

January 3, 2005

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

SUBJECT: POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2  
FIRE PROTECTION TRIENNIAL BASELINE INSPECTION  
NRC INSPECTION REPORT 05000266/2004010(DRS);  
05000301/2004010(DRS)

Dear Mr. Koehl:

On November 19, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Point Beach Nuclear Plant, Units 1 and 2. The enclosed report documents the inspection findings which were discussed on November 19, 2004, with you and other 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.

Based on the results of this inspection, one NRC-identified finding of very low safety significance (Green) was identified in the report. This finding was determined to involve a violation of NRC requirements. However, because the violation was of very low safety significance and because the issue was entered into your corrective program, the NRC is treating this finding as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC's Enforcement Policy.

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, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector Office at the Point Beach Nuclear Plant facility.

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Sincerely,

***/RA by Patrick Loudon Acting for/***

Steven A. Reynolds, Deputy Director  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000266/2004010(DRS);  
05000301/2004010(DRS)  
w/Attachment: Supplemental Information

cc w/encl: F. Kuester, President and Chief  
Executive Officer, We Generation  
J. Cowan, Executive Vice President  
Chief Nuclear Officer  
D. Cooper, Senior Vice President, Group Operations  
J. McCarthy, Site Director of Operations  
D. Weaver, Nuclear Asset Manager  
Plant Manager  
Regulatory Affairs Manager  
Training Manager  
Site Assessment Manager  
Site Engineering Director  
Emergency Planning Manager  
J. Rogoff, Vice President, Counsel & Secretary  
K. Duvenceck, Town Chairman  
Town of Two Creeks  
Chairperson  
Public Service Commission of Wisconsin  
J. Kitsembel, Electric Division  
Public Service Commission of Wisconsin  
State Liaison Officer

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U.S. NUCLEAR REGULATORY COMMISSION  
REGION III

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

Report No: 05000266/2004010(DRS); 05000301/2004010(DRS)

Licensee: Nuclear Management Company, LLC

Facility: Point Beach Nuclear Plant, Units 1 and 2

Location: 6610 Nuclear Road  
Two Rivers, WI 54241

Dates: November 1 - 19, 2004

Inspectors: G. Hausman, Senior Reactor Inspector, Lead  
D. Schrum, Reactor Inspector  
B. Melly, Fire Protection Contractor

Observers: B. Grimmel, Reactor Engineer

Approved by: J. Lara, Chief  
Electrical Engineering Branch  
Division of Reactor Safety

Enclosure

## SUMMARY OF FINDINGS

IR 05000266/2004010(DRS); 05000301/2004010(DRS); 11/01/2004 - 11/19/2004; Point Beach Nuclear Plant, Units 1 and 2; Fire Protection Triennial Baseline Inspection.

This report covers an announced triennial fire protection baseline inspection. The inspection was conducted by Region III inspectors and a fire protection contractor. One Green Non-Cited Violation (NCV) of very low safety significance was 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-Revealed Findings**

#### **Cornerstone: Initiating Events**

No findings of significance were identified.

#### **Cornerstone: Mitigating Systems**

Green. A finding of very low safety significance was identified by the inspectors for failure to align safe shutdown instrumentation to an electrical bus with a battery charger in procedure AOP-10A, "Safe Shutdown - Local Control." Specifically, the procedure aligned Units 1 and 2 safe shutdown instrumentation to a 125Vdc bus that did not have a battery charger available to support the selected instrumentation.

This issue was more than minor because it affected the procedure quality attribute of the Reactor Safety Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events. Specifically, the safe shutdown instrumentation associated with this bus, without a battery charger, could potentially become inoperable as the voltage of the battery supplying the bus decreased. Operators could select another bus with a safe shutdown inverter, however, the procedure did not direct this action. To correct this procedural error, the licensee issued Temporary Change Notice 2004-0762. This issue was entered into the licensee's corrective action program as CAP059262 and CE014635. The issue was of very low safety significance because it did not represent an actual loss of a safety function. The issue was a Non-Cited Violation (NCV) of 10 CFR Part 50, Appendix B, Criterion V, "Instruction, Procedures, and Drawings," for failure to provide a procedure of a type appropriate to the circumstances. (Section 40A5)

### **B. Licensee-Identified Violations**

No findings of significance were identified.

## REPORT DETAILS

### Summary of Plant Status

Units 1 and 2 operated at or near full power throughout the inspection period.

#### **1. REACTOR SAFETY**

##### **Cornerstones: Initiating Events and Mitigating Systems**

#### 1R05 Fire Protection (711111.05)

The purpose of this inspection was to review the Point Beach Nuclear Plant's (PBNPs) Fire Protection Program (FPP) for selected risk-significant fire areas. Emphasis was placed on determining that the post-fire safe shutdown capability and the fire protection features were maintained free of fire damage to ensure that at least one post-fire safe shutdown success path was available. The inspection was performed in accordance with the Nuclear Regulatory Commission's (NRC's) regulatory oversight process using a risk-informed approach for selecting the fire areas and attributes to be inspected. The inspectors used the PBNP's Individual Plant Examination of External Events (IPEEE) to choose several risk-significant areas for detailed inspection and review. The fire areas chosen for review during this inspection were:

<u>Fire Area</u>	<u>Description of Fire Area Reviewed</u>
A01-E	General Plant Area - Turbine Building (Specifically Fire Zone 224 - Alternate Shutdown Panel Zone)
A30	Cable Spreading Room
A31	Control Room
A33	HVAC Equipment Room

For each of these fire areas, the inspection focused on the fire protection features, the systems and equipment necessary to achieve and maintain safe shutdown conditions, determination of licensee commitments, and changes to the FPP.

#### .1 Systems Required to Achieve and Maintain Post-Fire Safe Shutdown

The Code of Federal Regulations (CFR) Title 10, Part 50, Appendix R, Section III.G.1, required the licensee to provide fire protection features that were capable of limiting fire damage to structures, systems, and components (SSCs) important to safe shutdown. The SSCs that were necessary to achieve and maintain post-fire safe shutdown were required to be protected by fire protection features that were capable of limiting fire damage to the SSCs so that:

- One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) was free of fire damage; and
- Systems necessary to achieve and maintain cold shutdown from either the control room or emergency control station(s) can be repaired within 72-hours.

Specific design features for ensuring this capability were specified by 10 CFR Part 50, Appendix R, Section III.G.2.

a. Inspection Scope

The inspectors reviewed the plant systems required to achieve and maintain post-fire safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions for each fire area selected for review in accordance with the criteria discussed above. Specifically, the review was performed to determine the adequacy of the systems selected for reactivity control, reactor coolant makeup, reactor heat removal, process monitoring, and support system functions. This review included the fire protection safe shutdown analysis.

The inspectors also reviewed the operators' ability to perform the necessary manual actions for achieving safe shutdown by reviewing procedures, the accessibility of safe shutdown equipment, and the available time for performing the actions.

The inspectors reviewed the PNPPs Updated Safety Analysis Report and the licensee's engineering and/or licensing justifications (e.g., NRC guidance documents, license amendments, technical specifications, safety evaluation reports, exemptions, and deviations) to determine the licensing basis.

b. Findings

No findings of significance were identified.

