



**UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II**
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

December 30, 2011

Mr. Michael Annacone
Vice President
Brunswick Steam Electric Plant
P.O. Box 10429
Southport, NC 28461

**SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT – NRC TRIENNIAL FIRE
PROTECTION INSPECTION REPORT 05000325/2011011 AND
05000324/2011011**

Dear Mr. Annacone:

On November 18, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Brunswick Unit 1 and 2 facilities. The enclosed inspection report documents the inspection results, which were discussed on November 17, 2011, with you and other members of your staff.

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

Based on the results of this inspection, no findings were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response, if any, will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of

Progress Energy

NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Reinaldo Rodriguez, Acting Chief
Engineering Branch 2
Division of Reactor Safety

Docket Nos.: 50-325, 50-324
License Nos.: DPR-71, DPR-62

Enclosure: Triennial Fire Protection Inspection Report 05000325/2011011 and
05000324/2011011 w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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ADAMS: Yes ACCESSION NUMBER: ML# 113640026 SUNSI REVIEW COMPLETE

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-325, 50-324

License Nos.: DPR-71, DPR-62

Report Nos.: 05000325/2011011 and 05000324/2011011

Licensee: Carolina Power and Light (CP&L)

Facility: Brunswick Steam Electric Plant, Units 1 and 2

Location: 8470 River Rd SE
Southport, NC 28461

Dates: October 31 - November 4, 2011 (Week 1)
November 14 - 18, 2011 (Week 2)

Inspectors: M. Thomas, Senior Reactor Inspector (Lead Inspector)
J. Dymek, Reactor Inspector
R. Fanner, Reactor Inspector
L. Suggs, Reactor Inspector

Accompanying Personnel: N. Merriweather, Senior Reactor Inspector (Weeks 1 and 2)
E. Patterson, Construction Inspector (Weeks 1 and 2)
M. Riches, Operations Engineer (Week 1 only)
G. Wiseman, Senior Reactor Inspector (Week 1 only)

Approved by: Reinaldo Rodriguez, Acting Chief
Engineering Branch 2
Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000325, 324/2011-011; 10/31 – 11/04/2011, and 11/14 – 18/2011; Brunswick Steam Electric Plant; Fire Protection and Other Activities

This report covers an announced two-week period of inspection by a triennial fire protection team composed of four regional inspectors. No findings were identified during this inspection period.

A. NRC-Identified and Self-Revealing Findings

None

B. Licensee Identified Violations

None

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R05 Fire Protection

This report documents the results of a triennial fire protection inspection of the Brunswick Steam Electric Plant (also referred to as Brunswick Nuclear Plant (BNP)), Units 1 and 2. The inspection was conducted in accordance with the guidance provided in NRC Inspection Procedure (IP) 71111.05T, "Fire Protection (Triennial)," dated August 1, 2011. The objective of the inspection was to review a minimum sample of three risk-significant fire areas (FAs) to evaluate implementation of the fire protection program (FPP), and to review site specific implementation of at least one B.5.b mitigating strategy as well as the storage, maintenance, and testing of B.5.b mitigating equipment. The sample FAs, and associated fire zones (FZs) were chosen based on a review of available risk information as analyzed by a senior reactor analyst from Region II, a review of previous inspection results, plant walkdowns of FAs, consideration of relational characteristics of combustible material to targets, and location of equipment needed to achieve and maintain safe shutdown (SSD) of the reactor. In selecting a B.5.b mitigating strategy sample, the inspectors reviewed licensee submittal letters, safety evaluation reports (SER), licensee commitments, B.5.b implementing procedures, and previous NRC inspection reports. Section 71111.05-02 of the IP specifies a minimum sample size of three FAs and one B.5.b implementing strategy for addressing large fires and explosions. This inspection fulfilled the requirements of the procedure by selecting a sample of three FAs and one B.5.b mitigating strategy. The FAs chosen were identified as follows:

1. Control Building 49-foot elevation, FA CB-23 (Unit 1 Main Control Room).
2. Reactor Building 20-foot elevation, FA RB1-1g (North East, East Central, and South East).
3. Diesel Generator Building 50 foot elevation, FA DG-12 (4160 Volt AC switchgear Division II, E2).

