. The inspectors referenced and compared the design basis stroke timing requirements in FSAR Section 10.2, "Auxiliary Feedwater System (AF)," to the surveillance test acceptance criteria to verify that the criteria satisfied the safety-related functions described in the FSAR. The inspectors checked the order and configuration associated with IT 10C and 10D valve alignments to verify that no air was introduced into the AFWP suction, the system was properly filled and vented, no SW was actually introduced into an operating steam generator, and the system was properly returned to service. The inspectors reviewed the completed surveillance test procedure to verify that supervisory reviews had been completed and all acceptance criteria had been satisfied.

b. Findings

No findings of significance were identified.

.4 Test of Bearing Cooling Requirements for Electrically-Driven AFWP P-38A

a. Inspection Scope

The inspectors reviewed and observed testing conducted to determine cooling water requirements for the electric-driven AFWP P-38A. The inspectors verified testing prerequisites were satisfied and that temperature limitations were briefed and understood by the operating crew. The inspectors verified that procedure adherence was consistent with regulatory requirements and standards. Following completion of the test procedure, the inspectors verified the system was properly returned to service. Finally, the inspectors reviewed the 10 CFR 50.59 screening associated with the test procedure.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed the licensee's approved Temporary Modification (TM) 01-031, "Raising the Setpoint for 2P-25B, Condensate Pump Motor Winding." The scope of this TM was to increase the temperature alarm setpoints for the condensate pump motor windings until the motor could be rewound during the next outage. The inspectors reviewed the condensate pump TM safety evaluation, motor winding temperature trends, and the associated FSAR design basis requirements to verify pump operability was maintained. The inspectors also reviewed electrical insulation ratings to verify that the revised setpoint was consistent with temperature limits for the class of insulation used in the condensate pump motor.

b. Findings

No findings of significance were identified.

Emergency Preparedness

EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the control room simulator and technical support center during an emergency preparedness drill conducted on August 16, 2001. The inspection focused on the ability of the licensee to appropriately classify emergency conditions, complete timely notifications, and implement appropriate protective action recommendations in accordance with approved procedures.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access Control to Radiologically Significant Areas (71121.01)

.1 Plant Walk-downs, Radiological Boundary Verifications, and Radiation Work Permit Reviews

a. Inspection Scope

The inspectors conducted walk-downs of the radiologically controlled area to verify the adequacy of radiological boundaries and postings. Specifically, the inspectors walked down several radiologically significant work area boundaries (high and locked high

radiation areas) in the Unit 1 and 2 Auxiliary Buildings. Confirmatory radiation measurements were taken to verify that these areas and selected radiation areas were properly posted and controlled in accordance with 10 CFR Part 20, licensee procedures, and TSs. The inspectors reviewed radiation work permits (RWPs) for routine plant tours. The inspectors also reviewed a RWP and attended a pre-job briefing for an "At Power" entry into the Unit 2 Containment. The RWP was reviewed for protective clothing requirements and electronic dosimetry alarm setpoints. The inspectors then observed the entry to verify compliance with regulatory requirements.

b. Findings

No findings of significance were identified.

.2 Job-In-Progress Reviews

a. Inspection Scope

The inspectors observed portions of the refurbishment of Unit 1 Charging Pump 1PIA. Radiation work permit requirements for the job were reviewed to verify that dosimetry placement, alarm setpoints, job site radiological surveys, radiological exposure estimates, contamination controls, and postings were adequate given the job's radiological conditions.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety

2PS3 Radiological Environmental Monitoring and Radioactive Material Control Programs (71122.03)

.1 Review of Environmental Monitoring Reports and Data

a. Inspection Scope

The inspectors reviewed the licensee's Annual Radiological Environmental Monitoring Report for the year 2000. Sampling location commitments, monitoring and measurement frequencies, land use census, the vendor laboratory's Interlaboratory Comparison Program, and data analysis were assessed. Anomalous results, including data, missed samples, and inoperable or lost equipment, were evaluated. The review of the Radiological Environmental Monitoring Program (REMP) was conducted to verify that the REMP was implemented as required by the Offsite Dose Calculation Manual (ODCM) and associated TSs, and that changes, if any, did not affect the licensee's ability to monitor the impact of radioactive effluent releases on the environment. The most recent quality assessment of the licensee's REMP vendor was reviewed to verify that the vendor laboratory performance was consistent with licensee and NRC requirements.

b. Findings

No findings of significance were identified.

.2 Walkdowns of Radiological Environmental Monitoring Stations and Meteorological Tower

a. Inspection Scope

The inspectors conducted a walk-down of selected environmental air sampling stations and thermoluminescent dosimeters to verify that their locations were consistent with their descriptions in the ODCM, and to evaluate the equipment material condition. The meteorological monitoring site was observed to validate that sensors were adequately positioned and operable. The inspectors reviewed a sample of monthly reports submitted to the licensee by its meteorological services vendor regarding the onsite meteorological monitoring program's data recovery rates, routine calibration and maintenance activities, and non-scheduled maintenance activities to verify that the meteorological instrumentation was operable, calibrated, and maintained in accordance with licensee procedures. The inspectors observed read-outs of wind speed, wind direction, and atmospheric stability measurements in the Control Room to verify that the readout instrumentation was operable.

b. Findings

No findings of significance were identified.