.2 Fire Protection of Safe Shutdown Capability

Title 10 CFR Part 50, Appendix R, Section III.G.2, required separation of cables and equipment and associated circuits of redundant trains by a fire barrier having a 3-hour rating. Title 10 CFR Part 50, Appendix R, Section III.G.3, required that, if the guidelines cannot be met, then alternative or dedicated shutdown capability and its associated circuits, independent of cables, systems or components in the area, room, or zone under consideration should be provided.

a. Inspection Scope

For each of the selected fire areas, the inspectors reviewed the licensee's Safe Shutdown Analysis (SSA) to ensure that at least one post-fire safe shutdown success path was available in the event of a fire in accordance with the criteria discussed above. This included a review of manual actions required to achieve and maintain hot shutdown



conditions and to make the necessary repairs to reach cold shutdown within 72-hours. The inspectors also reviewed procedures to determine whether or not adequate direction was provided to operators to perform these manual actions. Factors such as timing, access to the equipment, and the availability of procedures, were considered in the review.

The inspectors also evaluated the adequacy of fire suppression and detection systems, fire area barriers, penetration seals, and fire doors to ensure that at least one train of safe shutdown equipment was free of fire damage. To accomplish this, the inspectors observed the material condition and configuration of the installed fire detection and suppression systems, fire barriers, construction details, and supporting fire tests for the installed fire barriers. In addition, the inspectors reviewed licensee documentation, such as deviations, detector placement drawings, fire hose station drawings, carbon dioxide pre-operational test reports, smoke removal plans, Fire Hazard Analysis (FHA) reports, SSA, and National Fire Protection Association (NFPA) codes to verify that the fire barrier installations met license commitments.

b. Findings

No findings of significance were identified.

.3 Post-Fire Safe Shutdown Circuit Analysis

Title 10 CFR Part 50, Appendix R, Section III.G.1, required that SSCs important to safe shutdown be provided with fire protection features capable of limiting fire damage to ensure that one train of systems necessary to achieve and maintain hot shutdown conditions remained free of fire damage. Options for providing this level of fire protection were delineated in 10 CFR Part 50, Appendix R, Section III.G.2. Where the protection of systems whose function was required for hot shutdown did not satisfy 10 CFR Part 50, Appendix R, Section III.G.2, an alternative or dedicated shutdown capability and its associated circuits, were required to be provided that was independent of the cables, systems, and components in the area. For such areas, 10 CFR Part 50, Appendix R, Section III.L.3, specifically required the alternative or dedicated shutdown capability to be physically and electrically independent of the specific fire areas and capable of accommodating post-fire conditions where offsite power was available and where offsite power was not available for 72-hours.

a. Inspection Scope

The inspectors performed a review of the licensee's SSA and Safe Shutdown Equipment List (SSEL) to determine whether the licensee had appropriately identified and analyzed the safety related and non-safety related cables associated with safe shutdown equipment located in the selected plant fire zones in accordance with the criteria discussed above. The inspectors' review included the assessment of the licensee's electrical systems and electrical circuit analyses.

The inspectors evaluated a sample of safety and non-safety related cables for equipment in the selected fire areas to determine if the design requirements of Section

III.G of Appendix R to 10 CFR Part 50 were being met. This included determining that hot shorts, open circuits, or shorts to ground would not prevent implementation of safe shutdown.

b. Findings

No findings of significance were identified.

.4 Alternative Shutdown Capability

Title 10, Part 50, Appendix R, Section III.G.1, required the licensee to provide fire protection features that were capable of limiting fire damage so that one train of systems necessary to achieve and maintain hot shutdown conditions remained free of fire damage. Specific design features for ensuring this capability were provided in 10 CFR Part 50, Appendix R, Section III.G.2. Where compliance with the separation criteria of 10 CFR Part 50, Appendix R, Section III.G.2, could not be met, an alternative or dedicated shutdown capability be provided that was independent of the specific fire area under consideration. Additionally, alternative or dedicated shutdown capability must be able to achieve and maintain hot standby conditions and achieve cold shutdown conditions within 72-hours and maintain cold shutdown conditions thereafter. During the post-fire safe shutdown, the reactor coolant process variables must remain within those predicted for a loss of normal alternating current power, and the fission product boundary integrity must not be affected (i.e., no fuel clad damage, rupture of any primary coolant boundary, or rupture of the containment boundary).

a. Inspection Scope

The inspectors reviewed the licensee's systems required to achieve safe shutdown to determine if the licensee had properly identified the components and systems necessary to achieve and maintain safe shutdown conditions in accordance with the criteria discussed above. The inspectors also focused on the adequacy of the systems to perform reactor pressure control, reactivity control, reactor coolant makeup, decay heat removal, process monitoring, and support system functions.

b. Findings

No findings of significance were identified.

.5 Operational Implementation of Alternate Shutdown Capability

The PBNPs FPP described the means by which safe shutdown could be achieved to meet the requirements of 10 CFR Part 50, Appendix R, Sections III.G.3 and III.L. The PBNPs safe shutdown analysis identified the minimum number of components and plant systems necessary for achieving Appendix R safe shutdown performance goals. The FPP accomplished safe shutdown by isolating power to most plant equipment and then used an emergency diesel generator or the station blackout turbine generator to power equipment necessary for plant shutdown. Numerous manual actions were required with four operations staff working together to shutdown both Unit 1 and Unit 2.

a. Inspection Scope

From November 1, 2004 through November 5, 2004, the inspectors performed a review of the licensee's operating procedures, which augment the post-fire safe shutdown procedures to determine if the licensee complied with the criteria discussed above. The review focused on ensuring that all required functions for post-fire safe shutdown and the corresponding equipment necessary to perform those functions were included in the procedures. The review also looked at operator procedural training, as well as consistency between the operations shutdown procedures and any associated administrative controls.

b. Findings

Introduction: The inspectors identified an unresolved item associated with a lack of time critical manual actions in procedure FOP 1.2 "Potential Fire Affected Safe Shutdown Equipment," Revision 6 and for other potentially non-conservative Appendix R response times. The inspectors could not evaluate the risk significance of this issue until the licensee completed additional reviews and calculations to resolve this issue.

Description: The inspectors reviewed and walked down the fire protection procedures AOP-10A, "Safe Shutdown - Local Control," Revision 39 and AOP-10C, "Safe Shutdown Following a Fire at PAB [Primary Auxiliary Building] 26 Foot Central," Revision 0. The inspectors evaluated the two procedures for consistency, adequacy, operator training and operator familiarity. The two fire protection procedures were common to both units and were to be implemented as fire area specific (i.e., alternate shutdown (ASD)) procedures for the Control Room, Cable Spreading Room, and the 26 foot elevation of the PAB.

The inspectors determined if: (1) the procedures used for ASD were consistent with the safe shutdown analysis (SSA) methodology and assumptions; (2) the procedures were written so that the operator actions could be correctly performed within the times assumed in the SSA; (3) the training program for operators included ASD capability; and (4) personnel required to achieve and maintain the plant in hot standby from ASP could be provided with normal on-site staff, exclusive of the fire brigade.