The inspectors evaluated the licensee's FPP against applicable requirements, including BNP Unit 1 Operating License Condition 2.B(6) and Unit 2 Operating License Condition 2.B(6), "Fire Protection;" Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Appendix A, General Design Criteria 3, "Fire Protection;" 10 CFR Part 50, Appendix R Subsections III.G, III.J, and III.L; 10 CFR 50.48, "Fire Protection;" Appendix A to NRC Auxiliary Power Conversion System Branch (APCSB) Branch Technical Position (BTP) 9.5-1, "Guidelines For Fire Protection For Nuclear Power Plants," August 1976; NRC Safety Evaluation Reports dated November 22, 1977, as supplemented April 1979, June 11, 1980, December 30, 1986, December 6, 1989, July 28, 1993, and February 10, 1994; BNP Updated Final Safety Analysis Report (UFSAR) Section 9.5.1, "Fire Protection System"; and plant Technical Specifications. The review of the B.5.b mitigating strategies was based on the BNP Operating License Conditions 2.P for Unit 1, and 2.M for Unit 2, "Mitigation Strategy License Condition;" licensee B.5.b submittals;

Enclosure

10 CFR 50.54(hh)(2); and related NRC SERs. The inspectors evaluated all areas of this inspection, as documented below, against these requirements. Specific licensing basis documents reviewed are listed in the Attachment.

.01 Protection of Safe Shutdown Capabilities

a. Inspection Scope

The inspectors evaluated the licensee's ability to achieve hot and cold shutdown assuming a postulated fire in selected FAs. The inspectors examined those fire protection features provided to limit fire damage to structures, systems and components (SSCs) important to post-fire SSD as required by the approved FPP. The inspectors selected a sample of SSD systems to evaluate the licensee's ability to safely shutdown the plant. The components and systems examined included reactor coolant makeup, reactor heat removal, and associated support systems such as the electrical power distribution system, service water and heating ventilation and air conditioning systems.

The inspectors performed in-plant walkdowns of selected FAs to observe: (1) the material condition of fire protection systems and equipment; (2) the storage of permanent and transient combustibles; (3) the proximity of fire hazards to cables relied upon for SSD; and (4) the licensee's implementation of procedures and processes for limiting fire hazards, housekeeping practices, and compensatory measures for inoperable or degraded fire protection systems and credited fire barriers. Reviews were accomplished to ensure that the licensee was maintaining the fire protection systems, had properly evaluated the in-situ combustible fire loads, controlled hot-work activities, and limited transient fire hazards in a manner consistent with operating license conditions, regulatory requirements, and plant administrative and FPP procedures.

The inspectors reviewed calculation 7453-101-8-B-21-57F, "Appendix R Spurious Operations Analysis," which identified components that could be susceptible to spurious operations, which could, in turn, affect redundant trains of equipment or other credited SSD systems. Components identified in this calculation were compared to components identified in the licensee's separation analysis and fire hazards analysis (FHA). The licensee indicated that calculation 7453-101-8-B-21-57F was no longer being updated and was neither used in the development of nor referenced in the safe shutdown analysis (SSA) or FHA. The inspectors reviewed the documents to verify that the licensee had reconciled the differences for each component identified in the calculation.

The inspectors reviewed the pre-fire plans for selected FAs to determine if information provided to the fire brigade was adequate to 1) identify equipment important to SSD; 2) facilitate fire suppression activities; and 3) remove smoke and/or water runoff so that operator manual actions (OMAs) required for SSD could be accomplished. The location and proper storage of compressed gas cylinders within the reactor building (RB) was also reviewed to determine if they represented a fire or missile hazard to equipment or cables required for SSD.

b. Findings

No findings were identified.

.02 Passive Fire Protection

a. Inspection Scope

For the selected FAs, the inspectors evaluated the adequacy of fire barrier walls, ceilings, floors, mechanical and electrical penetrations, fire doors, fire dampers and electrical raceway fire barrier systems (ERFBS). The inspectors walked down accessible portions of the selected FAs to observe material condition of the fire barriers including the use of portable cameras for inspection of penetrations in the overhead. The inspectors reviewed the design of selected ERFBS to confirm that appropriate materials and construction methods were used to assure that the respective fire barriers met their intended design function. The inspectors reviewed the fire protection data system for selected and adjoining FAs to verify that the plant fire loading used by the licensee was appropriate for the stated fire resistance rating of the enclosures. The inspectors reviewed recently completed surveillance procedures for fire doors, penetration seals and ERFBS.

b. Findings

No findings were identified.