.3 Review of REMP Sample Collection and Analysis

a. Inspection Scope

The inspectors accompanied a licensee REMP technician to observe the collection and preparation of a variety of environmental samples, including surface water, air filters (particulate), and charcoal cartridges (iodine) to verify that the sampling was representative and that the sampling techniques were sound and in accordance with station procedures and the ODCM. The inspectors observed the technician perform air sampler field check maintenance to verify that the air samplers were functioning in accordance with procedures. Selected air sampler calibration and maintenance records for 2000 were reviewed to verify that the equipment was being maintained as required. The environmental sample collection program was compared with the ODCM to verify that samples were representative of the licensee's release pathways. Additionally, the inspectors reviewed the most recent results of the vendor laboratory's inter-laboratory comparison program and quality assurance program to verify that the vendor was capable of making adequate radiochemical measurements.

b. Findings

No findings of significance were identified.

.4 Unrestricted Release of Material From the Radiologically Controlled Area

a. Inspection Scope

The inspectors reviewed the licensee's controls, procedures, and practices for the unrestricted release of material from radiologically controlled areas. The following areas were evaluated in order to verify that: (1) radiation monitoring instruments used to perform surveys for unrestricted release of materials were appropriate; (2) instrument sensitivities were consistent with NRC guidance contained in Inspection and Enforcement Circular 81-07 and Health Physics Positions in NUREG/CR-5569 for both surface contaminated and volumetrically contaminated materials; (3) criteria for survey and release conformed with NRC requirements; (4) licensee procedures were technically sound and provided clear guidance for survey methodologies; and (5) radiation protection and chemistry staff adequately implemented station procedures.

The inspectors reviewed the quality control records for radiochemistry instrumentation used to identify and quantitate radioisotopes in materials for free release, in order to verify that the instrumentation was calibrated and maintained as required by site procedures.

b. Findings

No findings of significance were identified.

.5 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed CRs and the results of the licensee's REMP self-assessment performed during the second quarter of 2001 to determine if problems were being identified and entered into the corrective action program for timely resolution. The inspectors also reviewed the licensee's overall management of the REMP, including attention to details of the sampling program and the vendor laboratory, in order to evaluate the effectiveness of the REMP in collection and analysis of samples for the detection of offsite radiological contamination.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

.1 RCS Specific Activity PI

a. Inspection Scope

The inspectors reviewed the second quarter 2001 PI data for the RCS Specific Activity PI for Unit 1 and Unit 2 using the PI definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 1.

The inspectors reviewed chemistry department data to determine the value for RCS specific activity and did independent calculations to verify the PI value.

b. Findings

No findings of significance were identified.

.2 Occupational Exposure Control Effectiveness

a. Inspection Scope

The inspectors conducted reviews to verify the licensee's reported PI for the occupational radiation safety cornerstone. The data review focused on selected CRs and radiological access control data for the previous 12 months. The inspectors conducted plant walk-downs to verify that those areas that met the definition of locked high radiation areas were adequately secured.

b. Findings

There were no findings of significance identified.

4OA3 Event Follow-up (71153)

.1 SW Header Strainer Fouling on September 20, 2001

a. Inspection Scope

The inspectors reviewed the excessive fouling of the SW header strainers due to lake grass intrusion on September 20, 2001.

b. Findings

As Found Condition

The inspectors identified a finding of very low safety significance that was also considered a Non-Cited Violation for the licensee not providing instructions on maintaining service water strainer plugging below design basis values.

On September 20, 2001, auxiliary operators observed differential pressures across the north and south SW strainers to be 1.18 psid and 2.23 psid, respectively. At normal flow conditions, these values placed the SW system in an unanalyzed condition that was outside of system design bases. Upon discovery, the licensee initiated hourly blowdowns of the strainers to keep the differential pressure across the strainers less than 1.0 psid. After discussions with engineering personnel, operations placed the strainers in continuous blowdown and the system remained in that configuration for the remainder of the inspection period. Initial licensee review of the event identified that lake currents caused by high easterly winds uprooted the grass and transported it to the circulating and service water pump forebay, eventually fouling the strainers.

