October 29, 2003

Mr. Alfred J. Cayia
Site-Vice President
Point Beach Nuclear Plant
Nuclear Management Company, LLC
6610 Nuclear Road
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2
NRC INTEGRATED INSPECTION REPORT 05000266/2003004;
05000301/2003004

Dear Mr. Cayia:

On September 30, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Point Beach Nuclear Plant, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on September 30 with you and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and to 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.

Concurrent with this quarterly baseline inspection, the NRC conducted an inspection in accordance with Inspection Procedure (IP) 95003, "Supplemental Inspection for Repetitive Degraded Cornerstones, Multiple Degraded Cornerstones, Multiple Yellow Inputs, or One Red Input." The IP 95003 supplemental inspection was conducted as a result of the Red finding related to the potential common mode failure of the AFW system due to closure of the recirculation valve upon loss of instrument air. The results of the IP 95003 supplemental inspection are currently under review and will be documented in a separate inspection report.

In addition to the routine NRC inspection and assessment activities, and IP 95003 supplemental inspection activities, Point Beach performance is being evaluated quarterly as described in the May 9, 2003, Annual Assessment Follow-Up Letter - Point Beach Nuclear Plant. Consistent with Inspection Manual Chapter (IMC) 0305, plants in the multiple/repetitive degraded cornerstone column of the Action Matrix are given consideration at each quarterly performance assessment review for (1) declaring plant performance to be unacceptable in accordance with the guidance in IMC 0305; (2) transferring to the IMC 0350 "Oversight of Operating Reactor Facilities in a Shutdown Condition with Performance Problems" process; and (3) taking additional regulatory actions, as appropriate. On October 15, 2003, the NRC reviewed Point Beach operational performance, inspection findings, and performance indicators for the third quarter of 2003. As stated above, the results of the IP 95003 supplemental inspection are currently being evaluated and, thus, were not included in this review. Based on this review, we concluded that Point Beach performance, while not good, did not represent either significant degradation or unsafe operations. We determined that no additional regulatory actions are currently warranted. The NRC will continue to closely monitor Point Beach performance consistent with the guidance in IMC 0305.

Based on the results of this inspection, two NRC-identified and one self-revealed findings of very low safety significance were identified, one of which involved a violation of NRC requirements. However, because this violation was of very low safety significance and because the issue was entered into the licensee's corrective action program, the NRC is treating this finding and issue as a Non-Cited Violation consistent with Section VI.A.1 of the NRC Enforcement Policy. Additionally, a licensee-identified violation is listed in Section 4OA7 of this report.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 801 Warrenville Road, Lisle, IL 60532-4351; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Point Beach Nuclear Plant facility.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Steven A. Reynolds
Acting Director
Division of Reactor Projects

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

Enclosure: Inspection Report 05000266/2003004; 05000301/2003004
w/Attachment: Supplemental Information

See Attached Distribution

DOCUMENT NAME: C:\ORPCheckout\FileNET\ML033030540.wpd

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RIII		RIII		RIII		RIII	
NAME	MKunowski/trn		AVegel		SReynolds			
DATE	10/29/03		10/29/03		10/29/03			

OFFICIAL RECORD COPY

cc w/encl:

R. Grigg, President and Chief
Operating Officer, WEPCo
J. Cowan, Executive Vice-President
Chief Nuclear Officer
Licensing Manager
D. Weaver, Nuclear Asset Manager
D. Schoon, Acting Plant Manager
R. Scott, Acting Manager, Regulatory Affairs
J. Rogoff, Esquire General Counsel
D. Cooper, Senior Vice-President
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
J. Kitsembel, Electric Division
Wisconsin Public Service Commission
State Liaison Officer

<u>ADAMS Distribution</u>:
WDR
DFT
DWS
RidsNrrDipmIipb
GEG
HBC
PGK1
C. Ariano (hard copy)
DRPIII
DRSIII
PLB1
JRK1

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos:	50-266; 50-301
License Nos:	DPR-24; DPR-27
Report No:	05000266/2003004; 05000301/2003004
Licensee:	Nuclear Management Company, LLC
Facility:	Point Beach Nuclear Plant, Units 1 and 2
Location:	6610 Nuclear Road Two Rivers, WI 54241
Dates:	July 1 through September 30, 2003
Inspectors:	P. Krohn, Senior Resident Inspector M. Morris, Resident Inspector J. Cameron, Project Engineer P. Peterson, Senior Operations Engineer K. Walton, Operations Engineer
Observers:	F. Ramirez, NRC Intern A. Klett, NRC Intern S. Pergande, NRC Intern
Approved by:	Anton Vegel, Chief Branch 7 Division of Reactor Projects

Enclosure

TABLE OF CONTENTS

SUMMARY OF FINDINGS

IR 05000266/2003004, 05000301/2003004; 07/01/2003 - 09/30/2003; Point Beach Nuclear Plant, Units 1 & 2; Licensed Operator Requalification; Identification and Resolution of Problems.

This report covers a 3-month period of baseline resident inspection and an announced baseline inspection by operator licensing inspectors. The inspection was conducted by Region III inspectors and the resident inspectors. Three Green findings, one of which was associated with one Non-Cited Violation, were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector-Identified and Self-Revealing Findings

Cornerstones: Initiating Events and Mitigating Systems

- Green. The inspectors identified a finding of very low risk significance concerning a grading discrepancy between the facility licensee and the NRC inspectors during the NRC licensed operator requalification annual operating test. The grading disagreement involved a pass-fail decision on one operating crew and two licensed operators' performance during the simulator scenario portion of the operating test. Specifically, the crew inadequately diagnosed and mitigated a component cooling water leak event which later caused an unexpected manual reactor trip. In addition, the senior operator, while implementing the Emergency Plan, failed to make proper and accurate off-site notifications. The licensee failed to adequately assess the pass/fail evaluation for the poor performance by the crew and operators that would have potentially resulted in an operational test failure.

  This finding was considered more than minor because improper grading of a crew or an individual was considered a risk important issue in that operators or crews with unsatisfactory performance could be placed on shift without proper remediation. Furthermore, there was the realistic potential of providing negative training based on improper assessment of operator performance. Specifically, poor performance on the simulator could potentially lead to improper operator actions on the actual plant. The finding was of very low safety significance because the poor performance and incorrect actions were on the simulator and not on the actual plant. Furthermore, no actual plant emergency occurred and there was no actual impact on equipment or personnel safety. No violation of regulatory requirements occurred. (Section 1R11.4)

- Green. The inspectors identified a Non-Cited Violation (NCV) of 10 CFR 55.46(d)(1), "Continued Assurance of Simulator Fidelity." The inspectors identified one example of failure to meet the performance requirements in maintaining simulator fidelity throughout the life of the simulation facility. Specifically, the facility licensee failed to conduct one particular performance test throughout the life of the simulator (since 1991) in accordance with the committed testing requirements of ANSI/ANS-3.5-1985, "Nuclear Power Plant Simulators for Use in Operator Training."

This finding was considered more than minor because of the realistic potential of providing negative training based on simulator deficiencies compared to the actual plant existed. Specifically, inadequate testing of the simulator to assure that the simulator appropriately replicated the actual plant could potentially have affected operator actions on the actual plant. The finding was of very low safety significance because the discrepancy was on the simulator and the actual plant functioned properly. Furthermore, no actual plant emergency occurred and there was no actual impact on equipment or personnel safety. (Section 1R11.9)

- Green. A finding of very low safety significance was self-revealed when Unit 2 operators failed to identify that the main feedwater regulating valves (MFRVs) were in the automatic mode with a signal to open when the reactor trip breakers were closed during a reactor startup. The resultant flow of lower temperature water into the steam generators reduced reactor coolant system (RCS) temperatures causing pressurizer level to decrease to the point that operators initiated a manual safety injection (SI) and reactor trip signal. The primary cause of this finding was related to the cross-cutting area of human performance. Despite at least four licensed reactor operators having discussed the abnormality of leaving the MFRVs in the automatic mode with senior reactor operators prior to the reactor startup attempt, no changes were made. In addition, the entire operations crew on the evening of July 11, 2003, failed to recognize the expected system responses when closing the reactor trip breakers.

  The inspectors determined that the finding was more than minor because it: (1) involved the configuration control and human performance attributes of the Initiating Events cornerstone; and (2) affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety functions during shutdown operations. The finding was of very low safety significance because it did not contribute to the likelihood of a primary or secondary system loss-of-coolant accident (LOCA), did not contribute to both the likelihood of a reactor trip and mitigating equipment unavailability, and did not increase the likelihood of a fire or flooding event. No violation of NRC requirements occurred. (Section 4OA2.1)

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

A violation of very low significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program (CAP). This violation and corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near full power until July 10, when power was reduced to 98 percent for turbine-driven auxiliary feedwater (AFW) pump testing. Unit 1 returned to full power later the same day and remained there until July 15, when Unit 1 automatically tripped due to a control rod drive system malfunction. Following repairs, Unit 1 achieved criticality on July 24 and returned to full power on July 25. Unit 1 remained at full power until August 7, when power was reduced to 98 percent for AFW pump testing. Unit 1 returned to full power later the same day and remained there until August 26, when power was reduced to 99 percent due to feedwater system oscillations. Unit 1 returned to full power later the same day and remained there until September 6 when power was reduced to 65 percent for steam generator atmospheric steam dump, condenser steam dump, cross-over steam dump, and turbine trip valve testing. Unit 1 returned to full power on September 7 and remained there until September 18 when power was reduced to 98 percent for AFW testing. Unit 1 returned to full power on September 19 and remained there through the end of the inspection period.

Unit 2 began the inspection period at 90 percent power, due to fish intrusion during the preceding inspection period. Unit 2 returned to full power on July 3, 2003, and remained there until July 10, when Unit 2 automatically tripped from full power following failure of the ‘B’ main feedwater pump. During the subsequent reactor startup on July 11, operators inserted a manual reactor trip and SI signal in response to an unexpected RCS cooldown which resulted in low pressurizer level. The cooldown was caused by the main feedwater regulating valves being inappropriately left by the operators in the automatic mode when the reactor trip breakers were closed. Following an event investigation, Unit 2 achieved criticality on July 12 and returned to full power on July 16. Unit 2 remained at full power until July 24, when reactor power was lowered to 98 percent to reduce ‘A’ steam generator AFW injection line temperatures by operating a turbine-driven AFW pump. Unit 2 returned to full power later the same day and remained there until August 2, when power was reduced to 98 percent for turbine-driven AFW pump testing. Unit 2 returned to full power on August 3 and remained there until August 29, except for brief periods at 98 percent power on August 8 and 9 for AFW pump testing and reduction of ‘A’ steam generator AFW injection line temperatures. Unit 2 began coasting down in preparation for the Unit 2 refueling outage, U2R26, on August 29. Unit 2 remained in coastdown through the end of the inspection period finishing the period at 78 percent power.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R04 Equipment Alignment (71111.04)

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors performed three partial walkdowns of accessible portions of risk-significant systems to determine if the systems were capable of performing the intended function. The inspectors utilized valve and electrical breaker checklists (CLs), tank level books, plant drawings, and selected operating procedures to determine if the components were properly positioned and supported the systems as needed. The inspectors also examined the material condition of the components and observed operating equipment parameters to determine if there were any obvious deficiencies. The inspectors reviewed completed work orders (WOs) and calibration records associated with the systems to determine if those documents revealed issues that could affect component or train function. The inspectors used the information in the appropriate sections of the Final Safety Analysis Report to determine the functional requirements of the system. The inspectors determined the alignment of the following systems:

- Unit 1 SI system - week of July 8, 2003;
- water treatment system - week of August 4, 2003; and
- the portion of the service water system located in the circulating water pumphouse - week of August 4, 2003.

b. Findings

No findings of significance were identified.