.03 Active Fire Protection

a. Inspection Scope

For the selected FAs, the inspectors performed in-plant observations of the material condition and operational line-up of fire detection, fire protection water supply, automatic wet pipe sprinkler systems and manual fire hose and standpipe systems. The inspectors reviewed the adequacy of the design and installation of fire suppression systems in the selected FAs. This was accomplished by review of system vendor drawings, calculations, and code compliance reviews. The inspectors evaluated if the fire detection and suppression methods were appropriate for the hazards in the selected FAs. The inspectors compared the fire detection and fire suppression systems to the applicable code of record for National Fire Protection Association (NFPA) Standard(s) for the selected FAs by reviewing the system design documents and observing their as-installed configurations as part of performing the in-plant walkdowns. The inspectors reviewed recently completed surveillance procedures for fire detection and fire sprinkler systems in the selected FAs and compared them to the BNP FPP.

For the selected FAs, the inspectors compared the pre-fire plan strategy of each FA to existing plant layout and equipment configurations and the fire response procedures. The inspectors assessed the condition of firefighting and smoke removal equipment by inspecting the equipment located in the fire brigade equipment staging and storage areas. The inspectors reviewed fire brigade drill planning and evaluation report records for drills performed in the control building, RB 20 foot elevation, and the diesel generator building 50 foot elevation performed in 2010 and 2011. The inspectors assessed the fire brigade fire fighting activities by observing an announced drill in the RB 20 foot elevation.

The inspectors' review of specific attributes of fire brigade conduct for these drills included strategy and tactics, command and control, use of fire brigade equipment, radio communications, and time-lines for alarm, assembly and first mitigating events (i.e. suppression).

b. Findings

No findings were identified.

.04 Protection From Damage From Fire Suppression Activities

a. Inspection Scope

The inspectors evaluated whether the installed automatic wet pipe sprinkler systems or manual fire fighting activities could adversely affect equipment credited for SSD, inhibit access to alternate shutdown equipment or adversely affect OMAs required for SSD for the selected FAs. The inspectors considered the consequences of a rupture, inadvertent operation or actual operation of a fire suppression system concurrent with manual fire fighting activities as could result from a fully involved fire in one of the selected FAs. The inspectors reviewed BNP operating experience reviews for NRC Information Notice 98-31, "Fire Protection System Design Deficiencies and Common Mode Flooding of Emergency Core Cooling Rooms at Washington Nuclear Project Unit 2." The inspectors reviewed pre-fire plans which addressed the opening of doors to drain water or ventilate smoke so that OMAs could be performed. The inspectors observed inspection activities of penetration seals and condition monitoring of structures to address potential damage from water leaking through floor slabs to equipment below. The inspectors measured curb heights above the floor for installed equipment and visually checked floor slope to determine if water could inadvertently pool in such a manner as to adversely affect SSD equipment or OMAs.

b. Findings

No findings were identified.

.05 Alternative Shutdown Capability

a. Inspection Scope

Methodology

For a postulated fire in any of the selected FAs, the licensee credited alternative shutdown capability to achieve hot and cold shutdown. The licensee defined alternative shutdown as SSD activities requiring utilization of abnormal operational practices:

- Operations other than normal SSD activities from the main control room
- Operations from designated alternative control system locations and/or
- Manual operation at equipment locations

The inspectors examined the following BNP fire response procedures and emergency operating procedures (EOP):

- 1ASSD-04, "Unit 1 Train A Shutdown"
- 1ASSD-05, "Unit 1 Reactor Building North"
- 1ASSD-06, "Unit 1 Reactor Building South"
- 0ASSD-02, "Control Building"
- 0-ASSD-00, "Users Guide"
- 0-ASSD-01, "Alternative Safe Shutdown Procedure Index"
- 2ASSD-03, "Unit 2 Train B Shutdown"
- 2ASSD-04, "Unit 2 Train A Shutdown"
- 0PFP-013, "General Fire Plan"
- 1EOP-01-RSP, "Unit 1 Reactor Scram Procedure"
- 0EOP-02- PCCP, "Primary Containment Control Procedure"
- 1EOP-01-RVCP, "Reactor Vessel Control Procedure"