Historical Perspective

In 1999, as discussed in Inspection Report 50-266/99016(DRP); 50-301/99016(DRP), the inspectors identified that the range of the installed pressure indicators on the strainers was too wide to allow accurate indication of significant strainer plugging (around 1 psid). In response, the licensee established two compensatory measures. First, the strainers were placed in continuous blowdown configuration. Second, temporary differential pressure indicators of the appropriate range were installed. In 2000, as discussed in Inspection Report 50-266-00-09(DRP); 50-301-00-09(DRP), the inspectors reviewed an operability evaluation (associated with CR 99-2241) and questioned the licensee's conclusion that it was not credible that the strainers would become plugged $\geq$60 percent (corresponding to $\geq$1.0 psid) during normal operation. There were no accurate historic records of strainer differential pressure in the 1.0 psid range to support the licensee's conclusion.

The inspectors noted that although the temporary differential pressure indicators had been left in place since the issue was first identified in 1999, the strainers were no longer maintained in continuous blowdown due to the licensee conclusion that strainer fouling beyond 60 percent during normal operation was not credible. The inspectors determined that removal of the previously established compensatory measure, based on an inadequate operability evaluation, was a direct cause of the condition adverse to quality identified on September 20, 2001.

Operability of the SW System on September 20, 2001

The excessive fouling resulted in the SW system being in a configuration that was beyond the design basis analyses. Specifically, the differential pressure across the north and south service water strainers was identified to be 1.18 psid and 2.23 psid, respectively. Based on the licensee's bounding analyses, both strainers were assumed to be 60 percent blocked. For the SW system parameters in effect at the time of the

gauge reading (three pumps running, pump discharge pressure approximately 75 pounds per square inch - gauge (psig), and total flow approximately 12,000 gpm), the 1.18 psid and 2.23 psid are indicative of fouling well above the design basis fouling of 60 percent.

Subsequent licensee review determined that for the plant and environmental conditions of September 20 (lake temperature, etc.) the SW system would have been able to supply adequate cooling to support mitigation systems. The inspectors, however, determined that the licensee's failure to recognize an adverse trend in strainer performance and the lack of adequate procedural guidance for operating the SW system under adverse environmental conditions resulted in a credible impact on safety by challenging SW operability. Specifically, the inspectors identified that auxiliary operator shiftly log readings indicated that strainer performance had been declining throughout the day on September 19. Despite the effect of automatic blowdown of the strainers (every 4 hours), the logged differential pressures across the strainers showed a steady increase on each of the three log readings taken on September 19. The third shift log entry on September 19 for the north strainer recorded a differential pressure of 0.8 psid (log limit was 1.0 psid). Despite the close proximity to the limit and increasing trend, room access records show the parameter was not monitored again until approximately 8 hours later when the beyond design basis values were observed on the morning of September 20, 2001.

The inspectors used NRC Inspection Manual Chapter 0609, “Significance Determination Process, (SDP)” Appendix A, dated February 5, 2001, to evaluate the issue. The finding was considered to be more that minor and have a credible impact on safety since the operability of the SW system was challenged by excessive fouling of the SW strainers. The finding affected the reactor safety cornerstone because it could have credibly affected the operability of a system or train in a mitigating system (emergency power and residual heat removal) due to a lack of sufficient cooling water. As a result, the inspectors initiated Phase 1 of the SDP. The inspectors determined that the issue was of very low safety significance (Green) based on the SDP Phase 1 Screening Worksheet for the Mitigating Systems Cornerstone because no actual loss of safety function occurred.

Contrary to the requirements of 10 CFR Part 50, Appendix B, Criterion V, “Instructions, Procedures, and Drawings,” the inspectors determined that the licensee failed to develop and implement documented instructions, procedures, or drawings, of a type appropriate to the circumstances, in that on September 20, the SW strainers became fouled beyond design basis limits. Specifically, the inspectors determined that shiftly monitoring of strainer differential pressure during adverse environmental conditions, in the absence of remote indication or alarm, was inadequate to assure operability of the SW system. This violation is being treated as a Non-Cited Violation (NCV) (NCV 50-266/01-13-02; 50-301/01-13-02) consistent with Section VI.A. of the NRC Enforcement Policy. This violation is in the licensee’s corrective action system as CR 01-2892, “Zurn Strainer Fouling.”

.2 (Closed) Licensee Event Report (LER) 301/2001-002-00: Manual reactor trip due to decreasing water level in circulating water system. On June 27, 2001, the Unit 2 reactor was manually tripped from approximately 70 percent power. The manual trip was

directed by Abnormal Operating Procedure AOP 13A, "Circulating Water System Malfunction," when the water level in the circulating water system pumpbay decreased to less than -11 feet. The drop in level was caused by a large influx of small fish (alewife) into the pumphouse forebay. The SW pumps also took suction from the pumpbays and -11 feet was a conservative minimum water level to assure adequate SW pump net positive suction head. Maintaining adequate net positive suction head verified that components serviced by the SW system remained capable of performing their safety functions. The lowest pumpbay level reached during the transient was -11.5 feet.