.2 Unit 1 Reactor Vessel Lower Head Complete System Walkdown

a. Inspection Scope

Following licensee observation of boric acid crystal deposits on the lower reactor vessel head insulation on July 16, 2003, the inspectors entered the Unit 1 keyway on July 19 and performed one complete system walkdown of the bottom-mounted instrumentation penetration tubing, the lower reactor vessel insulation package, portions of the reactor vessel support system, and two lower elevation bottom-mounted instrumentation penetrations. The inspectors used licensee-erected scaffolding, such that visual access was provided to portions of the thimble penetration weld and the exterior of the carbon steel reactor vessel. The inspectors performed the walkdown to ensure that no active reactor coolant leakage had occurred and to determine the validity of the licensee’s determination that the observed boric acid deposits were the result of reactor cavity seal leakage. The inspectors interviewed selected engineering personnel and reviewed reactor vessel penetration and insulation drawings, reactor seal leakage cavity history, a structural analysis corrosion report, videotape and digital picture documentation, chemistry analysis results, and boric acid indication evaluations to determine if the licensee had thoroughly and conservatively evaluated the deposits.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Walkdown of Selected Fire Zones

a. Inspection Scope

The inspectors conducted walkdowns which were focused on availability, accessibility, and the condition of fire fighting equipment, the control of transient combustibles and ignition sources, and on the condition and operating status of installed fire barriers. The inspectors selected nine fire areas for inspection based on their overall contribution to internal fire risk, as documented in the Individual Plant Examination of External Events with later additional insights; their potential to impact equipment which could initiate a plant transient; or their impact on the plant's ability to respond to a security event. The inspectors used the documents listed in the Attachment to determine if fire hoses and extinguishers were in their designated locations and available for immediate use; fire detectors and sprinklers were unobstructed; transient material loading was within the analyzed limits; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors also determined if minor issues identified during the inspection were entered into the licensee's CAP.

The following nine areas were inspected by walkdowns:

- Fire Zone 142 - Component Cooling Water (CCW) Pump Room
- Fire Zone 151 - SI Pump Room
- Fire Zone 237 - CCW Heat Exchanger and Boric Acid Tank Room
- Fire Zone 304M - AFW Pump Room Middle Section
- Fire Zone 304N - AFW Pump Room North Section
- Fire Zone 304S - AFW Pump Room South Section
- Fire Zone 581, Flammable Liquids Room
- Fire Zone 770, G-03 Diesel Room
- Fire Zone 775, G-04 Diesel Room

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06)

a. Inspection Scope

During the week of August 25, 2003, the inspectors completed one internal flood protection sample by walking down the following areas to assess the overall readiness of internal flood protection equipment and barriers.

- Cable Spreading Room Flood Zone

- Non-Vital Switchgear Room Flood Zone
- Vital Switchgear/Battery Room Flood Zone

The inspectors evaluated flood protection features, such as flood doors, door gaps, and subsoil drains, to determine if they were in satisfactory physical condition, unobstructed, and capable of providing an adequate flood barrier. The inspectors also reviewed design basis documents and risk analyses.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification (71111.11)

.1 Resident Inspector Review

a. Inspection Scope

On September 25, 2003, the resident inspectors observed an operating crew during a simulator training exercise using Simulator Guide 135, "Shutdown LOCA," Revision 0. This observation constituted one quarterly inspection sample.

The inspectors evaluated crew performance in the areas of:

- clarity and formality of communications,
- ability to take timely actions in the safe direction,
- prioritization, interpretation, and verification of alarms,
- procedure use,
- control board manipulations,
- oversight and direction from supervisors, and
- group dynamics.

Crew performance in these areas was compared to licensee management expectations and guidelines as presented in nuclear plant procedure (NP) 2.1.1, "Conduct of Operations," Revision 1. The inspectors determined if the crew completed the critical tasks listed in the simulator guide. The inspectors also compared simulator configurations with actual control board configurations. For any weaknesses identified, the inspectors observed the licensee evaluators to determine if they also noted the issues and discussed them in the critique at the end of the session.

b. Findings

No findings of significance were identified.

.2 Facility Operating History

a. Inspection Scope

Region-based inspectors reviewed the licensee's operating history from January 2002 through August 2003 to assess whether the Licensed Operator Requalification Training (LORT) program had addressed any identified operator performance deficiencies. The inspectors also reviewed recent corrective action documents, licensee event reports (LERs), the plant issue matrix, and plant performance review information.

b. Findings

No findings of significance were identified.

.3 Licensee Requalification Examinations

a. Inspection Scope

Region-based inspectors performed a biennial inspection of the licensee's LORT program. The inspectors reviewed the annual requalification operating and last year's (2002) biennial written examination material to evaluate general quality, construction, and difficulty level. The operating examination material consisted of two dynamic simulator scenarios and five job performance measures (JPMs). The 2002 biennial written examination was a two-part, open-reference, multiple-choice examination, including a static simulator examination. The biennial written examination was conducted in December 2002 for the previous 24-month training program. The inspectors reviewed the methodology for developing the examinations, including the LORT program 2-year sample plan, probabilistic risk assessment insights, previously identified operator performance deficiencies, and plant modifications. The inspectors also reviewed the licensee's program and assessed the level of examination material duplication during the current year annual examinations as compared to the previous year's annual examinations. Additionally, the inspectors interviewed members of the licensee's management, operations, and training staff and discussed various aspects of the examination development.

b. Findings

No findings of significance were identified.

.4 Licensee Administration of Requalification Examinations

a. Inspection Scope

Region-based inspectors observed the administration of the requalification operating test to assess the licensee's effectiveness in conducting the test and to assess the facility evaluators' ability to determine adequate performance using objective, measurable performance standards. The inspectors evaluated the performance of one shift crew in parallel with the facility evaluators during two dynamic simulator scenarios. In addition, the inspectors observed licensee evaluators administer five JPMs to six licensed operators. The inspectors observed the training staff personnel administer the operating test, including pre- and post-examination briefings, observations of operator performance, and individual and crew evaluations after dynamic simulator scenarios and JPM performance. The inspectors evaluated the ability of the simulator to support the examinations. A specific evaluation of simulator performance was conducted and documented under Section 1R11.9, "Conformance With Simulator Requirements Specified in 10 CFR 55.46," of this report. In addition, the inspectors observed actual control room operations and shift turnover activities for one operating crew to assess overall performance compared to performance observed on the simulator during the requalification examinations.

b. <u>Findings</u>

The inspectors identified a finding of very low risk significance (Green) concerning a grading disagreement between the facility licensee and the NRC inspectors during the licensed operator requalification annual operating test. Specifically, the grading disagreement was for a pass-fail decision on one operating crew and two licensed operators' performance during the simulator scenario portion of the operating test. The finding was greater than minor, and determined to be a Green finding based on MC 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)."

<u>Description</u>: On August 25 and 27, 2003, the inspectors observed the administration of two simulator scenarios to one operating crew during the annual NRC licensed operator requalification operating test. During both scenarios, the inspectors identified instances of poor performance which were not adequately evaluated by the licensee's training evaluators. In general, the licensee's evaluators identified many of the weaknesses observed by the inspectors. For example the licensee's evaluators identified crew and individual weaknesses associated with overall crew communications. This weakness included information sharing, crew briefs, peer checks, and formality of three-way communications. Additional weaknesses also noted by the licensee's evaluators included abnormal operating procedure usage and event diagnosis. However, the inspectors noted that additional areas of apparent weaknesses were not adequately emphasized. Specifically, the inspectors noted that the evaluations appeared either lenient or deficient pertaining to the competencies associated with systems understanding, Emergency Plan Implementing Procedure (EPIP) usage, command and control, and event diagnosis.

For example, during scenario SES-T105R, the Shift Manager failed to ascertain the overall plant status before making the initial emergency notification. Subsequently, the initial notification was made but incorrectly noted that the plant was still in an anticipated transient without scram (ATWS) condition when, in fact, the reactor was shutdown and out of the ATWS condition. The Shift Manager subsequently failed to follow-up with a plant status update notifying state, local, and NRC officials that the plant was no longer in an ATWS condition, even after more than 30 minutes had elapsed following the initial emergency notification. In addition, the Shift Manager failed to notify state, local, and NRC officials that the plant was also experiencing a steam generator tube rupture (SGTR) condition with a potential for an off-site release. In both cases, the Shift Manager failed to make the follow-up plant status notifications even at the end of the scenario. In accordance with EPIP 2.1, “Notification - ERO, State and Counties, and NRC,” Sections 5.5 and 5.6, plant status update notifications were required to be made when significant changes occurred to plant status and at least hourly.

During scenario SES-T106R, the Duty Operations Supervisor (DOS), along with the crew, incorrectly diagnosed and took actions to isolate component cooling water (CCW) to the wrong heat exchanger causing continued degradation of the plant with respect to CCW surge tank level control and volume control tank (VCT) level control. The incorrect diagnoses and failure to adequately mitigate the situation subsequently led to an unexpected manual reactor trip. Based on the licensee’s scenario validation, a reactor trip for this event was not required or expected.

The licensee’s evaluation noted that tripping the reactor was a conservative action; however, the licensee’s evaluation also noted that tripping the reactor had no effect on mitigating the CCW leak nor did the DOS consider an overall strategy to mitigate the overall problem. The inspectors concluded that although tripping the reactor may seem to be a conservative action, unnecessarily tripping the reactor without a clear event mitigation strategy would potentially place the reactor and the plant in an unnecessary transient and degraded condition.

The licensee added an emergent crew critical task to isolate the CCW leak and/or maintain sufficient CCW inventory such that a loss of component cooling does not occur. The inspectors determined that this emergent critical task was insufficient and appeared to be evaluated incorrectly. The inspectors noted that the emergent critical task should have focused on the effective diagnosis and mitigation of the CCW leak without resulting in an unexpected reactor trip. Based on this assessment of the emergent crew critical task, the inspectors determined that the crew failed to perform the required mitigating actions to identify and isolate the CCW leak without causing additional degradation of the plant (e.g., tripping the reactor).

In general, the licensee’s evaluation appropriately identified significant weaknesses in the diagnosis of the CCW leak and appropriately noted the inadequate and incomplete assessment to manually trip the reactor on the VCT level increase. The inspectors determined that the overall grading of the crew and two operators (Shift Manager and DOS) lacked emphasis and did not appear to be correct. The inspectors determined that the observed disagreement in the overall grading of the crew and two individual operators was a Green finding based on MC 0609, Appendix I, “Operator Requalification Human Performance Significance Determination Process (SDP).” Specifically, the licensee failed to identify a crew or operator performance issue that would have resulted in an operational test failure.

<u>Analysis</u>: The primary cause of this finding was related to the cross-cutting area of human performance due to the apparent lack of effective communications, diagnosis, system understanding, and crew coordination. Specifically, the crew inadequately diagnosed and failed to appropriately mitigate a CCW leak which later caused an unnecessary and unexpected manual reactor trip. In addition, the senior operators, while implementing the Emergency Plan, failed to make proper and accurate off-site notifications. Specifically, the Shift Manager failed to properly indicate the plant condition for a mitigated ATWS condition prior to making the initial off-site notification

and also failed to make the required status update notification for a SGTR condition. The licensee failed to adequately assess the pass/fail evaluation for the poor performance by the crew and operators that would have potentially resulted in an operational test failure. The licensee did not generate a corrective action program document to assess the observed grading discrepancies. In addition, the licensee did not perform a formal remedial action to address at least the licensee's observed crew and operator weaknesses.

Enforcement: The safety significance of this issue was more than minor due to the potential for negative training. The realistic potential of providing negative training based on improper grading of a crew or an individual was considered a risk important issue, because operators or crews with unsatisfactory performance could be placed on shift without proper remediation. Furthermore, there was the realistic potential of providing negative training based on improper assessment of operator performance on the simulator that could potentially lead to improper operator actions on the actual plant. However, the finding was of very low safety significance because the discrepancy was on the simulator and not on the actual plant. Also, no event occurred on the actual plant due to the potential negative training.

Although the licensee did not generate a corrective action program document nor conduct a formal remediation of the crew or operators, the licensee did conduct an adequate debrief and critique with the crew, noting the observed weaknesses. In addition, the licensee's management further observed previously scheduled training of the crew prior to the crew returning to on-shift duties. The licensee was also considering a method to require formal remediation of crews and individual operators who may have passed the examination but demonstrated significant weaknesses. In general, no regulatory requirement was violated; however, the identified issue was a very low risk significance finding (Green) in accordance with MC 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)," SDP Flowchart Page 1, Block Description No. 3 (FIN 05000266/2003004-01, 05000301/2003004-01,Operating Test Grading Disagreement).

.5 Examination Security

a. Inspection Scope

Region-based inspectors reviewed the licensee's overall licensed operator requalification examination security program related to examination physical security (e.g., access restrictions and simulator considerations) and integrity (e.g., predictability and bias). The inspectors also reviewed the facility licensee's examination security procedure, TI-9, "NRC Examination Security Requirements," the corrective actions related to any past and present examination security problems at the facility, and the implementation of security and integrity measures (e.g., security agreements, sampling criteria, bank use, and test item repetition) throughout the examination process.

b. Findings

No findings of significance were identified.