The inspectors compared the procedures to the FHA, SSA, flow diagrams, and other design basis documents to determine if equipment required for post-fire SSD was properly identified and adequately protected from fire damage in accordance with the requirements of 10 CFR 50, Appendix R, Section III.G and the approved FPP. The inspectors reviewed cable routing information by FA for a selected sample of SSD components to verify that cables would not be damaged by a fire in the selected FAs or the licensee's analysis determined that the fire damage would not prohibit safe shutdown. In cases where OMAs were credited in-lieu of cable protection of SSD equipment, the inspectors reviewed selected OMAs to verify that the OMAs were feasible utilizing the guidance of the NRC IP. A list of SSD components examined for cable routing is included in the Attachment.

Operational Implementation

The inspectors reviewed applicable sections of procedures 0PFP-13, 0ASSD-01, 0ASSD-02, 1ASSD-04, 1ASSD-05, 1ASSD-06 for FAs CB-23, RB1-1g, and DG-12 to verify that the shutdown methodology properly identified the components and systems necessary to achieve and maintain SSD conditions. The inspectors assessed the timeliness of the operators in identifying and assessing the initial plant conditions, response to suspected fire, and subsequent actions credited afterwards. The inspectors performed a walk-through of procedure steps to ensure the implementation and human factors adequacy of the procedures. The inspectors reviewed the licensee shift staffing of personnel credited for procedure implementation to verify personnel had procedures available, were trained on implementation, and were available in the event a fire occurred. The inspectors also reviewed selected operator actions to verify that the operators could reasonably be expected to perform the specific actions within the time required to maintain plant parameters within specified limits.

Procedure 0PLP-01.5, "Alternative Shutdown Capability Controls," established controls to provide reasonable assurance that alternative shutdown equipment remained operable, available, and accessible when required. The inspectors reviewed records of the most recently completed functional tests for a sample of the Appendix R transfer switches, relays and remote shutdown panel. The testing was performed by the following test procedures:

- Maintenance Surveillance Test procedure 1MST-RSDP21R, "RSDP and RTGB Panel Reactor Water Level Indication Channel Calibration," completed on January 13, 2011.
- Operability Test, OPT-19.11.L, "Safety Relief Valve Local Control Operability Test," completed April 12, 2010
- Operability Test, OPT-10.16.L, "Remote Shutdown Panel RCIC Flow Controller, RCIC Manual Turbine Trip, and RCIC Turbine Trip Reset Local Control Operability Test, completed July 1, 2011

The tests objectives were to demonstrate the capability to transfer plant controls from the main control room to the remote shutdown panel or local control station. The inspectors reviewed the records to verify that testing was performed satisfactorily and that test deficiencies were properly entered and corrected by the corrective action program.

b. Findings

No findings were identified.

.06 Circuit Analyses

a. Inspection Scope

The inspectors assessed whether the licensee identified the SSCs important to meeting the 10 CFR Part 50.48 requirements consistent with the established licensing basis. The inspectors reviewed training material, UFSAR, and system flow drawings to assess the likelihood of flow diversion paths, loss of function, or other scenarios that would adversely impact the plant's ability to achieve and maintain SSD conditions. The inspectors reviewed licensee SSD procedures and compared them with the post-fire SSA and separation analysis for the selected FAs. For areas where there were questions, the inspectors performed more detailed circuit analysis to verify fire induced damage would not adversely impact the credited SSD methodology.

During a walkdown of Fire Area DG-12, E2 Switchgear Room, the inspectors identified conduits associated with the credited SSD train traversing the FA. These conduits contained the following cables, which were served from the 120/208VAC distribution panel 1-1A-DG:

- H32-R43, circuit 9, Load Power Cable for E1-E3 Bus Duct Heater
- H32-H82, circuit 18, RHRSW Pump 1A Control Panel H82 Bus E-3
- AF3-H32, circuit 23, 4160 Switchgear E1 Heater and Control Bus

The inspectors verified that none of these components were required for SSD. However, since they were associated with the credited shutdown train, inspectors reviewed the licensee's breaker coordination analysis to ensure that fire damage to these cables would not interrupt the SSD capability.