In reviewing the licensee's root cause evaluation report of this event, the inspectors noted that operations personnel had identified the need for pumpbay level indication in 1996. In spite of re-identifying the need for automatic level indication in several subsequent root cause evaluations, effectiveness reviews, and other CRs, action to install automatic pump bay level indications had not progressed beyond the conceptual design stage when this event occurred. The root cause evaluation report documented 15 opportunities to have installed automatic pump bay level indication through the modification prioritization process, the OWA program, and the corrective action process that had occurred prior to this event. Also, the inspectors noted that similar events involving fish intrusions had resulted in lowering pumpbay levels in 1996.

The inspectors reviewed licensee calculations concerning SW and circulating water pump net positive suction head and determined that, since the circulating water pumps lost effective pumping capacity at -15 feet and SW pump operation was not affected until elevations below -19 feet, no impact on SW pump operation occurred during this event. This issue was included in the licensee's corrective action system as CR 01-2178, "Large Fish Kill Results in Unit 2 Trip."

.3 (Closed) LER 266/2001-004-00: Failure to Comply With LCO [Limiting Condition for Operation] Action Statement to Start Redundant Standby Emergency Power Supply. The inspectors dispositioned this issue as a Non-Cited Violation (NCV 50-266/01-10-02) in NRC Inspection Report 50-266/01-10; 50-301/01-10. The inspectors' review of this LER did not identify any new issues. This issue was included in the licensee's corrective action system as CR 01-2152, "Potential TS Compliance Issue Regarding Emergency AC [Alternating Current]."

4OA6 Meetings

Exit Meeting

The resident inspectors presented the routine inspection results to Mr. A. Cayia and other members of licensee management on October 3, 2001. The licensee acknowledged the findings presented. No proprietary information was identified.

Interim Exit Meetings

Senior Official at Exit Meeting:	Mr. Stuart Thomas, Radiation Protection Manager
Date:	August 31, 2001
Proprietary Information:	No

Subject:	Access Control to Radiological Areas Radiological Environmental Monitoring Program, and Occupational Exposure Control Effectiveness Performance Indicator
Change to Inspection Findings:	No
Senior Official at Exit Meeting:	R. Mende, Director, Engineering
Date:	August 30, 2001
Proprietary:	No
Subject:	Maintenance Rule Implementation Periodic Evaluation
Change to Inspection Findings:	No

4OA7 Licensee-Identified Violations

No findings of significance were identified.

KEY POINTS OF CONTACT

Licensee

A. Cayia, Plant Manager
F. Flentje, Senior Regulatory Compliance Specialist
D. Gehrke, Nuclear Oversight Supervisor
N. Hoefert, Engineering Programs Manager
C. Jilek, Maintenance Rule Coordinator
V. Kaminskas, Maintenance Manager
R. Mende, Director of Engineering
J. Strharsky, Assistant Operations Manager
L. Pepple, Radiation Protection Supervisor
M. Reddemann, Site Vice-President
D. Schoon, Operations Department Manager
D. Shannon, Radiation Protection Supervisor
S. Thomas, Radiation Protection Manager
R. Turner, Inservice Inspection Coordinator
T. Webb, Licensing Manager
S. Yuen, NMS-Group Lead, System Engineering

NRC

B. Wetzel, Point Beach Project Manager, NRR

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

50-266/01-13-01	URI	Operating crew response to high electrical generator differential temperatures during Unit 1 startup activities (Section 1R14.2)
50-266/01-13-02 50-301/01-13-02	NCV	Service water header strainer fouling on September 20, 2001 (Section 4OA3.1)

Closed

50-266/01-13-02 50-301/01-13-02	NCV	Service water header strainer fouling on September 20, 2001 (Section 4OA3.1)
50-301/2001-002-00	LER	Manual reactor trip due to decreasing water level in circulating water system (Section 4OA3.2)
50-266/2001-004-00	LER	Failure to comply with LCO action statement to start redundant standby emergency power supply (Section 4OA3.3)

Discussed

50-266/01-10-02	NCV	Failure to test the Unit 1 ‘B’ safeguards train redundant standby emergency power supplies within the TS time requirement (Section 4OA3.3)

LIST OF ACRONYMS USED

AFW	Auxiliary Feedwater
AFWP	Auxiliary Feedwater Pump
ALARA	As-Low-As-Is-Reasonably Achievable
AOP	Abnormal Operating Procedure
CFR	Code of Federal Regulations
CL	Checklist
CR	Condition Report
DBD	Design Basis Document
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
ECA	Emergency Contingency Action Procedure
EDG	Emergency Diesel Generator
FSAR	Final Safety Analysis Report
gpm	Gallons Per Minute
HP	Health Physics Procedure
ICP	Instrumentation and Control Procedure
IT	Inservice Test
LCO	Limiting Condition For Operation
LER	Licensee Event Report
MSLB	Main Steam Line Break
NCV	Non-Cited Violation
NP	Nuclear Procedure
NPM	Nuclear Procedure Memoranda
ODCM	Offsite Dose Calculation Manual
OP	Operating Procedure
OWA	Operator Workaround
PI	Performance Indicator
PMT	Post-Maintenance Testing
psid	Pounds Per Square Inch Differential
RCA	Radiologically Controlled Area
RCP	Reactor Coolant Pump
RCS	Reactor Coolant System
RMP	Routine Maintenance Procedure
RMS	Radiation Monitoring System
REMP	Radiological Environmental Monitoring Program
RP	Radiation Protection
RWP	Radiation Work Permit
SCR	Screening and Safety Evaluation
SGTR	Steam Generator Tube Rupture
SOP	System Operations Procedure
SSC	Structure, System, and Component
SW	Service Water
TM	Temporary Modification
TS	Technical Specification
URI	Unresolved Item
WO	Work Order