.6 Licensee Training Feedback System

a. Inspection Scope

Region-based inspectors assessed the methods and effectiveness of the licensee's processes for revising and maintaining its LORT program up-to-date, including the use of feedback from plant events and industry experience information. The inspectors interviewed licensee personnel (operators, instructors, training management, and operations management) and reviewed applicable licensee procedures. In addition, the inspectors reviewed the licensee's training and operations self-assessments.

b. Findings

No findings of significance were identified.

.7 Licensee Remedial Training Program

a. Inspection Scope

Region-based inspectors assessed the adequacy and effectiveness of the remedial training conducted since the previous annual requalification examinations and the training planned for the current examination cycle to ensure that they addressed weaknesses in licensed operator or crew performance identified during training and plant operations. The inspectors reviewed remedial training procedures and individual remedial training plans, and interviewed licensee personnel (operators, instructors, and training management). In addition, the inspectors reviewed the licensee's previous NRC annual examination cycle remediation packages for unsatisfactory operator performance on the operating test to ensure that remediation and subsequent re-evaluations were completed prior to returning individuals to licensed duties.

b. Findings

No findings of significance were identified.

.8 Conformance With Operator License Conditions

a. Inspection Scope

Region-based inspectors reviewed the facility and individual operator licensees' conformance with the requirements of 10 CFR Part 55. The inspectors reviewed the facility licensee's program for maintaining active operator licenses and to assess compliance with 10 CFR 55.53(e) and (f). The inspectors reviewed the procedural guidance and the process for tracking on-shift hours for licensed operators and which control room positions were granted credit for maintaining active operator licenses. The inspectors also reviewed eight licensed operators' medical records maintained by the facility's nurse and assessed compliance with the medical standards delineated in ANSI/ANS-3.4, "American National Standard Medical Certification and Monitoring of Personnel Requiring Operator Licenses for Nuclear Power Plants," and with

10 CFR 55.21 and 55.25. In addition, the inspectors reviewed the LORT program to assess compliance with the requalification program requirements of 10 CFR 55.59(c).

b. Findings

No findings of significance were identified.

.9 Conformance With Simulator Requirements Specified in 10 CFR 55.46

a. Inspection Scope

Region-based inspectors assessed the adequacy of the licensee's simulation facility (simulator) for use in operator licensing examinations and for satisfying experience requirements as prescribed in 10 CFR 55.46, "Simulation Facilities." The inspectors also reviewed a sample of simulator performance test records (i.e., transient tests, malfunction tests, and reactor core performance tests), simulator work order records, and the process for ensuring continued assurance of simulator fidelity in accordance with 10 CFR 55.46. The inspectors reviewed and evaluated the discrepancy process to ensure that simulator fidelity was maintained. This was accomplished by a review of discrepancies noted during the inspection to ensure that they were entered into the licensee's corrective action system and by an evaluation to determine if the licensee adequately captured simulator problems and that corrective actions were performed and completed in a timely fashion commensurate with the safety significance of the item (prioritization scheme). Open simulator discrepancies were reviewed for importance relative to impact on 10 CFR 55.45 and 55.59 operator actions as well as nuclear and thermal hydraulic operating characteristics. Simulator discrepancies closed during the last 12 months were reviewed for timeliness of resolution. The inspectors also reviewed the licensee's recent simulator core modeling performance testing to assess the adequacy of the simulator to replicate the actual reactor plant core's performance characteristics. Furthermore, the inspectors interviewed members of the licensee's simulator configuration control group and completed the NRC Inspection Procedure (IP) 71111.11, Appendix C, checklist to evaluate whether or not the licensee's plant-referenced simulator was operating adequately as required by 10 CFR 55.46(c) and (d).

b. Findings

The inspectors identified a finding of very low safety significance (Green) concerning the failure to conduct the required performance testing to adequately maintain simulator fidelity. Specifically, the licensee failed to perform required testing of the simulator in accordance with the committed guidance in ANSI/ANS-3.5-1985, "American National Standard Nuclear Power Plant Simulators for Use In Operator Training." The finding was greater than minor and determined to be a Green finding based on MC 0609, Appendix I, "Operator Requalification Human Performance Significance Determination Process (SDP)." A Non-Cited Violation (NCV) of 10 CFR 55.46(d)(1), "Simulation Facilities - Continued Assurance of Simulator Fidelity," was identified.

Description: On August 28, 2003, the inspectors identified an issue concerning the potential failure to comply with 10 CFR 55.46. The issue concerned the adequacy of the licensee to conduct periodic simulator performance testing in accordance with 10 CFR 55.46(d)(1), "Continued Assurance of Simulator Fidelity."

Per 10 CFR 55.46(d)(1), the licensee was required to maintain the simulator fidelity by periodically conducting simulator performance testing throughout the life of the simulator. The licensee was committed to operate and maintain the plant-referenced simulator by conducting tests in accordance with ANSI/ANS-3.5-1985, "American National Standard Nuclear Power Plant Simulators for Use In Operator Training." The ANSI/ANS-3.5-1985 standard required periodic testing under Section 5.4.2, "Simulator Operability Testing." In Section 5.4.2, the licensee was required to annually conduct a verification of simulator performance against the steady state criteria of Section 4.1, "Steady State Operation," and the transient criteria of Section 4.2, "Transient Operation." In accordance with Section 4.2, the licensee was required to conduct testing of the simulator to prove the capability of the simulator to perform correctly under the limiting cases of those evolutions identified in Section 3.1.1, "Normal Plant Evolutions," and Section 3.1.2, "Plant Malfunctions."

On August 28, 2003, the inspectors identified that the licensee had failed to conduct a simulator performance test throughout the life of the simulator. The inspectors identified that the licensee's simulator testing procedure, SIMGL C3.3, "Simulator Certification Testing," Appendix A, "Simulator Certification Test Schedule," had specifically exempted the testing of one test item required by Section 3.1.1 of the ANSI/ANS-3.5-1985 standard. The test item in question was Item No. 4, "Reactor trip followed by recovery to rated power." The inspectors found that this particular test was never performed since the inception of the simulation facility in 1991. The inspectors questioned the licensee and determined that the licensee was aware of the missed simulator testing due to information shared with another facility during June 2003. However, the inspectors determined that no corrective action program document or simulator discrepancy report was written for the missed simulator testing, nor had the NRC been informed of the potential discrepancy. Based on discussions with the licensee, the inspectors found that the licensee had addressed the issue of the missed simulator testing through the Simulator Review Committee (SRC) meetings dated May 14 and 28, 2003, and noted the discrepancy in the July 2003 Simulator 4-Year Report. The licensee determined that Test Item No. 4 should be performed and actions were taken to develop a testing procedure. The new test procedure, Test No. 6.6.10, "Reactor Trip Followed by Recovery to Rated Power," was developed and approved on June 19, 2003. However, at the time of the LORT inspection, the test procedure had not yet been performed. The inspectors were not informed of the licensee's awareness of the testing discrepancy and subsequent SRC decision until after the inspectors identified the potential violation for the missed performance test. At the conclusion of the inspection activity, the licensee was in the process of approving the missed simulator performance test and scheduling it for October 2003, during the scheduled simulator outage.

<u>Analysis</u>: The safety significance of this issue was more than minor due to the potential for negative training. The realistic potential of providing negative training based on simulator deficiencies compared to the actual plant, including inadequate testing of the simulator to assure that the simulator appropriately replicated the actual plant, could potentially affect operator actions on the actual plant. However, the finding was of very

low safety significance because the discrepancy was on the simulator and the actual plant responded as expected, and no event occurred on the actual plant due to the potential negative training.

Enforcement: The licensee was required by 10 CFR 55.46(d)(1) to maintain the simulator fidelity by periodically conducting simulator performance testing throughout the life of the simulator. Contrary to the above, on August 28, 2003, the inspectors identified that the licensee had failed to conduct a simulator performance test throughout the life of the simulator; specifically, Test Item No. 4, “Reactor trip followed by recovery to rated power.”

Because the finding was of very low safety significance and had been addressed through the licensee’s SRC process, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy (NCV 05000266/2003004-02; 05000301/2003004-02, Failure to Perform Required Performance Testing Per 10 CFR 55.46).

.10 Annual Operating Test Results

a. Inspection Scope

Region-based inspectors reviewed the overall pass/fail results of the annual JPM and simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee during 2003. Year 2003 was the first year of the 2-year training program; therefore, no biennial comprehensive written examination was administered. The overall operating test results were compared with the significance determination process in accordance with NRC Manual Chapter 0609I, “Operator Requalification Human Performance Significance Determination Process.”

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule (MR) Implementation (71111.12)

a. Inspection Scope

The inspectors reviewed two systems to determine if component and equipment failures were identified, entered, and scoped within the MR and if the selected systems and associated structures and components were properly categorized and classified as (a)(1) or (a)(2) in accordance with 10 CFR 50.65. The inspectors reviewed station logs, maintenance WOs, action requests, (a)(1) corrective action plans, functional failures, unavailability records, selected surveillance test procedures, and a sample of CAP documents to determine if the licensee was identifying issues related to the MR at an appropriate threshold and if corrective actions were appropriate. The inspectors also walked down portions of the systems to examine material condition, ensure the proper implementation of action plans, and to determine if past functional failures had been corrected. The inspectors reviewed the licensee's performance criteria to determine if the criteria adequately reflected equipment performance needs and if changes to performance criteria were reflected in the licensee's probabilistic risk assessment. Finally, the inspectors reviewed CAP049683, which was initiated as a result of this inspection activity and discussed the omission of 306 hours of unavailability time associated with a containment cooling fan backdraft damper functional failure. Specific systems reviewed were:

- Containment Cooling Ventilation System - week of August 25, 2003; and
- 13.8-Kilovolt (KV) and 345-KV Electrical Distribution Systems - week of September 6, 2003.

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 six planned and emergent work activities to determine if scheduled and emergent work activities were adequately managed. In particular, the inspectors reviewed the program for conducting maintenance risk safety assessments to determine if the licensee's planning, risk management tools, and the assessment and management of on-line risk were adequate. The inspectors also reviewed licensee actions when risk-significant 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. The following six specific activities were reviewed:

- July 7, 2003. This work included modifications to a 125-volt direct current (VDC) AFW recirculation valve solenoid and changes in planned activities because of a fish intrusion.

- August 18, 2003. This work included G-03 emergency diesel generator (EDG) troubleshooting following a failed surveillance test.

- September 1, 2003. This work included main and auxiliary transformer maintenance activities and continued G-03 EDG troubleshooting efforts. The inspectors reviewed the change in risk associated with the G-04 surveillance testing while G-03 remained out-of-service.

- September 8, 2003. This work included performing G-02 EDG and D-107 safety-related battery charger work with the G-03 EDG out-of-service.

- September 15, 2003. This work included Unit 1 480-volt safeguards bus cross-tie breaker maintenance, battery charger compensatory measures, and the addition of D-08 safety-related battery charger maintenance.

- September 22, 2003. This work included Unit 1 480-volt safeguards bus cross-tie breaker maintenance, D-106 battery cell replacement, and battery charger compensatory measures.

b. Findings

No findings of significance were identified.

1R14 Personnel Performance During Non-Routine Plant Evolutions and Events (71111.14)

.1 Unit 2 Reactor Startup

a. Inspection Scope

On July 13, 2003, the inspectors observed the Unit 2 operations crew start Unit 2 from Mode 3 and parallel the main generator with the electrical grid. The inspectors observed the startup to determine if communications, procedure use and adherence, and shift management command and control were in accordance with the licensee’s policies, procedures, and expectations.

b. Findings

No findings of significance were identified.

.2 Unit 1 Reactor Trip Due To A Rod Control System Malfunction

a. Inspection Scope

On July 15, 2003, the inspectors observed the Unit 1 operations crew respond to an automatic reactor trip from full power caused by a rod control system malfunction. The inspectors reviewed the indications and alarms that preceded the trip, evaluated the fire brigade response to smoke in the rod drive room, and assessed the ability of the operators to control and place the plant in a stable condition. The inspectors also reviewed the incident investigation and post-trip review report to ensure that the licensee had fully understood and corrected the cause of the reactor trip prior to attempting Unit restart.

b. Findings

No findings of significance were identified.

.3 Unit 1 Feedwater Oscillations

a. Inspection Scope

On August 26, 2003, the inspectors observed the control room response to Unit 1 feedwater oscillations caused by an instrument malfunction. The inspectors observed the operators reduce power to 99 percent, place both MFRVs in manual, and stabilize the Unit. The inspectors observed portions of the affected instrument replacement activities and return to full power.

b. Findings

No findings of significance were identified.