The inspectors also reviewed a sample of SSD components to verify that the components specified in the post-fire SSD procedures were available for a postulated fire in any of the selected FAs. The cables examined were based upon a list of SSD

components selected by the inspectors after a review of the licensee's separation analysis, FHA, and the system flow drawings. The results of this review were compared with the licensee's circuit analysis, electrical design drawings, Appendix R SSA, and the operations post-fire SSD procedures. The specific components reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.07 Communications

a. Inspection Scope

The inspectors reviewed the communications systems (sound powered phones and radios) to evaluate the availability and capability of systems used to support plant personnel in the performance of OMAs to achieve and maintain SSD conditions. During observation of an announced fire brigade drill the inspectors verified that the radio communication system functioned reliably at different locations within the plant. The inspectors walked down the SSD procedures at various locations with operators to verify designated sound powered phone jacks were available to licensee personnel. The inspectors reviewed the inventory records to ensure credited sound powered phones were available at the designated locations specified by procedures. The inspectors reviewed routing information for the sound powered phone system to determine if fire induced faults would damage credited circuits. During this review, the inspectors considered the effects of ambient noise levels, clarity of reception, reliability and coverage patterns. On a sampling basis, the inspectors had the operators perform sound powered phone and radio checks to ensure communications were available and reliable.

b. Findings

No findings were identified.

.08 Emergency Lighting

a. Inspection Scope

The inspectors performed plant walkdowns with operations staff on various post-fire SSD procedures for the selected FAs to observe the placement and coverage area of credited fixed 8-hour battery pack emergency lights. The inspectors evaluated the lights to ensure they provided adequate illumination of access and egress pathways and any equipment requiring local operation and/or instrumentation monitoring for post fire SSD. In instances where 8-hour battery pack emergency lights were not credited inspectors verified the credited lighting systems would be available for operators under post-fire SSD conditions.

The inspectors reviewed the licensee's maintenance and test records to ensure the design aspects of the fixed emergency lighting met the 8-hour capacity requirements

specified in commitments. The inspectors reviewed the applicable vendor documentation to ensure the lighting units were maintained consistent with vendor recommendations. The inspectors reviewed completed preventive maintenance and surveillance testing records to ensure adequate surveillance testing was conducted. For lights not meeting the acceptance criteria the inspectors verified work-orders were written to address the issues. A list of documents reviewed is included in the Attachment.

b. Findings

No findings were identified.

.09 Cold Shutdown Repairs

a. Inspection Scope

The inspectors reviewed the licensee's alternative safe shutdown procedures and verified that cold shutdown repairs were not required to achieve cold shutdown conditions within 72 hours after a fire event assuming no offsite power was available.

b. Findings

No findings were identified.

.10 Compensatory Measures

a. Inspection Scope

For the selected FAs, the inspectors reviewed the administrative controls for out-of-service, degraded and/or inoperable fire protection features such as detection and suppression systems, and passive fire barriers. The inspectors reviewed databases containing current fire protection impairments and compared them to the FAs selected for the inspection. Fire detection and suppression system impairments were reviewed against operability requirements and compensatory measures outlined in the BNP FPP. The inspectors reviewed this information to determine if the risk associated with removing the fire protection feature from service was adequately addressed with appropriate compensatory measures. The inspectors reviewed unplanned fire protection action statement entries for such items as system malfunction, failure, inadvertent actuation, out of specification operating parameters and surveillance test failures. Entry and closure dates of impaired fire protection items tracked were assessed to determine if restoration to normal operating mode was being done in a timely manner and met the overall objectives of control and compensatory measures outlined in the BNP FPP.

The inspectors reviewed actions for nuclear condition report (NCR) 493784 to verify that the licensee implemented compensatory measures (in the form of a roving fire watch) as a result of deficiencies identified during their NFPA 805 SSD revalidation project. The inspectors reviewed the fire protection and fire watch training program documents as well as training records for personnel tasked with performing fire watch responsibilities to ensure that individuals were properly instructed and qualified to perform the task.

b. Findings

No findings were identified.