LIST OF DOCUMENTS REVIEWED

1R04 Equipment Alignment

CL [Checklist] 11A G-03	G-03 Diesel Generator Checklist	Revision 4
CL 10D	Fuel Oil System	Revision 17

1R05 Fire Protection

Fire Protection Evaluation Report, Volume 2	Fire Zone: 163 - 2P2C Charging Pump Room	August 1999
Fire Protection Evaluation Report, Volume 2	Fire Zone: 164 - 2P2B Charging Pump Room	August 1999
Fire Protection Evaluation Report, Volume 2	Fire Zone: 165 - 2P2A Charging Pump Room	August 1999
Fire Protection Evaluation Report, Volume 2	Fire Zone: 166 - Motor Control Center 2-B32 Room	August 1999
Fire Protection Evaluation Report, Volume 3	Fire Zone: 583 - Unit 2 Turbine Hall Elevation 8 ft	August 1999
Fire Protection Evaluation Report, Volume 3	Fire Zone: 588 - Unit 2 Turbine Hall Elevation 26 ft	August 1999
Bechtel Drawing 6118 M-208	Fire Protection Water	November 18, 2000
Tag Series 0 FP KB-01 Pipe MM Rev 0-1A	Piping KB-1, Remove Temporary Modification 00-047/Fix Leak	August 12, 2001
Fire Hazards Analysis Report, Fire Area 33, Fire Zone 337	Area Specific Analysis and Conclusion, Control Building Heating, Ventilation, and Air Conditioning Equipment Room	August 17, 2001
CR 01-2894	Cover Plate Missing From Electrical Pull Box	September 19, 2001

1R11 Licensed Operator Qualifications

Simulator Guide 0092	Loss of Sump Recirculation	Revision 0
Emergency Contingency Action (ECA) 1.1	Loss of Containment Sump Recirculation	Revision 26
ECA 1.2	LOCA [Loss of Coolant Accident] Outside Containment	Revision 12
ECA 0.0	Unit 1 Loss of All AC [Alternating Current] Power	Revision 29
Simulator Guide 0091	Loss of AC Power	Revision 8

1R12 Maintenance Rule Implementation

Administrative Manual 3-4	Implementation of the Maintenance Rule at PBNP	Revision 3
Nuclear Procedure (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 7
NP 7.7.6	Work Order Review and MPFF [Maintenance Preventable Functional Failure] Determination for the Maintenance Rule	Revision 3
NP 7.7.7	Guideline for Maintenance Rule Periodic Report	Revision 2
	System Health Report - Service Water	August 15, 2001
	System Health Report - Feedwater and Condensate	August 15, 2001
	System Health Report - Emergency Diesel Generator	August 15, 2001
Nuclear Procedure Memoranda (NPM) 2000-0325	1999 Annual Report for the Maintenance Rule	March 30, 2000
NPM 200l-0251	2000 Annual Report for the Maintenance Rule	March 26, 2001

Point Beach Form 7029	Documentation of Maintenance Rule Performance Criteria	March 30, 2001
NPM 2001-0601	Maintenance Rule Self-Assessment S-A-ENG-01-002	August 27, 2001
Audit Report A-P-01-018	Nuclear Oversight Audit Report - Maintenance Rule	August 28, 2001
PBM 96-0381	Action Plan due to EDG A(1) Classification	July 2, 1996
	G01 Corrective Action Plan Approval	December 9, 1997
	G02 Corrective Action Plan Approval	December 9, 1997
	G03 Corrective Action Plan Approval	December 9, 1997
	G04 Corrective Action Plan Approval	December 9, 1997
	Maintenance Rule (a)(1) System Action Plan Checklist and Approval - Service Water	November 1, 1999
	Maintenance Rule (a)(1) System Action Plan Checklist and Approval - Diesel Generator	August 23, 2001
	Review of Maintenance Rule Performance (Change of Disposition) - Condensate and Feedwater System	October 28, 2000
	Review of Maintenance Rule Performance (Change of Disposition) - Auxiliary Feedwater System	December 18, 2000
CR 99-3230	1CS-466 Indicates Full Open at 100 Percent Power	December 15, 1999
CR 99-3253	Substantial Difference Noted on MFRV 1CS-466	December 17, 1999
CR 00-0660	1CS-466 Limit Switch Issue	February 28, 2000
CR 00-1097	Failure to Classify Plant Events Per Maintenance Rule	March 22, 2000
CR 00-1305	Consistency and Accuracy of “Unavailability” Reporting	April 25, 2000
CR 00-1365	Boric Acid Recirculation Controller	April 28, 2000
CR 00-1366	Boric Acid Transfer Pump Failed	April 28, 2000
CR 00-1444	Unit 2 Main Feed Check Valves Leaking	May 8, 2000