In 2000, the licensee issued CAP012654, "Contractor Spurious Opening of the 851 Safety Injection (SI) Valves and Potential Sump Flooding," dated September 22, 2000, and associated LER 266/2000-008-00, "Inadequate Procedural Guidance for Spurious Operation of Valves During Appendix R Alternate Shutdown," dated October 19, 2000. The two documents stated that according to Appendix R calculations an unrecoverable condition could develop from drain-down of the refueling water storage tank (RWST) to the containment sump through a spuriously opened SI-851A/B valve. In addition, the LER stated that the time for this condition to develop was 15-minutes. To isolate this draining the RHR Suction Valves must be closed within this period of time. During this inspection, however, the inspectors observed that procedure AOP-10A only ensured that RHR Suction Valves (i.e., 1SI-856A, 1SI-856B, 2SI-856A and 2SI-856B) were shut at 22-minutes and for procedure AOP-10C at 25-minutes. As a result, the inspectors were concerned that there would not be adequate water inventory available for reactor

makeup during the 72-hours required to reach cold shutdown. The inspectors questioned why the procedures did not ensure the affected valves were closed within the LER specified time period (i.e., 15-minutes) to isolate the potential diversion of water from the RWST.

The licensee stated that the LER had been issued in error since there was no approved calculation available to support the 15-minute time period. After the inspectors requested additional clarification, the licensee located an unapproved calculation (i.e., a spreadsheet) used to support the 15-minute time period. The licensee's review of the unapproved computer spreadsheet indicated that the 15-minutes was based on RCP seal leakage which had not been accounted for in the licensee's previous calculations for inventory lost from the RWST.

Specifically, the RCP seals would be potentially damaged after 13-minutes without seal cooling from the charging pumps. The procedures AOP-10A and AOP-10C remove power to most components in the plant. This included having power removed to the charging pumps. The charging pumps for seal cooling are not restored in AOP-10A and AOP-10C until after 30-minutes. The licensee stated that the calculated RCP seal leakage was 21.5 gallons per minute (gpm) for each RCP after the RCP seals are damaged.

The licensee stated that the unapproved computer spreadsheet assumptions were overly restrictive and that the current timeline for manual actions was acceptable. For example, the spreadsheet calculation assumed a number of worst case scenarios, which included simultaneous spurious operation of the two drain-down flow paths from the RWST and all failures were assumed to occur instantaneously. The licensee stated that the assumptions used in the unapproved computer spreadsheet led to the LER statement that the RWST should be isolated within 15-minutes for an Appendix R fire.

This issue regards the potential for not having adequate water inventory available for reactor makeup during the 72-hours required to reach cold shutdown due to the inventory lost due to RCP leakage and the potential drain-down of the RWST (i.e., through a spuriously operated valve to the containment sump) from an Appendix R fire. As a result, the inspectors were concerned that the licensee had the potential for a non-conservative Appendix R manual action response time in their procedures for ensuring that the RWST was isolated from draining to containment. In addition, not having RCP seal cooling for 30-minutes may be an unacceptable condition. The licensee wrote a CAP to formalize the un-approved evaluation and prepare a new calculation. The licensee entered this issue into their corrective action program as CAP060624, "Potentially Non-Conservative Appendix R Response Times," dated November 18, 2004.

The inspectors also identified a similar instance where the licensee did not identified the time critical manual actions in FOP 1.2, "Potential Fire Affected Safe Shutdown Equipment," Revision 6. Time critical manual actions are required to ensure that the RWST is isolated to prevent drain-down to the containment sump. As a result, the licensee issued CAP 060641, "FOP 1.2 Enhancement Recommendation," November 19, 2004, to review this issue. In addition, the licensee initiated compensatory actions,

hourly fire rounds were assigned for all areas where a fire could potential cause a spurious actuation and a subsequent drain-down of the RWST.

Pending a review of the licensee's assumptions and calculations; and completion of the review of FOP 1.2, this issue is an Unresolved Item (URI 05000266/2004010-01; 05000301/2004010-01).

.6 Communications

Title 10, Part 50, Appendix R, Section III.H, required that a portable communications system be provided for use by the fire brigade and other operations personnel required to achieve safe plant shutdown. This system should not interfere with the communications capabilities of the plant security force. Fixed repeaters installed to permit use of portable radio communication units should be protected from exposure to fire damage.

a. Inspection Scope

The inspectors reviewed the adequacy of the communication system to support plant personnel in the performance of alternative safe shutdown functions and fire brigade duties to determine compliance with the criteria discussed above. The inspectors also conducted a review to determine that sufficient channels were available to support safe shutdown implementation and that repeaters were powered by an emergency power source.

b. Findings

No findings of significance were identified.

.7 Emergency Lighting

Title 10, Part 50, Appendix R, Section III.J., required that fixed self-contained lighting consisting of fluorescent or sealed-beam units with individual eight-hour minimum battery power supplies should be provided in areas that must be manned for safe shutdown and for access and egress routes to and from all fire areas.

a. Inspection Scope

The inspectors performed a walkdown of the fire areas and the access/egress routes to determine that adequate emergency lighting existed in accordance with the criteria discussed above.

b. Findings

No findings of significance were identified.

.8 Cold Shutdown Repairs

Title 10, Part 50, Appendix R, Section III.L.5, required that equipment and systems comprising the means to achieve and maintain cold shutdown conditions should not be damaged by fire; or the fire damage to such equipment and systems should be limited so that the systems can be made operable and cold shutdown achieved within 72-hours. Materials for such repairs shall be readily available onsite, and procedures shall be in effect to implement such repairs.

a. Inspection Scope

The inspectors examined the licensee's ability to conduct cold shutdown repairs in accordance with the 72-hour requirement discussed above. The inspection team reviewed the licensee's procedure for implementation of cold shutdown repairs. The inspectors assessed whether the licensee identified all the appropriate tools and equipment needed to complete the required cold shutdown repairs. The inspectors' review focused on ensuring that the tools and equipment were readily available onsite and designated solely for those repairs.

b. Findings

No findings of significance were identified.

.9 Fire Barriers and Fire Zone/Room Penetration Seals

Title 10, Part 50, Appendix R, Section III.M, required that penetration seal designs be qualified by tests that are comparable to tests used to rate fire barriers.

a. Inspection Scope

The inspectors reviewed the test reports for three-hour rated barriers installed in the plant and performed visual inspections of selected barriers to ensure that the barrier installations were consistent with tested configuration in accordance with the criteria discussed above. In addition, the inspectors reviewed the fire loading for selected areas to ensure that existing barriers would not be challenged by a potential fire.

b. Findings

No findings of significance were identified.

.10 Fire Protection Systems, Features and Equipment

a. Inspection Scope

The inspectors reviewed the material condition, operations lineup, operational effectiveness, and design of fire detection systems, fire suppression systems, manual fire fighting equipment, fire brigade capability, and passive fire protection features. The inspectors reviewed deviations, detector placement drawings, fire hose station drawings,

halon and/or carbon dioxide system pre-operational test reports, and fire hazard analysis reports to ensure that selected fire detection systems, sprinkler systems, portable fire extinguishers, and hose stations were installed in accordance with their design, and that their design was adequate given the current equipment layout and plant configuration.

b. Findings

No findings of significance were identified.

.11 Compensatory Measures

a. Inspection Scope

The inspectors conducted a review to determine that adequate compensatory measures were put in place by the licensee for out-of-service, degraded or inoperable fire protection and post-fire safe shutdown equipment, systems, or features. The inspectors also reviewed the adequacy of short term compensatory measures to compensate for a degraded function or feature until appropriate corrective actions were taken.

b. Findings

No findings of significance were identified.