.4 Hazardous Chemical Spill

a. Inspection Scope

On August 29, 2003, the inspectors observed control room operator response to a liquid sodium bisulfite spill in the water treatment room at the north end of the turbine building. The inspectors reviewed the spill isolation, containment, liquid quantities, clean-up efforts, and other agency notification requirements to ensure that no adverse effects to personnel or the environment occurred. The inspectors also observed the crew at the scene prepare to and enter the spill area.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 480-Volt Breaker Failed to Trip During Test

a. Inspection Scope

Because a spare 480-volt breaker failed to trip during bench testing on July 11, 2003, the inspectors reviewed the breaker maintenance schedule and testing program to determine if other breakers had been correctly tested and that the failed breaker had not been placed in service. The inspectors reviewed pre-installation test data of other selected breakers to ensure that installed breakers remained capable of performing the intended function.

b. Findings

No findings of significance were identified.

.2 Potential for the G-03/04 EDG Radiator Fans to Trip When Freewheeling Backwards

a. Inspection Scope

During the week of July 7, 2003, the inspectors evaluated the potential of the G-03/G-04 EDG radiator cooling fans, which rotate backwards when idle due to local wind conditions, to trip on electrical overcurrent during fan startup. The inspectors interviewed selected design engineering personnel and reviewed Operability Determination OPR000066, "Potential for G03/04 Radiator Fans to Trip Breaker When Freewheeling Backwards." The inspectors observed a G-04 EDG monthly surveillance test; noted that the fans were rotating backwards at approximately 100 revolutions per minute; and determined if the fans obtained rated speed within the required times.

b. Findings

No findings of significance were identified.

.3 Discolored SI Pump Seal Water

a. Inspection Scope

During the week of August 4, 2003, the inspectors reviewed Operability Determination OPR000020, "1P-15B Discolored Pump Seal Water," and CAP034562, "Noted Black Colored Water When Venting SI Pumps," to determine the impact of 3 to 4 gallons of black liquid noted during a monthly venting evolution on SI pump operability. The inspectors interviewed selected system engineering and chemistry personnel, reviewed seal performance test data, evaluated the effects of catastrophic seal failure on pump operations, evaluated inter-system LOCA leakage limitations, and reviewed data associated with seal water chemistry analyses to evaluate the ability of the pump to perform the intended safety function.

b. Findings

No findings of significance were identified.

.4 Out-of-Specification EDG Fuel Oil Pour Point Parameter

a. Inspection Scope

During the week of August 18, 2003, the inspectors reviewed the operability determination associated with CAP035043, “Diesel Fuel Oil Pour Point Specification (TRM) [Technical Requirements Manual] 4.12 Inconsistent With Expected Values,” to determine the operability impact of a fuel oil shipment that had been added to the fuel oil storage tanks with an out-of-specification low pour point parameter. The inspectors interviewed selected system engineering and chemistry personnel, reviewed fuel oil analysis data, evaluated the lowest expected service temperatures of the underground fuel oil transfer lines, and determined if changes were made to the TRM diesel fuel oil acceptance criteria to ensure the ability of the EDGs to perform the intended safety function.

b. Findings

No findings of significance were identified.

.5 (Closed) Unresolved Item (URI) 50-266/301/03-02-03: Submerged 13.8-KV, 4160-Volt, and 480-Volt Electrical Cables.

This URI concerned the affects of prolonged water submergence on 13.8-kilovolt, 4160-volt, and 480-volt electrical cables. Because a cable monitoring program had not been in place, the actual physical condition, deterioration rates, remaining service life, cable insulation trend predictions, effects of repeated freezing and thawing cycles, potential electrical breaker coordination impacts, cable splice location, potential for collapsed underground conduits, and worse case failure analyses remained unknown at the end of the first quarter of 2003.

The licensee contracted a vendor to perform partial discharge testing of the susceptible cables in the second and third quarters of 2003. The testing revealed slightly degraded cable conditions associated with the Unit 2 ‘A’ and ‘B’ main feedwater pumps. The cables were scheduled for replacement during the October 2003 Unit 2 refueling outage. The remaining cables revealed very low levels of deterioration with recommended testing intervals of 1 to 3 years. The inspectors verified that the licensee had accepted the vendor’s recommendations for future monitoring and had written work orders to test the susceptible cables at the recommended intervals. In addition, the inspectors verified that corrective action and excellence plan items were in place to track and trend future cable testing. Finally, the inspectors verified that sump pumps would remain in place for those manholes that had previously experienced flooding to ensure that prolonged periods of cable submergence would not occur in the future. The inspectors determined that licensee corrective actions appeared reasonable to prevent accelerated degradation of the cables and to ensure that operability of the affected systems was not impacted.

Because the partial discharge testing had determined that the level of cable degradation for cables not being replaced was very low, future testing had been scheduled at acceptable intervals, and sump pumps had been installed to prevent future cable submergence, the inspectors determined that no further regulatory review of this issue was required. This URI is closed with no findings of significance identified. The licensee entered the submerged cable issue into the corrective action program as CAP031655, "4160 Volt Cables Possibly Beyond End of Life," and into the Site Excellence Plan as Items EQ 15-012 and 15-016.

1R16 Operator Workarounds (OWAs) (71111.16)

.1 Cumulative Effect of OWAs

a. Inspection Scope

Using the OWA list effective during the week of September 22, 2003, the inspectors evaluated the cumulative effect of these workarounds on plant operations. The inspectors evaluated outstanding OWAs to determine the overall complexity and aggregate effects on operator performance. The inspectors reviewed the interactions between OWAs associated with elevated pressures during reactor make-up water pump starts; charging pump trips; circulating water system and AFW valve local/remote position indication disagreements; plant process computer limitations; unexpected 125-VDC bus under-/over-voltage alarms during pump starts; moisture separator reheater manual valve operations; crossover steam dumps; AFW pump low flow concerns; and gland steam regulator response to evaluate the operator's ability to respond to postulated events and still implement abnormal and emergency operating procedures. The inspectors also reviewed OWA meeting minutes to determine if the licensee had conducted periodic reviews of OWAs and considered the total impact of workarounds on plant operations.

b. Findings

No findings of significance were identified.

.2 Temporary Information Tag Control

a. Inspection Scope

On July 19, 2003, the inspectors reviewed licensee use of temporary information tags in the main control room and selected plant areas to determine if the tags were being controlled in accordance with plant procedures. Specifically, the inspectors evaluated whether there were any equipment issues requiring additional actions which could impact operator response to emergency or abnormal events.

b. Findings

No findings of significance were identified.

.3 Plant Process Computer System Issues

a. Inspection Scope

During the week of September 22, 2003, the inspectors reviewed OWA 0-03R-003 to determine if the workaround was properly classified and dispositioned in accordance with the criteria of the licensee's procedure. The workaround concerned operator challenges associated with plant process computer system priority alarm inputs; alarm management issues; the location of computers, monitor, and keyboards; system server alarm inconsistencies; datalink issues; and alarm volume. The inspectors interviewed selected operations personnel, reviewed the adequacy of the corrective actions to address the issue, and examined the impacts on the operators' ability to implement normal, abnormal, and emergency operating procedures.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

During the weeks of July 21 and September 15, 2003, the inspectors reviewed the design change package and WOs associated with a Unit 1 control rod drive motor generator (MG) set voltage regulator modification to determine the accuracy of the design change and that the work was completed in accordance with the installation work plan. The inspectors reviewed the 10 CFR 50.59 screening, modification request, design change CL, design review board approvals, revised drawings, and vendor recommendations to determine if the modification met the intent of providing more reliable MG set voltage regulation. The inspectors also reviewed revised procedures and auxiliary operator logs to ensure operations personnel had been provided adequate guidance to operate and monitor the modified equipment.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope

The inspectors reviewed five PMT activities associated with the scheduled and emergent work activities listed below to determine if the testing was adequate for the scope of the work performed and the equipment remained capable of performing the intended function. The inspectors reviewed test acceptance criteria to ensure that the criteria were clear and that testing demonstrated operational readiness consistent with the design and licensing basis documents. The inspectors attended pre-job briefings, when possible, to determine if the impact of the testing had been properly characterized, and observed or reviewed the test to determine if the test was performed as written and that all testing prerequisites were satisfied. During the execution of selected tests, the inspectors performed walkdowns to determine the normal operating parameters for the affected equipment. Following the completion of selected tests, the inspectors completed walkdowns of the affected equipment to determine if the test equipment had been removed and that the equipment had been returned to a condition in which it could perform the intended function. The inspectors also reviewed the completed test data, WO documentation, and selected calibration records to ensure that the data were complete, appropriately verified, and met the acceptance criteria requirements of the test procedure. The inspectors reviewed the following activities:

- Unit 2 'B' Main Feedwater Pump Motor Replacement - weeks of July 14 and July 21, 2003;
- G-01 EDG Heat Exchanger Cleaning - week of July 28, 2003;
- Unit 1 G-06 Rod Drive MG Set Voltage Regulator Replacement - week of July 28, 2003;
- Repowering of the 2P-29 Turbine-Driven AFW Pump Recirculation Valve, 2AF-4002, from a Non-Safety to a Safety-Related Power Supply - weeks of July 28 and September 6, 2003; and
- G-03 EDG Voltage Regulator Replacement PMT - week of September 22, 2003.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

.1 Missed Technical Specification (TS) 125-VDC Battery Surveillance Tests

a. Inspection Scope

During the week of September 1, 2003, the inspectors reviewed the circumstances associated with missed TS Surveillance Requirement (SR) 3.8.4.7 concerning the D-06 and D-305 safety-related 125-VDC battery service tests. The inspectors reviewed test results associated with the last successful performance of the service tests, compliance with TS SR 3.0.3, probabilistic risk evaluations associated with the missed surveillance, data associated with the subsequent service tests, and the apparent cause evaluation (ACE) associated with the issue.

b. Findings

This licensee-identified violation is dispositioned in Section 4OA7.

.2 Routine Surveillance Testing Activities

a. Inspection Scope

The inspectors observed and reviewed the surveillance testing results for the two systems listed below to determine if the equipment was capable of performing the intended safety function and that the tests satisfied the requirements contained in TSs and the licensee's procedures. The inspectors reviewed the surveillance tests to determine if the tests were adequate to demonstrate operational readiness consistent with the design and licensing basis documents, and that the testing acceptance criteria were well documented and appropriate to the circumstances. For those cases where the initial surveillance test had failed, the inspectors evaluated the adequacy of licensee troubleshooting efforts to ensure the cause of the failure had been identified and corrected. Portions of the tests were observed to determine if the tests were performed as written, that all testing prerequisites were satisfied, and that the test data were complete and appropriately verified.

- G-02 EDG Monthly Surveillance - week of July 27, 2003; and
- G-03 EDG Monthly Surveillance - weeks of August 21 through September 22, 2003.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23)

a. Inspection Scope

During the week of September 29, 2003, the inspectors reviewed temporary modification 02-052 associated with a volt-ampere-reactive meter on the Unit 1 control board to determine if the modification was properly installed, had no effect on the operability of safety-related equipment, and met design basis requirements. The inspectors interviewed selected engineering personnel to ensure that the temporary modification process did not allow closure without intended actions having been completed. The inspectors reviewed the 10 CFR 50.59 screening associated with the temporary modification and questioned the use of a screening from a previous modification performed over 4 years ago. The inspectors questioned the licensee about the adequacy of NP 5.1.8, "10 CFR 50.59/72.48 Applicability, Screening and Evaluation (New Rule)," which allowed the use of the previous screening without having verified the validity of the original screening against changes to the 10 CFR 50.59 process and the licensee's procedure.

b. Findings

No findings of significance were identified.

Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Site Assembly and Accountability Drill With a Site Evacuation

a. Inspection Scope

On July 3, 2003, the inspectors observed an assembly and accountability drill, which included a site evacuation, intended to test the recently modified security building configuration. The inspectors observed several different assembly areas and monitored egress through the security building. The inspectors determined if the conditions of the Emergency Plan and timeliness goals were met.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151)

Cornerstones: Mitigating Systems, Barrier Integrity

.1 Reactor Safety Strategic Area

a. Inspection Scope

The inspectors sampled the licensee's submittals for PIs and periods listed below. The inspectors used PI definitions and guidance contained in Revision 2 of Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," to determine the accuracy of the PI data. The following two PIs were reviewed:

Unit 1

- safety system functional failures
- RCS leakage

Unit 2

- safety system functional failures
- RCS leakage

The inspectors reviewed selected applicable conditions and data from logs, licensee event reports, and CAP documents from August 2002 through August 2003 for each PI specified above. The inspectors independently re-performed calculations where applicable. The inspectors compared that information to the information required for each PI definition in the guideline to ensure that the licensee reported the data accurately.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152)

.1 Unit 2 SI During Start-up

a. Inspection Scope

On the evening of July 11, 2003, the inspectors observed a Unit 2 reactor startup following a reactor trip, due to a feedwater pump failure that had occurred the previous day. The inspectors observed closure of the reactor trip breakers; opening of the MFRVs while in the automatic mode; operator initiation of a manual SI signal due to RCS over-cooling and lowering of pressurizer level; and plant stabilization efforts to evaluate operator understanding of expected system responses and the ability to control and prevent plant transients.

b. Findings

Introduction: A Green finding was self-revealed when Unit 2 operators failed to identify that the MFRVs were in the automatic mode with a signal to open when the reactor trip breakers were closed during a reactor startup. The resultant flow of lower temperature water into the steam generators reduced RCS temperature, causing pressurizer level to decrease to the point that operators initiated a manual SI and reactor trip signal. The error with the MFRVs was not considered a violation of regulatory requirements, but did. upset plant stability, caused a significant transient, and increased the likelihood of challenging critical safety functions during shutdown operations.