CR 00-1504	Unavailability Performance Criteria Exceeded	May 10, 2000
CR 00-1536	G-05 Did Not Start When Called To	May 12, 2000
CR 00-2420	G-01 Lube Oil Silver Content	August 10, 2000
CR 00-2566	Unit 1 Main Feedwater Regulating Bypass Valve Controller	August 20, 2000
CR 00-2827	Emergency Diesel Generator Out of Service Hours for Reliability Reported Incorrectly	September 21, 2000
CR 00-3771	MOV [Motor-Operated Valve] Thermal Overload Trip	November 14, 2000
CR 01-0415	Failure of CRAM [Control Rod Drive Mechanism] Fan Damper	February 7, 2001
CR 01-2721*	Discussion of MPFF [Maintenance Preventable Functional Failure] Not Included in Condition Reports Per Procedure	August 29, 2001
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
	Documentation of Maintenance Rule Performance Criteria, Gas Turbine System	August 19, 1999
	Performance Criteria Assessments for GOT [Gas Turbine] since 3/30/2001	August 9, 2001
CR 01-2697	Maintenance Rule Unavailability Time Inaccurate for Gas Turbine	August 27, 2001
CR 01-0504	VIP [Variable Incentive Payment Plan] Goals Not Met	February 16, 2001

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 1	August 5, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 2	August 5, 2001

	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 1	August 26, 2001
	Weekly Core Damage Risk Profile (Safety Monitor) - Unit 2	August 26, 2001
	Work Week Activities Sorted by Component for Week Ending 9/1/01, Units 1 and 2, Work Week P11	

1R14 Personnel Performance During Non-routine Plant Evolutions

CL 1B	Containment Integrity Unit 1	Revision 44
CL 1D	Heatup	Revision 16
Cl 20	Post Outage Containment Closeout Inspection Unit 1	Revision 9

1R15 Operability Evaluations

Engineering Evaluation 2001-022	Unit 1 'B' RCP [Reactor Coolant Pump] #2 Seal Leakage	Revision 0
Engineering Evaluation 2001-022	Unit 1 ‘B’ Reactor Coolant Pump, 1P-1B, #2 Seal Leakage	Revision 1
Westinghouse Electric Corporation Product Update No. S-013	No. 2 and No. 3 Seal Operating Criteria	Revision 1
Westinghouse Technical Bulletin EMBU-TB-93-01-R1	Revised Procedures for RCP Shutdown With No. 1 Seal leakage Outside Operating Limits	October 10, 1995
Temporary Procedure Change 2001-0704 to AOP-1B	Reactor Coolant Pump Malfunction	August 31, 2001
AOP-1B	Reactor Coolant Pump Malfunction	Revision 16
Screening and Safety Evaluation (SCR) 2001-0726	10 CFR 50.59 Screening and Safety Evaluation, RCP Seal leakage Operating Limits and Action Responses	August 31, 2001
CR 01-2443	RMS Liquid Sample Well Orientation/Installation Questioned	July 26, 2001
CR 01-2670	RMS Liquid Monitors Out Of Service	August 23, 2001

Temporary Procedure Change Number 2001-0735	OP 1C, “Low Power Operation to Normal Power Operations”	September 17, 2001
SCR 2001-0762	10 CFR 50.59/72.48 Screening and Safety Evaluation for OP 1C, “Low Power Operation to Normal Power Operation”	September 17, 2001
OP 1C	Low Power Operation to Normal Power Operation	Revision 78
OP 2A	Normal Power Operation	Revision 40
NP 5.3.3, Attachment A	Incident Investigation and Post-Trip Review, Unit 1 Manual Turbine Trip	September 16, 2001
NP 2.1.1	Conduct of Operations	Revision 0
CR 01-2881	Chilled Water Pumps Low DP [Differential Pressure]	September 19, 2001
Inservice Test IT-15	Chill Water Pumps and Valves	Revision 17
FSAR Section 9.8	Control Room Ventilation System (VCR)	June 2001
FSAR Section 14.3.5	Radiological Consequences of Loss of Coolant Accident, Table 14.3.5-3, Control Room Parameters	June 2000
IST Background Document Appendix G	Inservice Testing Background Pump Data Sheet for Control Room Chill Water Pump 0P-112A	Revision 6
Design Basis Document DBD-31	Control Room VAC [Heating, Ventilation, and Air Conditioning] and Habitability	Revision 0
CR 01-2759	Elevated Letdown Flow Non-Conservatism	September 5, 2001
CR 01-1854	Non-Conservatisms In Steam Generator Tube Rupture (SGTR) Analysis	May 21, 2001
Calculation 2001-008	Nonconservatism in Iodine Spiking Calculations for SGTR and Rupture of a Steam Pipe	Revision 0
FSAR Table 14.3.5-6	Large Break Offsite and Control Room Doses	June 2000
Tag Series 1 CV Orifice Rev0-1	Letdown Orifice Outlet Control - Unit 1	September 8, 2001
Tag Series 2 CV Orifice Rev0-1	Letdown Orifice Outlet Control - Unit 2	September 8, 2001