**4. OTHER ACTIVITIES (OA)**

4OA2 Identification and Resolution of Problems (71152)

a. Inspection Scope

The inspectors reviewed the corrective action program procedures and samples of corrective action documents to assess whether or not the licensee was identifying issues related to fire protection at an appropriate threshold and entering them in the corrective action program. The inspectors reviewed selected samples of condition reports, work orders, design packages, and fire protection system non-conformance documents.

b. Findings

No findings of significance were identified.

#### 4OA5 Other Activities

##### a. Inspection Scope

(Closed) Unresolved Item URI 50-266/2004006-02; 50-301/2004006-02: In a review conducted from November 1, 2004 through November 5, 2004, the inspectors identified that the licensee's procedure AOP-10A, "Safe Shutdown - Local Control," Revision 38, failed to align safe shutdown instrumentation to an electrical bus with a battery charger. Specifically, the procedure aligned Units 1 and 2 safe shutdown instrumentation to a 125Vdc bus that did not have a battery charger available to support the selected instrumentation (see Sections 4OA2.1 and 4OA2.b.(2) of Inspection Reports 05000266/2004006; 05000301/2004006 and 05000266/2004008; 05000301/2004008, respectively for details).

##### b. Findings

Introduction: A Green NCV was identified for failure to provide a procedure of a type appropriate to the circumstances during alignment of safe shutdown instrumentation to an electrical bus in AOP-10A, as required by 10 CFR Part 50 Appendix B, Criterion V, "Instructions, Procedures, and Drawings."

Analysis: The inspectors determined that the licensee's AOP-10A procedure aligned Units 1 and 2 safe shutdown instrumentation to a 125Vdc safety-related battery bus without a battery charger. The safe shutdown instrumentation associated with this bus could potentially become inoperable as the voltage of the battery supplying the bus decreased. Operators could select another bus with a safe shutdown inverter, however, the procedure did not direct this action. As a result, the procedure was not of a type appropriate to the circumstances and was a performance deficiency warranting a significance evaluation in accordance with IMC 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Screening," issued on June 20, 2003. The inspectors determined that the finding was more than minor because it affected the procedure quality attribute of the Reactor Safety Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events.

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 September 10, 2004. The inspectors determined that the finding did not degrade short term decay heat removal capability or reactivity control; result in a design or qualification deficiency or an actual loss of safety function; or involve internal or external initiating events. Therefore, the finding was considered to be of very low safety significance (Green).

Enforcement: Title 10, Part 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," states, in part, that activities affecting quality shall be prescribed by documented instructions and/or procedures, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions and/or procedures. Contrary to this, prior to September 16, 2004, the licensee's procedure AOP-10A, "Safe



Shutdown - Local Control," Revision 38, failed to align Units 1 and 2 safe shutdown instrumentation to a 125Vdc safety-related battery bus with a battery charger. As a result, the procedure was not of a type appropriate to the circumstances and the safe shutdown instrumentation associated with this bus, without a battery charger, could potentially become inoperable as the voltage of the battery supplying the bus decreased. To correct this procedural error, the licensee issued Temporary Change Notice 2004-0762. This violation is associated with a finding that is characterized by the SDP as having very low risk significance (Green) and is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. This issue was entered into the licensee's corrective action program as CAP059262 and CE014635. (NCV 05000266/2004010-02; 05000301/2004010-02)

#### 4OA6 Meetings

##### .1 Exit Meeting

The inspectors presented the inspection results to Mr. Koehl and other members of licensee management at the conclusion of the inspection on November 19, 2004. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

##### .2 Interim Exit Meetings

No interim exits were conducted.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee

H. Abelquader, Appendix R. Engineer  
G. Casadonte, Fire Protection Coordinator  
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R. Davenport, Production Planning Manager  
B. Dungan, Operations Manager  
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F. Hennessy, Programs Engineering Manager  
M. Huting, NMC Director-Programs Engineering  
D. Koehl, Site Vice President  
C. Krause, Regulatory Affairs Senior Engineer  
R. Ladd, Fire Protection Engineer  
C. Lambert, NMC Vice President - Engineering  
J. Lang, NMC Fleet Lead-Appendix R  
D. Larson, Emergency Lighting  
J. McCarthy, Director-Site Operations  
B. McLean, Fire Protection Engineer  
R. Milner, Business Support Manager  
L. Peterson, Design Engineering Manager  
D. Schuelke, Acting Radiation Protection Manager  
J. Schweitzer, Director-Site Engineering  
J. Shaw, Plant Manager  
G. Sherwood, Engineering Programs Manager  
R. Womack, NMC Fleet Programs Manager-Appendix R

#### Nuclear Regulatory Commission

P. Krohn, Senior Resident Inspector  
M. Morris, Resident Inspector

## LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Opened

05000266/2004010-01; URI Potentially Non-Conservative Appendix R Response Times  
05000301/2004010-01 (Section 1R05.5)

05000266/2004010-02; NCV Failure to Ensure That a Safe Shutdown Procedure Directed  
05000301/2004010-02 Alignment of Instrumentation to a Direct Current Bus with a  
Battery Charger (Section 4OA5)

### Closed

05000266/2004006-02; URI Resident Inspector Review of a Safe Shutdown Procedure  
05000301/2004006-02 That Directed Alignment of Instrumentation to a Direct  
Current Bus Without a Battery Charger (Section 4OA5)

05000266/2004010-02; NCV Failure to Ensure That a Safe Shutdown Procedure Directed  
05000301/2004010-02 Alignment of Instrumentation to a Direct Current Bus with a  
Battery Charger (Section 4OA5)

### Discussed

None.

## LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

### CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
03-E19	Evaluation of CR Habitability for Toxic Gas & Smoke Events	December 3, 2003
CALC-WE0005-01	PBNP App R Rm Temperature Response	April 23, 2004
CALC-WE0005-10	Determination of Time Available to Isolate RWST	June 1, 1998
CALC-97-0063	ECCS Flow Model K-Factor Evaluation of K69 & K39	April 15, 1997
CALC-2002-0042	Electrical Heat Load Calculation for CSR	April 26, 2004
Eval 1999-008	Control Bldg Fire Barrier Features	2
FPEE-1999-001	Unprotected Telephone Wires & Lighting Fixture Power Cords in CSR	0
FPEE-1999-002	DGs G03 & G04 Duct Banks & Manholes	1
FPEE-1999-003	DGs G03 & G04 Bldg Boundaries	0
FPEE-1999-004	Turbine Bldg Embedded Conduits	0
FPEE 1999-005	Auxiliary Bldg Stairway & Hatches	1
FPEE-1999-006	SW Duct Banks & Manholes	1
FPEE 1999-009	Undampened Ventilation Ducts in Significant Fire Barriers in the Control, Primary Auxiliary, & Turbine Bldgs	December 5, 2003
FPEE-1999-011	AFW Pump Rm (Two) Power Cables Omitted from Exemption	1
FPEE-1999-012	Fire Area Boundary Evaluation, Separation of Unit 1 & Unit 2 Facades from Fire Area A01-E	1
FPEE-1999-015	NFPA 12A Code Deviation - Halon Agent Storage Container Pressures	0
FPEE-1999-016	Fire Separation of CSR & CR via a 2-hour Fire Rated Concrete Block Wall	0
FPEE-1999-017	Separation of Instrument Channels Inside Containment	2
FPEE-1999-019	Separation of Steam Generator Pressure Instrumentation Inside FZs 524 & 596, the Unit 1 & Unit 2 Facades, in Fire Area A01-D	1
FPEE-2000-001	Replacement of Electric Strikes on Fire Doors	0
FPEE-2000-002	Qualification of ICMS Product 60 Fire Penetration Seal for 3-hour Fire Rated Gypsum Board Walls	0

## CALCULATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
FPEE-2000-003	480V Power Receptacles to Support Post-Fire SD	0
FPEE-2000-004	Qualification of Dow Corning 3-6548 Silicone RTV Foam Fire Penetration Seal for 3-Hour Fire Rated Gypsum Board Walls	0
FPEE-2001-002	Evaluation of Fire Propagation Beneath AFW Pump Rm Doors 321 - 324	0
FPEE-2001-003	Evaluation of 4" Ceramic Fiber Temporary Penetration Seals	0
FPEE-2001-004	Evaluation of the Adequacy of Fire Penetration Seals M-7-3-7-S8 & M-7-2-23-E24	0
FPEE-2001-005	Adequacy of 1-Hour Raceway Fire Barriers Constructed of 3M Interam Materials Installed on JB-1017 & PBN02 in the Vital SWGR Rm	0
FPEE-2001-006	Adequacy of 1-Hour Raceway Fire Barriers Constructed of 3M Interam Materials Installed on Four-Inch Conduits	0
FPEE-2002-001	Qualification of PCI-Promatec SE-Foam Fire Penetration Seal for 3-Hour Fire Rated Gypsum Board Walls	1
FPEE-2002-002	3-Hour Fire Rated Gypsum Board Fire Barrier in the AFW Pump Rm	0
FPEE-2003-001	Evaluation of the 3-Hour Fire Rated Spancrete Ceiling Assembly Separating the AFW Tunnel & Pump Rm	0
FPEE-2003-004	Fire Protection of Raceway Supports	0
FPEE-2004-001	Qualification of PCI-Promatec Interam Flexible Fire Protective Systems Protection of Conduits FP-3, FK-1, NO2-3 & 1-SO79 for a One-Hour Fire Rating	0
FPTE-001	TE of Fire Barrier Penetration Seals, Fire Rated Wrapping & Cable Tray Fire Stops at PBNP	1
FPTE-002	TE of Inadvertent Suppression System Actuation at PBNP	0
FPTE-003	TE of Emergency Lighting Capability at PBNP	0
FPTE-004	TE of Fire Damper Tests at PBNP	0
FPTE-005	TE for App R Hot SD Components OOS	1
FPTE-006	TE of Fire Detector Location Plan at PBNP	0
FPTE-007	TE of PBNP Point-to-Point Portable Radio Communications for an App R Fire	1
FPTE-008	TE for App R Cable Separation in the AFW Pump Rm FZ 304	0
FPTE-009	TE for Removal of the Foam System on the Outside Fuel Oil Storage Tanks T-32A/B FZ 576	0

## **CALCULATIONS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
FPTE-010	Compliance Review of 10 CFR Part 50, App R, Section III.O, RCP Lube Oil Collection System	0
FPTE-011	TE of Acceptable PBNP Cable Fire Retardancy Standards Power, Control & Specialty Cable	1
FPTE-012	TE of PBNP's Manual Action Report	1
FPTE-013	TE of PBNP Fire Hose Details	0
FPTE-015	TE of the Acceptance Testing for the CSR, Vital SWGR Rm, & AFW Pump Rm Halon System	0
FPTE-016	Resolution of Identified Deviations to NFPA Code Requirements	0

## **CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED DURING INSPECTION**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
CAP060261	FPTE-015 Contains Incorrect Reference	November 1, 2004
CAP060270	Incorrect Reference to App R Exemption 12 in SSAR	November 1, 2004
CAP060271	Incorrect Barrier Symbol used for North, South & East Walls of FZ 330	November 1, 2004
CAP060282	Fire Barrier Penetration & HELB Requirements Not Ready for WO 0307406	November 2, 2004
CAP060289	FZs 331 & 328A Refer to Same Rm/Passage	November 2, 2004
CAP060298	Combustible Material Reduction Opportunity	November 3, 2004
CAP060308	Labeling Difference Between 1C205 & 2C205 Safe SD Panels	November 3, 2004
CAP060314	Pipe Hangar Interference with Adjacent Piping	November 3, 2004
CAP060324	Inadequate Change Management Process, Engineering Programs	November 4, 2004
CAP060342	PCB Transformers Located in CSR	November 4, 2004
CAP060344	Transient Combustible Control Improvement	November 4, 2004
CAP060346	Implementation of Fire Barrier Penetration Program Change Ineffective	November 4, 2004
CAP060348	Radios May Not Function Properly for App R Fire	November 5, 2004
CAP060350	Label for Penetration Seal M-5-3-24 Missing in Field	November 5, 2004
CAP060352	Penetration Seal Location Drawing M-2005-6-56 Not Located in Permanent Drawings	November 5, 2004
CAP060366	Need AOP-10C/E Equipment Identified in the Field as We Have for AOP-10A	November 5, 2004
CAP060371	MSDS Inconsistences	November 5, 2004
CAP060406	OPR 86 Revision 2	November 8, 2004
CAP060443	AFW Pump Rm Fire Barrier Not Reflected in NP 1.9.9 Sketch	November 10, 2004

**CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED DURING INSPECTION**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
CAP060449	FEP 4.16 Procedure Enhancements - Includes Caution for CSR Fire & Using W-13C	November 10, 2004
CAP060494	Incorrect Date for QR Signature on AOP-10A TCN 2004-0791	November 11, 2004
CAP060506	Drawing Discrepancies on Method of Structural Steel Protection	November 12, 2004
CAP060515	SSAR Table 2-4 Calculation Summary Incorrect	November 12, 2004
CAP060533	Transient Combustibles Inventory in U2 66' PAB Fan Rm	November 15, 2004
CAP060557	Ladder to Access SW-00043 for AOP-10A Not Included in Fire Protection TE (FPTE-012)	November 16, 2004
CAP060570	Steel Column Fireproofing	November 16, 2004
CAP060571	Discrepancies between FPEE-1999-016, Calculation 2002-0039 & FPER	November 12, 2004
CAP060574	RMP 9384 Inadequate for App R, Emergency Lighting PMT	November 17, 2004
CAP060575	FPEE-1999-005 Requires Revision to Reflect Changes Made by the HELB Mod	November 17, 2004
CAP060581	Potentially Incorrect Information in LER 2000-008-00	November 17, 2004
CAP060583	Large Number of Manual Actions	November 17, 2004
CAP060590	Manufacturer's Recommendations Not Being Followed for 1/2-X 13 & 14	November 17, 2004
CAP060594	Inconsistencies with App R/Fire Protection Program Documentation	November 17, 2004
CAP060596	Improvement Suggestion for SSAMS Analysis for Fire Area A01-A	November 17, 2004
CAP060603	Investigate Need to Provide Containment for Transformers Containing PCBs	November 17, 2004
CAP060624	Potentially Non-Conservative App R Response Times	November 18, 2004
CAP060639	Air Leakage at Threshold of Door-62 (MCR to CSR)	November 19, 2004
CAP060641	FOP 1.2 Enhancement Recommendation	November 19, 2004
CAP060648	Design Input Documentation Supporting 3-Hour Fire Rating of Structural Steel Pro	November 19, 2004

**CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED PRIOR TO INSPECTION**

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
CAP003014	Fire in P-28A Motor While Removing Coupling	April 24, 2002
CAP003313	Unsatisfactory Radio Communication Equipment Impacting Plant Operation	June 5, 2003
CAP012654	Contractor Spurious Opening of the 851 Safety Injection (SI) Valves & Potential Sump Flooding	September 22, 2000

**CORRECTIVE ACTION PROGRAM DOCUMENTS ISSUED PRIOR TO INSPECTION**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
CAP052185	Radio System at PBNP Has Uncovered Areas Potential to Affect Emergency Response	December 8, 2003
CAP054665	Radios Not Working Properly in AFW Pump Rm Area	March 10, 2004
CAP057232	WO# 0305373 for Emergency Lighting Preventive Maintenance Was Missed	June 6, 2004
CAP058374	Poor Radio Coverage in Various Places in the Plant	August 8, 2004
CAP058806	AOP-10B Procedures Contained a Typographical Error	August 27, 2004
CAP058914	Unacceptable Radio Coverage	September 1, 2004
CAP059262	Question PI&R Question re OPS Procedure Feedback	September 16, 2004
CAP059358	Compensatory Measures for OPR000085 Not Implemented	September 21, 2004
CAP059607	App R Manual Actions Need to Be Reviewed for Acceptability	September 23, 2004
CAP059628	Breaker Alignment Error in AOP-10A Safe Shutdown - Local Control	October 1, 2004
CAP059814	Less Than Adequate Radio System Coverage in AFW Pump Rm	October 11, 2004
CAP059815	Less Than Adequate Radio System Coverage in U-1 Charging Pump Area	October 11, 2004
CAP059816	Less Than Adequate Radio System Coverage in U-1 (8 Foot) Primary Auxiliary Bldg (PAB) Fan Rm	October 11, 2004
CAP059849	Noun Name Errors Found in AOP-10A	October 12, 2004
CAP059864	AOP-10A Errors Found	October 13, 2004
CE014635	Question PI&R Question re OPS Procedure Feedback	September 20, 2004

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
2P-01A	EWD RHR Pump Suction from Containment Sump B Motor 2SI-00851A-M PBNP, Unit 2	April 26, 2000
2P-010B	EWD RHR Pump Suction from Containment Sump B Motor 2SI-00851B-M PBNP Unit 2	October 23, 2000
2T-013	EWD RWST Outlet to 2P-010A/B RHR Pumps Suction Header 2SI-00856A-M PBNP, Unit 2	October 25, 1999
2T-013	EWD RWST Outlet to 2P-010A/B RHR Pump Suction Header 2SI-008568-M PBNP Unit 2	October 25, 1999
6118-E180, Sht 13	Electrical Layout, Fire Detection System, Control Bldg, Area 3 (Elev 26'-0")	4



**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
6118-E180, Sht 16	Electrical Layout, Fire Detection System, Control Bldg, Area 3 (Elev 60'-0")	2
6118-C-22	Architectural Floor Plan, (Elev 8'-0")	20
6118-C-23	Architectural, Floor Plan, Elev 26'-0"	23
6118-C-24	Architectural, Floor Plan, Elev 44'-0", 46'-0", 52'-0" & 60'-0"	19
6118-C-25	Architectural, Auxiliary Bldg - Boiler Rm. 2 Water Treating Areas, Elev 8'-0" & 26'-0", Facade - Prepared Drum Storage Partial Floor Plans & Sections	8
6118-C-35	Architectural Sections, Sheet 1	17
6118-C-38	Architectural, Sections	11
6118-C-44	CR Floor Plan, Elev 44'-0"	13
6118-C-54	Architectural Masonry, Interior & Exterior Details, Sheet 6	7
6118-C-145	Concrete, Auxiliary Bldg.-North Wing, Plan at Elev 26'-0", 46'-0" & 52'-0"	10
6118-C-152	Concrete, Auxiliary Bldg.-North Wing, Reinforcing at Elev 26'-0", 46'-0" & 52'-0"	5
6118-C-153	Concrete, Auxiliary Bldg.-North Wing, Reinforcing - Sections & Details	6
6118-E-180	Electrical Layout, Fire Detection System, Control Bldg, Area 3, (Elev 26'-0")	13
6118-C-181	Concrete, Turb. Bldg-Class I Structure, Plans at Elev 26'-0" & 44'-0"	14
6118-C-182	Concrete, Turb. Bldg-Class I Structure, Plans at Elev 60'-0" & 74'-0" & Wall Elevations	8
6118-C-183	Concrete, Turb. Bldg-Class I Structure, Elevations & Details	7
6118-C-302	Column Schedule, Sheet 2	8
6118-C-309	Structural Steel, Turbine Bldg Elevation, Column Line F, Unit 1	6
6118-C-2023	Architectural, Floor Plan Unit 2, Elev 26'-0"	12
6118-C-2309	Structural Steel, Turbine Bldg Elevation, Column Line F, Unit 2	6
BECH 6118-144	Heating & Ventilation Temperature Control P&ID Temperature Control PBNP Unit 1&2	November 12, 1986
BECH E-104	Lighting, Communications, & Area Monitors for Turbine Bldg, Auxiliary Bldg, & Containment, Miscellaneous Upper Levels	June 12, 1973
E-2096, Sheet 3	Connection Diagram Auxiliary Safety Instrument Panel (ASIP) 2C20	6
E-2098, Sheet 21	Connection Diagram Local Devices Instrumentation	37