Description: On July 11, 2003, control room operators attempted to perform a Unit 2 reactor startup following a trip from full power that had occurred the previous day when a main feedwater pump had malfunctioned. In accordance with Operating Procedure 1B, "Reactor Startup," the crew closed the reactor trip breakers, allowing the MFRVs to accept an automatic signal from the associated controller. Because steam generator levels had been slightly below the program level, an open signal to the MFRVs had developed. With the controller in the automatic mode, closing the reactor trip breakers caused the MFRV to cycle open, increasing feedwater flow to the steam generators. The increased feedwater flow reduced RCS temperatures and caused pressurizer level to decrease. The RCS cooldown transient resulted in pressurizer level going off-scale low. The operations crew recognized the decreasing pressurizer level and initiated a manual SI and reactor trip signal. The operators subsequently reset the SI signal after pressurizer level had been recovered and stabilized the plant in Mode 3.

Analysis/Enforcement: The inspectors determined that the operators proceeding through a reactor startup, while failing to recognize the impacts and all of the automatic signals that would be satisfied when the reactor trip breakers were closed, was a performance deficiency warranting a significance evaluation in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening," issued on June 20, 2003. The inspectors determined that the finding was more than minor because it: (1) involved the configuration control and human performance attributes of the Initiating Events cornerstone; and (2) affected the cornerstone objective of limiting the likelihood of those events that upset plant stability and challenge critical safety function during shutdown operations. The inspectors determined that the operators not recognizing the impacts and all of the automatic signals that would be satisfied when closing the reactor trip breakers, also affected the cross-cutting area of human performance because: (1) prior to the reactor startup attempt, at least four licensed reactor operators had discussed the abnormality of leaving the MFRVs in the automatic mode with senior reactor operators; and (2) the entire operations crew on the evening of July 11, 2003, had failed to recognize the expected system responses when closing the reactor trip breakers.

The inspectors completed a significance determination of this issue using IMC 0609, “Significance Determination Process,” dated March 21, 2003, Appendix A, “Significance Determination of Reactor Inspection Findings for At-Power Situations,” dated March 18, 2002. The inspectors answered “no” to all of the Phase 1 screening questions because the finding did not contribute to the likelihood of a primary or secondary system LOCA, did not contribute to both the likelihood of a reactor trip and mitigating equipment unavailability, and did not increase the likelihood of a fire or flooding event. Therefore, the finding was considered to be of very low safety significance (Green). The finding was assigned to the Reactor Safety/Initiating Events Cornerstone for Unit 2.

Enforcement: Because all plant systems functioned as required; normal charging was able to refill the pressurizer; refueling water storage tank water was not injected into the RCS via the SI pumps; and no damage to systems or equipment occurred, no violation of regulatory requirements occurred. The issue was considered a finding (FIN) of very low safety significance (FIN 05000301/2003004-03). The licensee entered the event into its corrective action system as CAP034029, “Initiated a Manual Safety Injection on Unit 2 Due to Pressurizer Low Level.”

.2 Unit 1 Rod Drive MG Set Failure and Organizational Effectiveness During Repair Activities

a. Inspection Scope

During the weeks of July 19 and September 15, 2003, the inspectors reviewed the root cause evaluation (RCE) and ACEs associated with the July 15th failure of the 1G-06 control rod drive MG set. The evaluations were reviewed to ensure that the licensee’s identification of the problem was complete and accurate; adequate consideration had been given to extent-of-condition reviews and use of industry operating experience; corrective actions were focused and appropriate; and to evaluate organizational effectiveness during troubleshooting and repair activities. The inspectors reviewed past WO history, calibration records, auxiliary operator log readings, generator excitation waveforms, procedure revisions, and rod drop timing test results to determine whether the RCE had adequately considered age-related degradation, manufacturing defects, and over-stressing of components as potential root causes.

b. Findings

The licensee chartered RCE 208 to determine the cause of the 1G-06 failure which resulted in the Unit 1 reactor trip on July 15. While performing the evaluation, the licensee concluded that failure of a voltage regulator surge suppressor had created high currents, which damaged other internal components, such that excitation to the 1G-06 generator was lost; 1G-07 became overloaded; control rod drive mechanism bus voltage dropped significantly; control rods began to fall into the core; and an automatic reactor trip occurred. The catastrophic failure of the surge suppressor and past voltage regulator replacements having been performed per the original design made it difficult to determine if the failure had resulted from age-related degradation, manufacturing defects, or over-stressing of regulator components. The inspectors determined that the licensee's corrective actions associated with the voltage regulator failure and reactor trip were adequate and that the licensee had correctly identified the inadequate use of industry operating experience in recognizing the vulnerability of a rod drive MG set failure to cause a reactor trip.

Apparent Cause Evaluation 1372 was performed to evaluate organizational and communication deficiencies that occurred during voltage regulator repair activities which resulted in several delays. Deficiencies included lost paperwork, miscommunication of expected operation of equipment, conflicting information on actual completion of WO steps and major work activities, no single supervisory point of contact or project manager during initial troubleshooting and repair activities, lack of in-house knowledge and experience on the design details of the voltage regulator, lack of integration of the reactor trip incident investigation team activities with the forced outage organization, and an initial lack of integration of modification acceptance, PMT, and return-to-service activities. Although repairs were eventually accomplished and Unit 1 successfully returned to full power, the deficiencies discussed in the ACE highlighted the inter-departmental communication and coordination challenges still facing the licensee's organization.

.3 Human Performance Issues Concerning Leak-Before-Break (LBB) Analysis

a. Inspection Scope

During the weeks of August 25 and September 2, 2003, the inspectors reviewed the human performance aspects of a LBB analysis that was used for the Unit 2 steam generator replacement project prior to NRC approval.

b. Findings

During the 1996 Unit 2 steam generator replacement project, the licensee received an LBB analysis for the RCS from the nuclear steam supply system vendor as part of the replacement activities. The licensee reasoned that the analysis did not have to be submitted to the NRC, because a generic LBB analysis had previously been approved.

During a 2000 CCW closed-loop inside primary containment assessment, the licensee submitted other LBB analyses for residual heat removal piping, SI accumulator injection lines, and the pressurizer surge line. The licensee did not submit the RCS analysis with these other analyses because it was assumed to have been previously accepted during the 1996 steam generator replacement project. During a 2003 review for plant life extension, engineering personnel identified that the LBB analysis for the RCS had not been approved by the NRC.

These events indicate an engineering lack of attention-to-detail and understanding of items requiring regulatory review. The NRC Point Beach 95003 Engineering/Operations/Maintenance supplemental inspection team will complete review of the LBB analyses in Inspection Report 05000266/2003007; 05000301/2003007.

.4 Biennial Sample Review

a. Inspection Scope

Region-based inspectors reviewed licensee self-assessments and five corrective action documents written to document deficiencies identified in the licensed operator training program. The licensee’s self-assessments included a review of the licensed operator training program completed two months prior to this inspection activity. The self-assessments and corrective action program documents were reviewed to ensure that the full extent of the issues were identified, an appropriate evaluation was performed, and the corrective action program documents were appropriately prioritized.

b. Findings

The inspectors noted that some of the corrective action program documents did not have corrective actions specified because the issues were new and corrective actions had not yet been assigned. The inspectors determined that the corrective actions were enhancements to the existing licensed operator training program and not significant conditions adverse to quality per 10 CFR Part 50, Appendix B.

Concerning the missed simulator testing in Section 1R11.9, the inspectors determined that no corrective action program document or simulator discrepancy report was written for the missed simulator testing. However, the licensee adequately addressed the issue through the SRC process. At the conclusion of the inspection activity, the licensee was in the process of coordinating and scheduling the missed performance test and planned to conduct it during the October 2003 simulator outage.

Concerning the operating test grading disagreement between the licensee evaluators and the NRC inspectors, the inspectors determined that no corrective action program document was written to address the potential grading discrepancy. However, the licensee, on September 29, 2003, verbally noted that enhancements to the present evaluation process were being considered.

No findings of significance were identified.

4OA3 Event Follow-up (71153)

.1 Restart of Main Circulating Water Pump Following Fish Intrusion

a. Inspection Scope

During the week of July 1, 2003, the inspectors observed the pre-job briefing and restart of the Unit 2 'B' circulating water pump following a fish intrusion that had occurred at the end of the last inspection period. The inspectors evaluated the adequacy of the pre-job briefing, procedure adherence, communication practices, and supervisory oversight associated with the pump restart. The inspectors also monitored condenser vacuum, forebay level, and circulating water system traveling screen performance during the pump restart and Unit ascension to full power to determine if any remaining fish had more than a minimal impact on plant operations.

b. Findings

No findings of significance were identified.

.2 Unit 2 Reactor Trip Due to Main Feedwater Pump Failure

a. Inspection Scope

During the week of July 11, 2003, the inspectors reviewed the automatic Unit 2 reactor trip from full power due to a main feedwater pump trip. The inspectors reviewed the incident investigation results, evaluated planned restart activities, and assessed the licensee's determination that the pump failure was related to equipment aging.

b. Findings

No findings of significance were identified.

.3 Unit 2 Reactor Trip and SI

a. Inspection Scope

On July 11, 2003, the inspectors observed the response to a Unit 2 manual SI and reactor trip during reactor startup activities. The inspectors reviewed the circumstances of the operators closing the reactor trip breakers while the MFRVs were in the automatic mode with a signal to open. The open signal was caused by steam generator levels that were being maintained below controller program level via the main feedwater bypass valves. The inspectors reviewed the plant transient, observed operator response to initiate a manual reactor trip and SI, and evaluated efforts to place the plant in a stable condition. This event is discussed in Section 4OA2.1 of this report.

b. Findings

No findings of significance were identified.

.4 Unit 1 and 2 Response to Electrical Grid Disturbance

a. Inspection Scope

On the afternoon of August 14, 2003, the inspectors evaluated the Point Beach Unit 1 and Unit 2 response to the electrical blackout that had occurred in the eastern United States to determine the potential impacts on plant operation. The inspectors evaluated the changes in electrical grid frequency and voltage noticed in eastern Wisconsin, the Units' response to the perturbation, and the impacts of Unit 1 nuclear instrument maintenance that had been in progress to ensure the stability of the operating Units.

b. Findings

No findings of significance were identified.

.5 (Closed) Licensee Event Report (LER) 05000301/2003-004-00: Reactor Trip Due to Failure of 'B' Main Feed Pump Motor.

On July 10, 2003, while operating at 100 percent power, Unit 2 experienced the failure of the 'B' main feed pump motor caused by an electrical fault within the motor. The loss of the main feedwater pump resulted in an automatic Unit 2 reactor trip. The trip was due to a feed flow/steam flow mismatch coincident with low steam generator level. The AFW system also actuated as expected, due to the initial low steam generator water level. The reactor protection and safety systems responded as required and the Unit was stabilized in Mode 3.

This LER was reviewed by the inspectors and no findings of significance were identified. The licensee replaced the main feed pump motor and documented the forced shutdown in CAP033997. This LER is closed.

.6 (Closed) LER 50-301/2003-001-01: Containment Accident Backdraft Damper Failure Results in Condition Prohibited by TS 3.6.6.C.

This is a supplement to LER 50-301/2003-001-00, which was previously discussed in NRC integrated Inspection Report 50-266/2003-03; 50-301/2003-03, Section 4OA3.3. The supplemental LER discussed the apparent causes and human performance factors associated with the discovery of an inoperable backdraft damper in the Unit 2 'D' containment fan cooler on April 2, 2003. The licensee determined that time/schedule pressures, multiple tasking, unfamiliar tasks, and ineffective communication had contributed to the failure to recognize that the Unit 2 W-1D2 containment cooling fan backdraft damper was substantially degraded on the evening of March 20, 2003. Corrective actions included providing engineering management briefings to appropriate engineering staff discussing human performance factors which led to the event and lessons-learned. The supplemental LER was reviewed by the inspectors and no findings of significance were identified. The licensee documented in CAP031978 the failure to identify the degraded condition of the backdraft damper. This supplemental LER is closed.