	Operability Determinations - Corrective Action Plan Review	September 19, 2001
NUREG 1482	Guidelines for Inservice Testing at Nuclear Power Plants	April 1995

1R16 Operator Workarounds

0-97R-002 D/G	G01/G02/G03/G04 Spurious Air Low Pressure Alarm Comes in Locally at the EDG on Start of the Diesel	
Modification Request 00-070	Elimination of Nuisance Low Starting Air Pressure Alarm During EDG Start of G-01	Revision 0
Modification Request 00-073	Elimination of Nuisance Low Starting Air Pressure Alarm During EDG Start of G-04	Revision 0

1R19 Post-Maintenance Testing

IT 21	Charging Pumps and Valves Test (Quarterly) Unit 1	Revision 10
WO 9945377	Repack Charging Pump	
WO 9944580	Suction Manifold Leak	
WO 9703885	Feed Pump Motor Maintenance	August 23, 2001
Routine Maintenance Procedure (RMP) 9002-2	Reactor Coolant Pump Motor Inspection	Revision 26
RMP 9002-5	Reactor Coolant Pump Mechanical Seal Replacement	Revision 24
RMP 9002-12	Reactor Coolant Pump and Motor Final Restoration and Post Maintenance Testing	Revision 7

1R22 Surveillance Testing

Chemistry Analytical Methods and Procedure 600.3	Primary Side Sampling Procedures: Hot Leg Liquid Sampling - Depressurized Liquid	Revision 1
Chemistry Analytical Methods and Procedure 410	Determination of Radioactive Iodine and Iodine 131 Equivalents in Reactor Coolant	Revision 5

IT 10	Test of Electrically-Driven Auxiliary Feed Pumps and Valves (Quarterly)	Revision 43
FSAR Section 10.2	Auxiliary Feedwater System (AF)	June 2000
CR 01-2671	Error in FSAR Auxiliary Feedwater AFW Statement	August 24, 2001
Document Feedback Form	Feedback for ICP [Instrumentation and Control Procedure] 13.008A, Auxiliary Feedwater Flow Instruments Outage Calibration, Revision 0	August 24, 2001
Document Feedback Form	Feedback for ICP 13.008B, Auxiliary Feedwater Flow Instruments Outage Calibration, Revision 0	August 24, 2001
Document Feedback Form	Feedback for 1ICP 04.003-5, Auxiliary Feedwater Flow Instruments Outage Calibration, Revision 4	August 24, 2001
Document Feedback Form	Feedback for 2ICP 04.003-5, Auxiliary Feedwater Flow Instruments Outage Calibration, Revision 5	August 24, 2001
Drawing M-217, Sheet 1	Auxiliary Feedwater System	Revision 68
Drawing M-217, Sheet 2	Auxiliary Feedwater System	Revision 15
Drawing M-207, Sheet 1A	Service Water	Revision 19
Point Beach Test Procedure 105	Test of Bearing Cooling Requirements for Electrically-Driven Auxiliary Feed Pump P-38A	Revision 0
10 CFR 50.59 Screen 2001-0258	Test of Cooling Requirements for Electrically-Driven Auxiliary Feed Pump P-38A	Revision 1
NP 10.3.1	Authorization of Changes, Tests, and Experiments (10 CFR 50.59 and 72.48 Reviews)	Revision 12

1R23 Temporary Plant Modifications

Temporary Modification 01-031	Raising of the Setpoint for 2P-25B, Condensate Pump Motor Winding	Revision 0
SCR 2001-0567	Raising of the Setpoint for 2P-25B, Condensate Pump Motor Winding	Revision 0

Setpoint Document 14.2	Secondary Systems: Condensate and Feedwater	Revision 12
Design Basis Document DBD-03	Condensate and Feedwater	Revision 1