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
E-2098, Sheet 26	Connection Diagram Local Devices Instrumentation	1
E-2098, Sheet 31	Connection Diagram Charging Pump Terminal Box 2N04/2TB-50	5
E-2099, Sheet 7	Connection Diagram Penetration 2Q12, 2Q19, 2Q25, 2Q55 & 2Q56	15
E-2099, Sheet 9	Connection Diagram Penetration 2Q58 & 2Q20	8
M-1-3-48	Fire Barrier, Computer Rm336, Floor, Elev 60'-0"	3
M-1-3-63	Layout, Reac. Engineering Floor, Rm 333, Elev 60'-0"	2
M-3-3-35	CR 326, Floor, Elev 44'-0"	4
M-3-3-36	Layout, CR Wall, Section #2, Rm 326, North Wall, Elev 44'-0"	1
M-3-3-37	Control Rm. Wall, Sec.#2, Rm 326, South Wall, Elev 44'-0"	1
M-3-3-38	CR, Wall, Sect#2, Rm 326, East Wall, Elev 44'-0"	2
M-3-3-39	Control Rm. Wall, Sec.#3, Rm 326, North Wall, Elev 44'-0"	2
M-3-3-40	Control Rm. Wall, Sec.#3, Rm 326, South Wall, Elev 44'-0"	0
M-3-3-41	CR 326, Sec.#3, East Wall, Elev 44'-0"	0
M-3-3-42	Control Rm. Wall, Sec.#4, Rm 326, North Wall, Elev 44'-0"	0
M-3-3-43	Control Rm. Wall, Sec.#4, Rm 326, South Wall, Elev 44'-0"	0
M-3-3-44	Control Rm., Section #4, Rm 326, East Wall, Elev 44'-0"	1
M-3-3-45	Fire Barrier, CR, 326, Sect. 5, Floor, Elev 44'-0"	3
M-3-3-46-1	CR 326, Floor, Elev 44'-0"	2
M-3-3-46-2	Inside Board 2-CO4, Floor, Elev 44'-0"	6
M-3-3-46-3	CR, Inside Board 2-CO3, Floor, Elev 44'-0"	6
M-3-3-46-4	Fire Barrier, CR 326, Elev 44'-0"	8
M-3-3-46-5	Inside Board 1C03, Floor, Elev 44'-0"	5
M-3-3-46-6	Inside Board 1C04, Floor, Elev 44'-0"	5
M-3-3-46-7	Supv. & Unit Stations, Floor, Elev 44'-0"	5
M-3-3-47	CR 326, Section #7, Floor, Elev 44'-0"	3
M-3-5-21-1	Heater & Boric Acid Tank Rm 237, East Wall, Elev 46'-0"	1
M-3-5-21-2	Heater & Boric Acid Tank Rm 237, East Wall, Elev 46'-0"	1
M-3-5-21-3	Heater & Boric Acid Tank Rm 237, East Wall, Elev 46'-0"	1
M-5-3-24-1	CSR 318 North Wall, Elev 26'-0"	3
M-5-3-24-1	CSR 318, North Wall, Elev 26'-0"	3

**DRAWINGS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
M-7-3-24-2	CSR 318, North Wall, Elev 26'-0"	0
M-5-3-25	CSR 318, South Wall, Elev 26'-0"	7
M-5-3-26-1	CSR 318, East Wall, Elev 26'-0"	5
M-5-3-26-2	CSR 318, East Wall, Elev 26'-0"	5
M-5-3-27-1	CSR 318, West Wall, Elev 26'-0"	7
M-5-3-27-1	CSR 318, West Wall, Elev 26'-0"	5
M-5-3-28	CSR, Floor, Elev 26'-0"	11
M-5-3-31	CR 326, North Wall, Elev 44'-0"	5
M-5-3-32	Fire Barrier CR, 326, South, Elev 44'-0"	4
M-5-3-33	CR 326, East Wall, Elev 44'-0"	3
M-0-35	Fire Barrier, RE/Comp/HVAC Equipment Rm, Ceiling Elev 74'-0"	8
M-0-38	CSR, Floor	0
M-0-39	Air Shafts (Control Rm 326), Floor, Elev 44'-0"	1
M-2003-6-26	Day Tank Rm 252, Floor, Elev 54'-0"	0
M-2003-6-30	Day Tank Rm 253, Floor, Elev 54'-0"	0
M-2003-6-34	Day Tank Rm 252, Ceiling Elev 54'-0"	0
M-2005-6-18	Concentrator Holding Tank Rm 215, North Wall, Elev 26'-0"	6
M-2005-6-19	Pipe Rm 217, North Wall, Elev 26'-0"	4
PBC-218, Sht 1	Fire Protection for Site Plan	8
PBC-218, Sht 2	Fire Protection for Turbine Bldg, Aux. Bldg & Containment, Elev 8'-0"	16
PBC-218, Sht 3	Fire Protection for Turbine Bldg, Aux. Bldg & Containment, Elev 26'-0"	9
PBC-218, Sht 4	Fire Protection for Turbine Bldg, Aux. Bldg & Containment, Elev 44'-0"	7
PBC-218, Sht 5	Fire Protection for Turbine Bldg, Aux. Bldg & Containment, Elev 66'-0"	5
PBC-218, Sht 8	Fire Protection for CR Elev 44'-0" & Computer Rm Elev 60'-0"	2
PBC-218, Sht 21	Fire Barrier Locations for Turbine Bldg, Aux. Bldg & Containment, Elev 8'-0"	9
PBC-218, Sht 22	Fire Barrier Locations for Turbine Bldg, Aux. Bldg & Containment, Elev 26'-0"	5
PBC-218, Sht 23	Fire Barrier Locations for Turbine Bldg, Aux. Bldg & Containment, Elev 44'-0"	5
PBC-218, Sht 24	Fire Barrier Locations for Turbine Bldg, Aux. Bldg & Containment, Elev 66'-0"	3
PW-N1034-732	Wiring Diagram Annunciator Panel (ASIP) 2C20	11
PW-N10034-702	Wiring Diagram Auxiliary Safety Instrument Panel (ASIP) 1C20	7
PW-N10034-723	Wiring Diagram Auxiliary Safety Instrument Panel (ASIP) 2C20	9

## DRAWINGS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
PW-NI0034-710	Wiring Diagram Auxiliary Safety Instrument Panel (ASIP) 1C20	6
WE PBE-174	Internal Wiring Diagram Local Instrument Rack C207 PBE-174	3
WE PBM-246	Hydrogen Gas System Flow Diagram	December 18, 1981

## OPERABILITY EVALUATIONS

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
OPR000116	Potentially Non-Conservative App R Response Times	November 20, 2004

## PROCEDURES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
0-PT-FP-008	Triennial Service Testing of Fire Hose & Fire Hose Stations	0
AOP-10A	Safe SD - Local Control	38 & 39
AOP-10C	Safe SD Following Fire at PAB 26 Foot Central	0
AOP-10D; Unit 1	Cold SD Following Fire at PAB 26 Foot Central	0
AOP-10D; Unit 2	Cold SD Following Fire at PAB 26 Foot Central	0
AOP-10E	Safe SD Following Fire at PAB 46 Foot CCW HX & BAST Rm or Computer & Instrument Rack Rm	0
AOP-10F; Unit 1	Safe SD Following Fire at PAB 46 Foot CCW HX/BAST Room or Computer/Instrument Rack Rm	0
AOP-10F; Unit 2	Cold SD Following Fire at PAB 46 Foot CCW HX/BAST Rm or Computer/Instrument Rack Rm	0
FEP 4.8	Fire Emergency Plan	7
FEP 4.14	Fire Emergency Plan, Turbine Hall, Unit 1	6
FEP 4.15	Fire Emergency Plan, Turbine Hall, Unit 2	6
FOP 1.2	Potential Fire Affected Safe SD Components	5 & 6
NP 1.9.6	Plant Cleanliness & Storage	13
NP 1.9.9	Transient Combustible Control	8
OM 3.27	Control of Fire Protection & App R Safe SD Equipment	25
PC 3	FM Radio Battery Cycling	January 12, 2004
PC 73 Part 3	Service Testing of Fire Hose & Hose Stations	15
TS 77	Semi-Annual Smoke Detection System Integrity Test	15
TS 78	Semi-Annual Halon 1301 Fire Suppression System Surveillance Test	15
WMTP 11.33	Halon System Concentration Test	September 20, 1984