.7 <u>(Closed) LER 05000301/2003-005-00</u>: Unit 2 Manual Reactor Trip and Manual Safety Injection Due to Pressurizer Low Level.

On July 11, 2003, Unit 2 was in Mode 3 at normal operating temperature and pressure in preparation for a reactor startup. Upon closure of the reactor trip breakers, the MFRVs opened because steam generator levels were slightly below the programmed level. The MFRV controllers had been left in the automatic mode, following a reactor trip that had occurred the previous day. The increase in feedwater flow to the steam generators caused a RCS cooldown, which resulted in a decrease in pressurizer level. With pressurizer level low off-scale, the operators initiated a manual reactor trip, a manual SI, and a manual containment isolation per Abnormal Operating Procedure 1A, "Reactor Coolant Leak." There was no actual SI flow into the RCS during the event and the charging pumps made up for the RCS shrinkage due to the cooldown. All systems and equipment functioned as designed during the event. Corrective actions included procedure changes to ensure the MFRV controllers are placed in manual with the valves closed prior to closing the reactor trip breakers. This LER was reviewed by the inspectors and no findings of significance were identified. Human performance deficiencies associated with this event are discussed in Section 4OA2.1 of this report. The licensee entered the event into its corrective action system as CAP034029, "Initiated a Manual Safety Injection on Unit 2 Due to Pressurizer Low Level."

.8 <u>(Closed) LER 05000266/2003-002-00</u>: Unit 1 Reactor Trip Due to Rod Control Motor-Generator Set Failure.

On July 11, 2003, Unit 1 experienced an automatic reactor trip from full power, due to a voltage regulator failure in the 1G-06 control rod drive MG set. Following the trip, an operator was dispatched to the Unit 1 rod drive room and identified smoke coming from the voltage regulator cabinets. Actions were taken to de-energize both rod drive MG sets and stabilize the Unit in Mode 3. Systems and equipment necessary to mitigate the reactor trip functioned as designed and the plant was maintained in a stable hot shutdown condition during the troubleshooting and repair of 1G-06. The licensee determined that the trip had resulted from a voltage regulator malfunction caused by failure of a surge suppressor component in the regulator power and feedback circuit. Corrective actions included repairing the 1G-06 MG set and modifying the 1G-06 and 1G-07 MG set voltage regulator circuitry to improve reliability. In addition, plans were made to inspect the Unit 2 rod drive MG sets during the upcoming fall 2003 refueling outage to determine whether modifications similar to those completed on Unit 1 were necessary. The LER was reviewed by the inspectors and no findings of significance were identified. The licensee entered the event into its corrective action system as CAP034095, "Unit 1 Reactor Trip Due to 1G06 Rod Drive Motor Generator Voltage Regulator Problem."

4OA4 <u>Cross-Cutting Aspects of Findings</u>

.1 A finding discussed in Section 4OA2.1 of this report had, as its primary cause, a human performance deficiency, in that, licensed reactor and senior reactor operators failed to recognize the impacts and all of the automatic signals that would be satisfied when closing the reactor trip breakers during a reactor startup with the MFRVs in the automatic mode. Despite at least four licensed reactor operators having discussed the abnormality of leaving the MFRVs in the automatic mode with senior reactor operators prior to the reactor startup attempt, no changes were made. In addition, the entire operations crew on the evening of July 11, 2003, failed to recognize the expected system responses when closing the reactor trip breakers.

4OA6 Meetings

.1 Exit Meeting

On September 30, 2003, the resident inspectors presented the inspection results to Mr. A. Cayia and members of his staff, who acknowledged the findings. The licensee did not identify any information, provided to or reviewed by the inspectors, as proprietary.

.2 Interim Exit Meetings

Interim exits were conducted for:

- Biennial Licensed Operator Requalification Training Program Inspection with Mr. A. Cayia on August 29, 2003.
- Subsequent interim exit meeting via telephone with Mr. C. Sizemore to clarify and finalize the potential findings and acknowledge the overall results of the NRC licensed operator requalification annual operating test on September 29, 2003.
- Subsequent telephone discussion was conducted with Mr. J. Jensen to further discuss and clarify the potential findings for the Biennial Licensed Operator Requalification Training Program inspection on October 9, 2003.

4OA7 Licensee-Identified Violations

The following violation of very low significance was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Manual, NUREG-1600, for being dispositioned as an NCV.

Cornerstone: Mitigating Systems

Technical Specification SR 3.8.4.7 requires that a battery service test be performed at least once per 18 months. Contrary to the above, the licensee missed this SR between January 24, 2003, and August 21, 2003, for the D-06 125-volt station battery and between July 11, 2002, and July 22, 2003, for the D-305 125-volt swing station battery. Specifically, the licensee inappropriately credited accomplishment of TS SR 3.8.4.8 performance tests as satisfying TS SR 3.8.4.7 requirements without having modified the discharge rate parameters of the performance test required for such credit. The licensee entered this issue into the corrective action program as CAP034913, “D-06 and D-305 Missed TS Surveillance Tests.”

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

A. Cayia, Site Vice-President
J. Jensen, Plant Manager
G. Arent, Regulatory Affairs Manager
J. Boesch, Maintenance Manager
G. Casadonte, Fire Protection Coordinator
D. Fadel, Site Engineering Director
F. Flentje, Senior Regulatory Compliance Specialist
M. Holzmann, Nuclear Oversight Supervisor
N. Hoefert, Engineering Programs Manager
R. Hopkins, Internal Assessment Supervisor
C. Jilek, Maintenance Rule Coordinator
T. Kendall, Program Engineering
B. Kopetsky, Security Coordinator
C. Krause, Senior Regulatory Compliance Engineer
R. Ladd, Fire Protection Engineer
R. Lingle, Operations Manager
K. Locke, Regulatory Compliance
R. Milner, Emergency Planning Manager
T. Petrowsky, Design Engineer Manager
D. Schoon, Training Manager
J. Schweitzer, Production Planning Manager
M. Schug, Assistant Operations Manager
C. Sizemore, Training Supervisor
P. Smith, Operations Training Supervisor
J. Strharsky, Planning and Scheduling Manager
T. Taylor, Site Assessment Manager
S. Thomas, Radiation Protection Manager

Nuclear Regulatory Commission
D. Spaulding, Point Beach Project Manager, NRR
T. Vegel, Chief, Reactor Projects Branch 7
P. Louden, Chief, Reactor Projects Branch 5

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

05000266/2003004-01 05000301/2003004-01	FIN	Operating Test Grading Disagreement
05000266/2003004-02 05000301/2003004-02	NCV	Failure to Perform Required Performance Testing Per 10 CFR 55.46
05000301/2003004-03	FIN	Unit 2 SI During Start-up
05000301/2003-004-00	LER	Reactor Trip Due to Failure of 'B' Main Feed Pump Motor
05000301/2003-001-01	LER	Containment Accident Backdraft Damper Failure Results in Condition Prohibited by TS 3.6.6.C.
05000301/2003-005-00	LER	Unit 2 Manual Reactor Trip and Manual Safety Injection Due to Pressurizer Low Level
05000266/2003-002-00	LER	Unit 1 Reactor Trip Due to Rod Control Motor-Generator Set Failure

Closed

05000266/2003004-01 05000301/2003004-01	FIN	Operating Test Grading Disagreement
05000266/2003004-02 05000301/2003004-02	NCV	Failure to Perform Required Performance Testing Per 10 CFR 55.46
05000301/2003004-03	FIN	Unit 2 SI During Start-up
05000266/2003002-03 05000301/2003002-03	URI	Submerged 13.8-Kilovolt, 4160-Volt, and 480-Volt Electrical Cables
05000301/2003-004-00	LER	Reactor Trip Due to Failure of 'B' Main Feed Pump Motor
05000301/2003-001-01	LER	Containment Accident Backdraft Damper Failure Results in Condition Prohibited by TS 3.6.6.C.
05000301/2003-005-00	LER	Unit 2 Manual Reactor Trip and Manual Safety Injection Due to Pressurizer Low Level
05000266/2003-002-00	LER	Unit 1 Reactor Trip Due to Rod Control Motor-Generator Set Failure

Discussed

None.

LIST OF DOCUMENTS REVIEWED

1R04 Equipment Alignment

CL 7a; SI System; Unit 1; Revision 18

Design Basis Document (DBD) 11; Safety Injection and Containment Spray System, Unit 0; Revision 2

Point Beach Nuclear Power Plant Unit 1 and Unit 2 Final Safety Analysis Report, Section 6.2; Safety Injection System; June 2003

Level Switch LS-9052 Calibration Record; T-119A Clearwell Tank High/Low Alarm; November 10, 1995

Point Beach Nuclear Plant Setpoint Document STPT 20.1; Water Treatment General Instrumentation; Revision 7

WO 0208365; T-119A Clearwell Tank Level Indicator Transmitter; July 18, 2002

Tank Level Book TLB-50; Clearwell (T-119A); Revision 1

Operating Instruction (OI) 73; Water Treatment Demineralizer Plant Operation; Revision 26

OI 73F; Water Treatment PreTreatment Plant Operation; Revision 15

OI 150; Condensate Storage Tank Operations; Revision 4

CL 10H; Water Treatment and Coolers Service Water Lineup; Revision 8

CL 13E, Part 2; Auxiliary Feedwater Valve Lineup Motor Driven; Revision 36

Bechtel Drawing 6118 M-210, Sheet 1; Plant Makeup Water Treatment System Pretreatment System; Revision E

Bechtel Drawing 6118 M-210, Sheet 2; Plant Makeup Water Treatment System Demineralizer System; Revision E

Wisconsin Electric Drawing WSC D96G0901; Water Treatment Reverse Osmosis System; Revision D

Point Beach Calculation 2003-0053; Water Treatment System Reliability and Availability for AFW Orifice Issue Risk; June 26, 2003

CL 10B; Service Water Safeguards Lineup; Revision 52

CL 13F; Circulating Water System Checklist Unit 1; Revision 7

CL 13F; Circulating Water System Checklist Unit 2; Revision 7

Boric Acid Indication Evaluation 03-0062; 1R-1 Reactor Vessel and Assembly; July 19, 2003

Report SIR-03-096; The Effect of Non-RCS Boric Acid Deposits on RPV [Reactor Pressure Vessel] Component Integrity at Point Beach Unit 1, Structural Integrity Associates, Inc.; July 21, 2003

Point Beach Unit 2 Undervessel Digital Photograph; Digital Picture Series DCS05384.JPG to DCS05394.JPG; July 15, 2003

Point Beach Unit 1 Undervessel Digital Photograph; Digital Picture Series DCS05403.JPG to DCS05434.JPG, DCS00653.JPG, and DCS00644.JPG to DCS0653.JPG; July 15, 2003

Videotape; Point Beach Unit 1 Bottom Head Visual Examination; July 16, 2003

Point Beach Drawing TP-3609-2; Insulation Panels; Revision 0

Point Beach Drawing TP-3609-3; Sections and Details of Insulation; Revision 0

Point Beach Drawing TP-3609-4; Section Through Hemispheric Bottom of Reactor Vessel; Revision 0

Point Beach Drawing TP-3609-5; Sections and Details for Insulation Panels; February 6, 1968

Point Beach Drawing TP-3609-6; Panel Layout for Reactor Vessel; February 6, 1968

1R05 Fire Protection

Point Beach Nuclear Plant Fire Hazards Analysis Report, Revision 1, January 2003

CAP049815; Concern Regarding Single Access Point to CCW HX [Component Cooling Water Heat Exchanger] Area; September 3, 2003 (NRC-identified issue)

1R06 Flood Protection Measures

DBD T - 41; Hazards - Internal and External Flooding [Module A], Point Beach Nuclear Plant: Revision 0

Nuclear Plant Procedure (NP) 8.4.17; Point Beach Nuclear Plant Flooding Barrier Control; Revision 3

1R11 Licensed Operator Qualifications

Simulator Guide SG 135; SD [Shutdown] LOCA; Revision 0

NP 2.1.1; Conduct of Operations; Revision 1

TRPR 33.0; Training Program Description; Licensed Operator Requalification Training Program; Revision 16; August 15, 2003