EP6 Drill Evaluation

	Emergency Drill Plan Package	August 16, 2001

2OS1 Access Control to Radiologically Significant Areas

CR 01-2594	Radiation Protection Visitor Control Concern	August 15, 2001
Health Physics Procedure (HP) 3.2	Radiological Labeling, Posting and Barricading Requirements	March 30, 2001
NP 4.2.16	Visitor Access to a Radiologically Controlled Area	February 21, 2001
Point Beach Form 4035c	Calculated Neutron Exposure Records (multiple entries)	August 30, 2001
RWP 01-008	Tours for General Surveillance	November 5, 1998
RWP 01-015	General Maintenance in Primary Auxiliary Building, Unit 1/Unit 2 Facade	January 1, 2001
RWP 01-201	Containment Entries	December 29, 2000
2-System Operations Procedure CONT-001	Operating Containment Air-locks	July 23, 2001
	Gamma Dose Summary for U2 Containment Entries	August 30, 2001
	Point Beach TS, Paragraph 15.6.11, “Radiation Protection Program”	March 17, 1998
	Potential Hot Environment, Pre-Job Briefing Considerations	June 28, 2000
	Pre-job Briefing Checklist	March 26, 2001

2PS3 Radiological Environmental Monitoring Program

A-P-00-09	Office of Assessment, Plant Support Audit, Second Quarter 2000	August 17, 2000
CR 00-1753	Recorders Changed Without Required Procedure Changes	June 7, 2000
CR 00-2228	Met Tower Instrumentation Calibration Methodology Questioned	July 21, 2000
CR 00-3506	Potential Sampler Dilution	November 3, 2000
CR 00-3507	Sampler Flow Calibration Problems	November 3, 2000
CR 01-1352	Retention Pond Sampler Found Turned Off	May 21, 2001
CR 01-1931	Environmental Samplers Tripped Off	May 31, 2001
CR 01-2272	Discrepancies with Monitoring	July 9, 2001
EM	Environmental Manual	December 1, 2000
HPCAL 1.33	Maintenance and Calibration of Low Volume Air Samplers	May 11, 2001
HPCAL 2.15	Small Article Monitor Type SAM-9/11 Calibration and Efficiency	February 9, 2001
HPCAL 2.15	Small Article Monitor Type SAM-9/11 Calibration and Efficiency, Data Sheets From Calibrations	
ICP 06.003	Meteorological and Circulating Water System Calibration Procedure	January 30, 2001
ICP 06.003	Meteorological and Circulating Water System Calibration Procedure, Temporary Change No. 2001-0142	February 20, 2001
ICP 6.55	Meteorological Instrumentation Calibration Procedure	June 25, 2001
ICP 7.30	Instrumentation and Control Procedure, Meteorological Monitoring System	September 5, 1995
NP 4.2.25	Release of Material, Equipment and Personal Items From Radiologically Controlled Areas	November 29, 2000
WO 9941684	Power Failures for Environmental Air Sampler at Location E-01	June 20, 2001

WO 9913032	Preventive Maintenance Activity, Meteorological System Calibration	February 7, 2001
WO 9920906	Preventive Maintenance Activity, Meteorological Tower Instrumentation Calibration	June 26, 2001
WO 9928252	Preventive Maintenance Activity, Meteorological System Inspection	August 17, 2001
	Annual Monitoring Report 2000	April, 2001
	Environmental, Inc. Report, Appendix A, "Interlaboratory Comparison Program Results"	January, 2000 through December, 2001
	Final Report to Wisconsin Electric Power Co., Radiological Environmental Monitoring Program for Point Beach Nuclear Plant, Environmental, Inc. Midwest Laboratory.	February 2, 2001
	Point Beach Meteorology Towers (1, 2 and 3) Real-Time Data Sheets	August 29, 2001
	RAP-1 and RAS-1 Air Sampler Maintenance and Calibration Records	November 2, 2000
	Sampling Procedures Manual, Teledyne Midwest Laboratory	August 8, 1999

4AO1 Performance Indicator Verification, Occupational Exposure Control Effectiveness

CR 01-2317	TS High Radiation Area Violation	July 13, 2001
NPM 2000-0281	NRC Occupational Exposure Performance Indicator Data for 1st Quarter 2000	April 5, 2000
NPM 2000-0505	NRC Occupational Exposure Performance Indicator Data for 2nd Quarter 2000	July 12, 2000
NPM 2000-0797	NRC Occupational Exposure Performance Indicator Data for 3rd Quarter 2000	October 10, 2000
NPM 2001-0006	NRC Occupational Exposure Performance Indicator Data for 4th Quarter 2000, Unintended Exposure Data	January 5, 2001

4A03 Event Follow-up

Root Cause Evaluation Report 01-041 (CR 01-2178)	Unit 2 Manual Trip Due to Decreasing Pump Bay Level (Traveling Water Screens Plugged with Large Influx of Small Fish)	July 27, 2001
Individual Plant Examination Summary Report Section 3.2.1.1.7	Service Water System	June 30, 1993
CR 01-2892	Zurn Strainer Fouling	September 20, 2001
CR 01-2178	Large Fish Kill Results in Unit 2 Trip	June 28, 2001
CR 01-2152	Potential TS Compliance Issue Regarding Emergency AC [Alternating Current]	June 25, 2001