## REFERENCES

<u>Number</u>	<u>Description or Title</u>	<u>Date or Revision</u>
-----	PBNP Safe Shutdown Analysis Report	2
-----	Issuance of Proposed Rulemaking Package on GI-23, RCP Seal Failure	August 26, 1994
-----	Fire Affecting Safe Shutdown Components	0
2004-002-3-004	Nuclear Oversight Observation Report - Fire Protection	July 9, 2004
DBD-T-40	Fire Protection/App R Design Basis Document	June 25, 2004
FHAR	Fire Hazards Analysis Report	2
FOP 1.2	Potential Fire Affected Safe SD Components	5
FPER	Fire Protection Evaluation Report	3
IN 86-76	Problems Noted in CR Emergency Ventilation Systems	August 28, 1986
LER 2000-008-00	Inadequate Procedural Guidance for Spurious Operation of Valves During App R Alternate SD	October 19, 2000
NFPA 10	Portable Fire Extinguishers	1967
NFPA 13	Sprinkler Systems	1966
NFPA 13 - 1966	Code Compliance Verification Checklist	February 8, 1999
NFPA 14	Standpipe and Hose Systems	1963
NFPA 15 - 1962	Code Compliance Verification Checklist Deviations	February 8, 1999
NFPA 72D	Proprietary Protective Signaling Systems	1979
NFPA 72E	Automatic Fire Detectors	1974
OPS-2004-01454	Operations Procedure Change Report AOP-10A Safe Shutdown - Local Control	August 25, 2004
PBSA-ENG-04-15	Focused Self-Assessment of App R/Emergency Lighting conducted July 19 - 22, 2004.	September 27, 2004
PBSA-ENG-04-16	Focused Self-Assessment of Transient Combustible Control/Fire Protection & App R Program conducted July 19-22, 2004.	September 29, 2004
PC 6 Part 1 Report	Monthly Operations Inventory Report Duke E&S Circuit Analysis 2SI-00851A Containment Sump Isolation MOV	August 12, 2004 0
Report	Duke E&S Cable Routing 2SI-00851A Containment Sump Isolation MOV	0
Report	Duke E&S Circuit Analysis 2SI-00851B Containment Sump Isolation MOV	0
Report	Duke E&S Cable Routing 2SI-00851B Containment Sump Isolation MOV	0
RMP 9384-1	App R Emergency Lighting Testing & Maintenance	June 6, 2004
RMP 9384-1	App R Emergency Lighting Testing & Maintenance	August 11, 2004
SEG# PB-LOR-C- 04-SG003	Fire Affecting Safe Shutdown Components	0
SER	Fire Protection	August 2, 1979

**REFERENCES**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
SSAR	Safe SD Analysis Report	2
WCAP-15603-NP	Transmittal of WOG2000 RCP Seal Leakage Model for Westinghouse PWR (Non-Proprietary)	0

**SURVEILLANCES**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
Fire Protection/ App R	October 14 - 20, 2004 Fire Watches	October 20, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	January 5, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	February 2, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	March 2, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	March 29, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	May 25, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	June 23, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	July 19, 2004
O-PT-FP-002	Monthly Diesel Engine Driven Fire Pump Functional Test	August 8, 2004
RMP 9384-1	App R Emergency Lighting Testing & Maintenance	June 6, 2004
RMP 9384-1	App R Emergency Lighting Testing & Maintenance	August 11, 2004
TS 77 Appendix A	Smoke Detector System Integrity Test Checklist	October 6, 2004
TS 78	Semiannual Halon 1301 Fire Suppression System Surveillance Test	March 19, 2003
TS 78	Semiannual Halon 1301 Fire Suppression System Surveillance Test	September 28, 2003

**TEMPORARY CHANGE NOTICES (TCNs)**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
TCN 2004-0719	AOP-10B Safe to Cold Shutdown in Local Control	October 25, 2004
TCN 2004-0720	AOP-10B Safe to Cold Shutdown in Local Control	October 25, 2004
TCN 2004-0762	AOP-10A Safe Shutdown - Local Control	September 16, 2004
TCN 2004-0780	AOP-10A Safe Shutdown - Local Control	October 1, 2004
TCN 2004-0791	AOP-10A Safe Shutdown - Local Control	October 15, 2004
TCN 2004-0793	AOP-10A Safe Shutdown - Local Control	October 13, 2004

**VENDOR DOCUMENTS**

<b><u>Number</u></b>	<b><u>Description or Title</u></b>	<b><u>Date or Revision</u></b>
03-5734-001	CMS - Fire Qualification Test on Floor Penetration Seals	November 30, 1979
CR4984	CTL Fire & Hose Stream Tests for Penetration Seal Systems	March 19, 1982
OAOQ3.AM (4610)	Factory Mutual - Fire Endurance Test , Carborundum Design FC-246, Penetration Seal in Precast Concrete Floor utilizing Silicone Elastomers	May 18, 1977
SwRI 03-6004-006	Promatec Three Hour Fire Qualification Test, 10" & 6" Depth Silicone RTV Foam for Electrical & Mechanical Penetration Seals - CPT1001A	July 25, 1980
V878-04-TD-05	Code Compliance Verification Checklist for F-16 Charcoal Filter Spray System, Attachment 13-CCVC-5	0
V878-04-TD-05	Code Compliance Verification Checklist for AFW Pump Rm, CSR, Computer Rm & Instrument Rack Rm, Vital SWGR Rm & D05 & D06 125V Battery Rms, Attachment 12A-CCVC	0

## LIST OF ACRONYMS USED

AC or ac	Alternating Current
ADAMS	Agency-Wide Document Access and Management System
AFW	Auxiliary Feedwater
AOP	Abnormal Operating Procedure
App R	Appendix R
BAST	Boric Acid Storage Tank
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CR	Control Room
CSR	Cable Spreading Room
DRS	Division of Reactor Safety
E&S	Engineering and Services
EWD	Elementary Wiring Diagram
FPI	Fire Protection Instruction
FPP	Fire Protection Program
FZ	Fire Zone
gov	Government
FHA	Fire Hazard Analysis
HX	Heat Exchanger
html	Hypertext Markup Language
http	Hypertext Transfer Protocol
HVAC	Heating, Ventilation, Air Conditioning
IMC	Inspection Manual Chapter
IPEEE	Individual Plant Examination of External Events
IR	Inspection Report
k	kilo
LER	Licensee Event Report
MOV	Motor Operated Valve
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
NRC	Nuclear Regulatory Commission
NRR	Office of Nuclear Reactor Regulation
NUREG	NRC Technical Report Designation
OA	Other Activities
OOS	Out-of-Service
P&ID	Piping and Instrumentation Drawing
PAB	Primary Auxiliary Building
PARS	Publically Available Records System
PBNP	Point Beach Nuclear Plant
PWR	Pressurized Water Reactor
RCP	Reactor Coolant Pump
RHR	Residual Heat Removal
Rm	Room
RWST	Refueling Water Storage Tank
SD	Shutdown



## LIST OF ACRONYMS USED

SDP	Significance Determination Process
SER	Safety Evaluation Report
SSA	Safe Shutdown Analysis
SSCs	Structures, Systems, and Components
SSEL	Safe Shutdown Equipment List
SW	Service Water
SWGR	Switchgear
TCN	Temporary Change Notice
TE	Technical Evaluation
USAR	Updated Safety Analysis Report
V or v	Volt
wpd	WordPerfect Document
www	World Wide Web