TRQM 18.31; Control Operator; Revision 11; July 17, 2003

OM 3.10; Operations Personnel Assignments and Scheduling; April 2, 2001

TI-9; NRC Examination Security Requirements; July 31, 2003

NP 1.10.1; Record Keeping for NRC Licensed Operators; May 7, 2003

AOP-9B; Component Cooling Water System Malfunction; Revision 17

CAP002526; Plant Mod Installed Without All Required Training Completed; March 13, 2002

CAP025679; Licensed Operator Requalification Issue; April 25, 2002

CAP002985; INPO Identified Area for Improvement During Accreditation Visit; April 22, 2003

CAP033137; Missed Training for Licensed Operators During LOR Cycle 03-2; May 28, 2003

CAP033803; Missed Training for Licensed Operators During LOR Cycle 03-3; June 27, 2003

CAP033805; Missed Training for a Non-Operations Licensed Individual During LOR Cycle 03-3; June 27, 2003

CAP034971; Training Missed Opportunities to ID Potential Simulator Deficiencies; August 13, 2003

CAP049714; NRC Not Receiving SRO/RO License Correspondence; August 28, 2003

CAP049736; Operator License Correspondence Issues; August 29, 2003

CAP049750; Potential License Exam Security Breach; August 29, 2003

ACE001377; Jump in Number of Operations Human Performance Events; July 29, 2003

IP 95003 Assessment - Operations Department; June 27, 2003

IP 95003 Assessment - Training Department - Licensed Operator Requalification Program; June 27, 2003

2003/2004 LOR Long Range Training Plan; April 30, 2003

Cycle 03-2 Operations Continuing Training End of Cycle Report; June 27, 2003

Cycle 03-3 Operations Continuing Training End of Cycle Report; August 16, 2003

QF-1040-04; Remediation / Make-Up Training Forms; Seven Sets; various dates

SE 99-043; Incorporate Westinghouse SGTR Analysis into FSAR 14.2.4; April 22, 1999

FSAR Section 14.2.4 - Steam Generator Tube Rupture; June 2002

Simulator Review Committee Meeting Minutes; May 28, 2003

SES-T105R; 2003 LORT Operating Test Scenario; Revision 0

SES-T106R; 2003 LORT Operating Test Scenario; Revision 1

P006.002.COT; 2003 LORT Operating Test JPM; Revision 1

P000.033b.COT; 2003 LORT Operating Test JPM; Revision 1

P000.043.AOT; 2003 LORT Operating Test JPM; Revision 2

P063.003a.AOT; 2003 LORT Operating Test JPM; Revision 0

P064.005.COT; 2003 LORT Operating Test JPM; Revision 0

Sample of 2002 LORT Written Examination Questions; various dates

2003 Crew D; Crew Simulator Evaluation Summary Documents, August 27, 2003

2003 Crew D; Individual Simulator Evaluation Summary Documents,
August 25-27, 2003

2002 NRC Operational Requalification Exam Summary; September 26, 2002

Operating Exam Remediation Packages; Two Packages; August 26, 2002

Written Exam Remediation Packages; Eight Packages; December 2002

LER 50-301/2003-03, “Failure to Place Instrument Channel in Trip as Required by Technical Specifications; May 28, 2003

PBNP Simulator Four-Year Report; July 2003

SIMGL C1.1; Simulator Discrepancy Report (SDR); Revision 8; December 9, 2002

SIMGL C1.4; Simulator Modifications and Core Load Changes; Revision 3;
July 31, 2003

SIMGL C3.3; Simulator Certification Testing; Revision 5; June 19, 2003

SDRs 02-0061; 02-0014; 02-0037; 02-0038; 02-0064; 02-0075; 03-0024; 03-0025; Open Simulator SDRs no action taken as of August 26, 2003; various dates

PDF-6803; Simulator Problem Form; Simulator Process Computer Locked UP; August 26, 2003

SCT 6.2.1; Simulator Steady State Performance Test at 100%; December 11, 2002

SCT 6.2.2; Simulator Steady State Performance Test at 75%; December 12, 2002

SCT 6.2.3; Simulator Steady State Performance Test at 28%; December 19, 2002

SCT 6.3.1; 100% Power Heat Balance; May 25, 1999

SCT 6.3.2; 75% Power Heat Balance; December 18, 2002

SCT 6.3.3; 28% Power Heat Balance; May 27, 1999

SCT 6.5.1; Simulator Testing Documentation; Manual Reactor Trip; April 6, 2003

SCT 6.5.4; Simultaneous Trip of All Reactor Coolant Pumps; April 6, 2003

SCT 6.6.10; Reactor Trip Followed by Recovery to Rated Power; New Test Procedure to Meet Requirement of ANSI/ANS-3.5, Section 3.1.1 (4); June 19, 2003

SCT 7.2; Simulator Testing Documentation; Loss of All Feedwater; December 1, 2000

Eight Licensed Operators' Medical Records; various dates

1R12 Maintenance Rule Implementation

DBD-30; Containment Heating and Ventilation; Revision 2

Maintenance Rule Records from Database MRLIN2; Maintenance Rule Unavailability Sheet for Service Water, Unit 0; August 1, 2001 through 2003

Maintenance Rule Records from Database MRLIN2; Maintenance Rule Unavailability Sheet for Containment Heating and Ventilation, Unit 1; August 1, 2001 through 2003

Maintenance Rule Records from Database MRLIN2; Maintenance Rule Unavailability Sheet for Containment Heating and Ventilation, Unit 2; August 1, 2001 through 2003

Point Beach Form (PBF)-7031; Maintenance Rule (a)(1) System Action Plan Checklist and Approval for Containment Heating and Ventilation; June 6, 2003

PBF-7029; Documentation of Maintenance Rule Performance Criteria for 13.8-KV System; September 13, 2000

PBF-7029; Documentation of Maintenance Rule Performance Criteria for 345-KV System; June 23, 1998

Performance Criteria Assessment for 345-KV Electrical System Since June 30, 2001; September 2, 2003

Performance Criteria Assessment for 13.8-KV Electrical System Since June 30, 2001; September 2, 2003

DBD-18; 13.8-KV Electrical System; Revision 2

DBD-20; 345-KV Electrical System; Revision 1

Drawing WE TD-4158-E; Schematic Diagram H.V. [High Voltage] Station Auxiliary Transformer 2X03, Unit 1 and 2; Revision 20

WO0303444; 2X-03 HV Station Auxiliary Transformer Phase Differential Relays; Unit 2

1R13 Maintenance Risk Assessment and Emergent Work Evaluation

E-1 Report; Work Week Schedule for Week of July 7, 2003

E-1 Report; Work Week Schedule for Week of August 18, 2003

E-1 Report; Work Week Schedule for Week of September 1, 2003

E-1 Report; Work Week Schedule for Week of September 8, 2003

E-1 Report; Work Week Schedule for Week of September 15, 2003

E-1 Report; Work Week Schedule for Week of September 22, 2003

1R14 Non-Routine Evolutions

NP 5.3.3; Incident Investigation and Post-Trip Review, Unit 1 Trip, July 15, 2003; Revision 4

Event Notification #39996; Point Beach Unit 1, Automatic Reactor Trip; July 15, 2003

CAP034095; Unit 1 Reactor Trip Due To 1G06 Rod Drive MG Voltage Regulator Problem; July 15, 2003

1R15 Operability Evaluations

Routine Maintenance Procedure (RMP) 9303; DB-50 Breaker Routine Maintenance, Unit 0; Revision 15

Operability Determination Request (OPR) 000068; Breaker B52-DB50-078 Did Not Close per RMP 9303, Step 5.1.4.g; July 11, 2003

CAP034016; Breaker B52-DB50-078 Did Not Close per RMP 9303, Step 5.1.4.g; July 11, 2003

WO9926865; 480 Volt DB-50 Switchgear Breaker; May 25, 2003

WO9926081; 480 Volt DB-50 Switchgear Breaker; May 18, 2003

OPR000066; Potential for G03/04 Radiator Fans to Trip Breaker When Freewheeling Backwards; August 8, 2003

CAP034153; Unable to Find Design Basis for G-03/04 Radiator Sizing; July 18, 2003 (NRC-identified issue)

OPR000020; 1P-15B Discolored Pump Seal Water; June 21, 2003

Crane Packing Company; Seal and Auxiliary Bushing Acceptance Test Procedure; December 24, 1969

CAP002936; Dirty Water Vented from 1P-15B Inboard Seal; April 19, 2002

CAP034562; Noted Black Colored Water When Venting SI Pumps; August 4, 2003

Drawing CraneP 12737; Shaft Seal Type-1, 3.000D.; Revision D

Letter from Dominion Engineering, Inc. to Point Beach Nuclear Plant, Crud Analysis; September 23, 2003

CAP035043; Diesel Fuel Oil Pour Point Specification (TRM 4.12) Inconsistent With Expected Values; August 21, 2003

Technical Requirements Manual, Section 4.12; Diesel Fuel Oil; Revision 1

Technical Requirements Manual, Section 4.12; Diesel Fuel Oil; Revision 2

Certificate of Analysis, United States Oil Company, Incorporated; T-173 Emergency Diesel Generator Fuel Oil Tank; August 14, 2003

Certificate of Analysis, United States Oil Company, Incorporated; T-173 Emergency Diesel Generator Fuel Oil Tank; August 20, 2003

CAP031655; 4160 Volt Cables Possibly Beyond End of Life; March 14, 2003

Corrective Action Item 28078; Tracking Action to Resolve Concern With Exposure of Underground Cables to Water; February 14, 2003

Site Excellence Plan Item 15-012; Manhole and Cable Vault Flooding; Revision 1

Site Excellence Plan Item 15-016; Underground Electrical Cables That Have Been Submerged; Revision 1

WO0309330; 1X-14 Perform Partial Discharge Testing; September 30, 2003

WO0309331; 1A-0-6 Perform Partial Discharge Test; September 30, 2003

WO0309332; 1X-03 Perform Partial Discharge Testing; September 30, 2003

WO0309333; 1H-04 Perform Partial Discharge Testing; September 30, 2003

WO0309336; 1X-04 Perform Partial Discharge Testing; September 30, 2003

WO0309339; 2X-04 Perform Partial Discharge Testing; September 30, 2003

WO0309340; 2H-04 Perform Partial Discharge Testing; September 30, 2003

WO0309341; 2X-14 Perform Partial Discharge Testing; September 30, 2003

WO0309342; 2A-06 Perform Partial Discharge Testing; September 30, 2003

WO0309343; 2X-03 Perform Partial Discharge Testing; September 30, 2003

Bechtel Drawing 6118 E-100 Sheet 1; Electrical Plot Plan Details; Revision E

Point Beach Vendor Report from Cable/Wise Services; Condition Assessment of Several Primary Cables for Point Beach Nuclear Plant, Two Rivers, Wisconsin; August 12, 2003

Point Beach Vendor Report from Cable/Wise Services; Condition Assessment of Several Primary Cables for Point Beach Nuclear Plant, Two Rivers, Wisconsin; May 21-22, 2003

Point Beach Vendor Report from Cable/Wise Services; Condition Assessment of Several Primary Cables for Point Beach Nuclear Plant, Two Rivers, Wisconsin; May 2003

1R16 Operator Workarounds

Periodic Check 82 Part 9; Operations' Review of Posted Temporary and Control Room Permanent Information, Unit 0; Revision 7

Operator Work Around Meeting Minutes, July 2002 through July 2003

Operations Department List of Operator Workarounds; September 22, 2003

CAP032635; Plant Process Computer System Issues Qualify as Operator Challenges; May 5, 2003

Operator Workaround 0-03R-003; Plant Process Computer; May 5, 2003

Alarm Response Procedure (ARP) 1C20 D 2-1; PPCS [Plant Process Computer System] Priority Alarm; Revision 4

ARP 2C20 D 2-9; PPCS Priority Alarm; Revision 4

NP 2.1.4; Operator Workarounds; Revision 1

NP 7.2.18; Temporary Modifications; Revision 0

1R17 Permanent Plant Modifications

Plant Modification 03-031; Unit 1 Control Rod Drive MG Set Voltage Regulator Modification; July 19, 2003

NP 7.2.12; Design Review Board; Revision 0

Point Beach Memorandum NPM 2003-0513; DRB [Design Review Board] for MR 03-031, Unit 1 Control Rod Drive MG Set Voltage Regulator Modification; July 21, 2003

Point Beach Memorandum NPM 2003-0516; Design Authority for MR 03-031, Unit 1 Control Rod Drive MG Set Voltage Regulator Modification; July 22, 2003

Point Beach Memorandum NPM 2003-0515; MR 03-031; July 22, 2003

Westinghouse Letter RRAS-AMO-03-129; Point Beach Unit #1 Rod Control System Motor-Generators; July, 21, 2003

10 CFR Part 50.59 Screening SCR 2003-0261; MR 03-031, Unit 1 Control Rod Drive MG Set Voltage Regulator Modification; July 22, 2003

Drawing 663C648, Sheet 5; CRD [Control Rod Drive] Power Supply Instrumentation Set #1; Revision 5

Drawing 663C648, Sheet 7; CRD Power Supply Instrumentation Set #2; Revision 5

Drawing 663C648, Sheet 10; CRD Power Supply Generator #1 Voltage Regulator; Revision 3

Drawing 663C648, Sheet 11; CRD Power Supply Generator #2 Voltage Regulator; Revision 3

1R19 Post-Maintenance Testing

Operating Procedure (OP) 1C; Startup To Power Operations; Revision 87

WO0306356; P-028B-M, Motor Failure, Inspect Motor/Pump/Gearbox Bearings; July 11, 2003

WO0306357; P-028B-M, Steam Generator Feed Pump Motor; July 15, 2003

PBF 9142; Bolting - Torque and Loading; Revision 1

CAP034162; Oil Leak on 2P-28B Outboard Motor Bearing; July 18, 2003

WO0303663; G-01 Emergency Diesel Generator Coolant HX [Heat Exchanger] (West); July 16, 2003

WO0303668; G-01 Emergency Diesel Generator Coolant HX (East); July 16, 2003

WO0303113; 2P-29 AFP [Auxiliary Feedwater Pump] Mini Recirculation Control; May 28, 2003

Installation Work Plan (IWP) 03-005-02; Modification Request 03-005 - Repower Turbine-Driven AFW Pump Recirc Valve 2AF-4002, Unit 2; May 7, 2003

Engineering Change Request 2003-0068; Modification Request 03-005; June 24, 2003

Inservice Test (IT) 09A; Cold Start of Turbine-Driven Auxiliary Feedwater Pump and Valve Test (Quarterly) Unit 2; Revision 31

OI 31; Rod Drive MG Set; Revision 5

OI 31; Rod Drive MG Set; Revision 6

WO0306432 Addendum 1; Rod Control MG Set; July 19, 2003

WO0306432; 1G-06 Troubleshoot Failure; July 21, 2003

WO9914467; Rod Drive Control; September 24, 2002

Unit 1 Turbine Hall Auxiliary Operator Log Readings; Station 25 thru 28 on Unit 1 Rod Drive MG Sets, Voltmeter and Ammeter Readings; September 1, 2002, to September 15, 2003

Unit 1 Rod Drop Testing Data; Selected Refueling Outage Data; U1R17 to U1R27

Reactor Engineering Surveillance Procedure (RESP) 1.1; Rod Control System, Rod Drop and Rod Stepping Testing; Revision 11

WO9926182; G-06 Rod Control MG Set; August 12, 2002

WO0306514; Rod Drive Cabinet Banks B & D Group 1 Circuit Cabinet, Investigate Removed Power Supply for Degradation; July 22, 2003

WO0306513; Rod Control MG/Reactor Trip Breaker Switchgear Control Panel; Troubleshoot Synchronizer With 1C-041 Cabinet for 1G-06 and 1G-07; July 22, 2003

WO0306430; Rod Drive Control, Check Power Supply and Fuses; July 21, 2003

WO0306431; Rod Drive Control, Replace PS-2 Power Supply, Banks B/D; July 21, 2003

WO0306433; Rod Control MG/Reactor Trip Breaker Switchgear Control Panel, Troubleshoot and Repair Damage in 1C41 Per RMP 9201; July 16, 2003

WO0306434; Rod Drive Control, Replace PS-2 Power Supply, Banks A/C; July 21, 2003

WO0306494; Rod Drive Control, Install and Test Control Rod Drive MG Set Voltage Regulator Modification; July 21, 2003

Point Beach Drawing WEST 663C648, Sheet 7 of 17; CRD [Control Rod Drive] Power Supply Instrumentation Set #2; Revision B

Engineering Evaluation 2003-0038; Engineering Evaluation for G-03 Voltage Regulator Replacement PMT; September 19, 2003

RMP 9201, Data Sheet 2; Control and Documentation for Troubleshooting and Repairs, Troubleshooting Steps; Revision 0

1R22 Surveillance Testing

Calculation Number 2003-0058; PRA [Probabilistic Risk Evaluation] for Missed Surveillance of Battery D06; August 15, 2003

RMP 9200-2; Station Battery D-06 Discharge Tests and Equalizing Charge; Revision 9; Performed on August 19, 2003

WO9943848; Station Battery Service Test per RMP 9200-2; October 28, 2002

WO9943849; Conduct Performance Test per RMP 9200-2; October 29, 2002

WO0205474; Swing Battery Service Test per RMP 9200-5; August 7, 2003

RMP 9200-5; Station Battery D-305 Discharge Tests and Equalizing Charge; Revision 7; performed on January 7, 2002

WO9921382; Conduct Performance Test per RMP 9200-5; January 22, 2002

WO9935595; Swing Battery Service Test per RMP 9200-5; February 20, 2002

CAP034913; D-06 & D-305 Missed TS [Technical Specification] Surveillance Tests; August 15, 2003

TS-82; Emergency Diesel Generator G-02 Monthly; Revision 65

Common Mode Failure Analysis for CAP 034339; July 27, 2003

CAP034339; G-02 EDG [Emergency Diesel Generator] Governor Floating During TS-82; July 27, 2003

WO 0306573; G-02 Failed To Properly Share Load When Paralleled to 2A-05 During TS-82; July 27, 2003

Point Beach Drawing EMD 8413730 Sheet 21; Schematic Diagram Diesel Generator G02 DC [Direct Current] Control Point Beach Nuclear Plant Unit 1 & 2; Revision E

Point Beach Drawing EMD 8413730 Sheet 22; Schematic Diagram Diesel Generator G02 Start No. 1 Circuitry Point Beach Nuclear Plant Unit 1 & 2; Revision E

Point Beach Drawing EMD 8413730 Sheet 28; Schematic Diagram Diesel Generator G02 Miscellaneous Point Beach Nuclear Plant Unit 1 & 2; Revision E

Point Beach Drawing MKW 6090F11001 Sheet 2; Elementary Wiring Diagram Generator Control Panel Point Beach Nuclear Plant Unit 1 & 2; Revision E

CAP049722; Terminal Lugs C-81 (G-03) Do Not Meet RMP 9100-1 Criteria; August 28, 2003

CAP049770; Excessive Delays in Testing G-03 to Loadbank; September 2, 2003

WO0307231; G-03 Voltage Regulation Problem Troubleshooting Log; August 21, 2003

CAP035034; G-03 Voltage Lowered to Approximately 2700 Volts After Ready to Load; August 21, 2003

RMP 9201; Control and Documentation for Troubleshooting and Repair Activities; Revision 0

<u>1R23</u> <u>Temporary Plant Modifications</u>

CAP050613; Possible Deficiency in NP 5.1.8; October 2, 2003 (NRC-identified)

Temporary Modification 02-052; Temporary 1TG-01-Varm Modification, Unit 1; February 9, 2003

<u>1EP6</u> <u>Drill Evaluation</u>

Point Beach Emergency Plan; Revision 27, May 23, 2003

<u>4OA1</u> <u>Performance Indicator Verification</u>

NEI 99-02; Regulatory Assessment Performance Indicator Guideline; Revision 2

NP 5.2.16; NRC Performance Indicators; Revision 7

Selected Reactor Operator Logs; January 1, 2002, to September 30, 2003

Performance Indicator Data Summary Report; Reactor Coolant System Leakage Units 1 & 2; 2002 and 2003

Performance Indicator Data Summary Report; Safety System Functional Failures Units 1 & 2; 2002 and 2003

4OA2 Identification and Resolution of Problems

CAP034513; Basis for Prompt Operability Screening on CAP033580 Incorrect; August 1, 2003

CAP033580; Determine Current LBB Analysis of Record for PBNP; June 18, 2003

Condition Evaluation CE011789; Determine Current LBB Analysis of Record for PBNP; June 16, 2003

10 CFR 50.59/72.48 Screening; Component Cooling Water System Closed Loop Inside Containment; February 15, 2003

PBNP Unit 2 Replacement Steam Generator Design; December 20, 1996

OPR000072; Leak Before Break Analysis for RCS Piping Not Reviewed and Approved by the NRC; Revision 0

NP 5.3.3; Incident Investigation and Post Trip Review, Attachment C; Revision 4, February 12, 2003

CAP034029; Initiated a Manual Safety Injection on Unit 2 Due to Pressurizer Low Level; July 11, 2003

Operations Department Human Performance Event Clock Reset; July 15, 2003

CAP034095; Unit 1 Reactor Trip Due to 1G06 Rod Drive MG Voltage Regulator Problem; July 15, 2003

ACE001372; Handoffs During Unit 1 Rod Drive Outage Appear To Be Less Than Optimal; July 25, 2003

CAP034218; NLI (-24 Volt) Power Supplies in RDC Power Cabinets; July 22, 2003

CAP034292; Handoffs During Unit 1 Rod Drive Outage Appear To Be Less Than Optimal; July 25, 2003

CAP034275; During the Performance of ICP [Instrumentation and Control Procedure] 10.46, We Found a Wire Landed on Wrong Terminal; July 24, 2003

CAP034283; Follow-up Actions Needed for Modification 03-031; July 24, 2003

CAP034302; Missed Opportunity to Potentially Detect and Prevent Unit 1 RDC [Rod Drive Control] Failure; July 25, 2003

CAP034199; Organization Coordination Resulted in Potential and Unnecessary Outage Delays

CAP034189; Unit 2 Rod Drive MG Set Vulnerability; July 18, 2003

CAP034176; Quarantine Lifted Without Authorization; July 18, 2003

RCE207; Unit 2 Manual Safety Injection, Manual Trip and Manual Containment Isolation During Reactor Startup; Unit 2 Revision 0; September 26, 2003

4OA3 Event Follow-up

Unit 2 P-28B Main Feedwater Pump Over Current Trip and Reactor Trip Charter; July 10, 2003

NP 5.3.3; Incident Investigation and Post Trip Review; Revision 4

Event Notification #39993; Point Beach Nuclear Plant, Unit 2, July 11, 2003

CAP033997; Unit 2 Main Feed Pump Trip Results in a Unit 2 Reactor Trip, July 10, 2003

CAP034875; Frequency Excursion on 345KV Grid; August 14, 2003

CAP031978; Backdraft Damper Degraded, 2W-001D2-A; April 3, 2003

Abnormal Operating Procedure 1A; Reactor Coolant Leak - Unit 2; Revision 15

CAP034095; Unit 1 Reactor Trip Due to 1G06 Rod Drive MG Voltage Regulator Problem; July 15, 2003

LIST OF ACRONYMS USED

ACE	Apparent Cause Evaluation
AFW	Auxiliary Feedwater
ANSI/ANS	American National Standard Institute/American Nuclear Society
ARP	Alarm Response Procedure
ATWS	Anticipated Transient Without Scram
CAP	Corrective Action Program
CL	Checklist
CCW	Component Cooling Water
CFR	Code of Federal Regulations
DBD	Design Basis Document
DOS	Duty Operations Supervisor
DRS	Division of Reactor Safety
EDG	Emergency Diesel Generator
EPIP	Emergency Plan Implementing Procedure
ERO	Emergency Response Organization
FIN	Finding
IMC	Inspection Manual Chapter
IP	Inspection Procedure
JPM	Job Performance Measure
KV	Kilovolt
LBB	Leak-Before-Break
LER	Licensee Event Report
LOCA	Loss-of-Coolant Accident
LORT	Licensed Operator Requalification Training
MC	Manual Chapter
MG	Motor Generator
MR	Maintenance Rule
MFRV	Main Feedwater Regulating Valves
NCV	Non-Cited Violation
NP	Nuclear Plant Procedure
NRC	Nuclear Regulatory Commission
OI	Operating Instruction
OPR	Operability Determination Request
OWA	Operator Workaround
PBF	Point Beach Form
PI	Performance Indicator
PMT	Post-Maintenance Testing
RCS	Reactor Coolant System
RMP	Routine Maintenance Procedure
SDP	Significance Determination Process
SDR	Simulator Discrepancy Report
SGTR	Steam Generator Tube Rupture
SI	Safety Injection
SR	Surveillance Requirement
SRC	Simulator Review Committee
TRM	Technical Requirements Manual

TS	Technical Specification
URI	Unresolved item
VCT	Volume Control Tank
VDC	Volt Direct Current
WO	Work Order