.11 Review and Documentation of Fire Protection Program Changes

a. Inspection Scope

The inspectors reviewed a sample of FPP changes made between November 2008 and November 2011 to assess the licensee's effectiveness to determine if the changes to the FPP were in accordance with the fire protection license condition and had no adverse effect on the ability to achieve SSD.

b. Findings

No findings were identified.

.12 Control of Transient Combustibles and Ignition Sources

a. Inspection Scope

The inspectors reviewed the controls for combustibles and ignition sources throughout the plant to verify that they were in compliance with the BNP FPP. The inspectors verified that the transient combustible materials and locations of transient combustible materials were being controlled in accordance with the licensee's administrative control procedures and the licensee's fire probabilistic risk assessment. The inspectors also reviewed and observed hot work that was being performed at the time of the inspection to verify that it was accomplished in accordance with the licensee's administrative control procedures.

b. Findings

No findings were identified.

.13 B.5.b Inspection Activities

a. Inspection Scope

The inspectors reviewed, on a sampling basis, the licensee's condensate storage tank and hot-well makeup mitigation strategies to verify that the measures were feasible, personnel were trained to implement the strategies, and equipment was properly staged and maintained. The inspectors requested and reviewed inventory and maintenance records of required equipment. The inspectors had discussions with plant staff, reviewed relevant documentation, and performed plant walkdowns with licensee staff. The inspectors reviewed applicable calculations for the selected strategies to verify the calculations provided an adequate engineering basis to support the appropriateness for the strategies. The inspectors assessed if the strategies could be met with the procedures, equipment, staff training, and water sources provided. The inspectors reviewed the design requirements of the credited equipment to verify the licensee's capability to provide a reliable and available water source, and the ability to provide the

minimum fuel supply. The inspectors reviewed completed test records and performed a physical inspection to verify that B.5.b equipment was being properly stored, maintained, and tested in accordance with the licensee's B.5.b program procedures. The inspectors performed a walkdown of the storage and staging areas for the B.5.b equipment to verify that equipment identified for use in the current procedures were available, calibrated, and maintained.

The inspectors reviewed training and qualification requirements for operators, fire brigade, emergency response organization, and new employees for the implementation of actions needed to mitigate a B.5.b related event. The inspectors reviewed training records of the licensee's staff to verify that operator training/familiarity with the strategy objectives and implementing guidelines were accomplished according to the established training procedures.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Inspection Scope

The inspectors reviewed recent independent licensee audits for thoroughness, completeness and conformance to requirements. The inspectors reviewed other corrective action program (CAP) documents, including completed corrective actions documented in selected NCRs to verify that industry-identified fire protection problems potentially or actually affecting the plant were appropriately entered into, and resolved by, the CAP process. The NCRs were reviewed with regard to the attributes of timeliness and apparent cause determination to ensure that proposed corrective actions addressed the apparent cause, reportability and operability determination.

b. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On November 17, 2011, the lead inspector presented the inspection results to Mr. M. Annacone, BNP Site Vice President, and other members of his staff. The licensee acknowledged the results. The lead inspector informed the licensee that proprietary information reviewed would not be included in this inspection report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

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J. Becker, Engineering Programs Supervisor
C. Browne, NFPA 805 Project
R. Brusselman, Fire Protection
D. Bryant, Operations Fire Protection
J. Burke, Engineering Director
C. Chan, Safe Shutdown Engineer
D. Dearie, Operations Senior Reactor Operator
P. Dubrouillet, Training Manager
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T. Rouns, Fire Protection Program Manager
K. Sawyer, Operations Training
T. Sherrill, Licensing Engineer
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R. Stewart, NFPA 805 Project Manager
R. Tart, NFPA 805 Transition Engineer
M. White, Fire Protection Coordinator

NRC personnel

H. Christensen, Deputy Division Director, Division of Reactor Safety, NRC Region II
P. O'Bryan, Senior Resident Inspector, BNP, NRC Region II
M. Schweg, Resident Inspector, BNP, NRC Region II

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed

None

LIST OF COMPONENTS REVIEWED
(Refer to Report Section 1R05.01 / 1R05.05 / 1R05.06 – Circuit Analyses)

<u>Component Identification</u>	<u>Description</u>
<u>Valves</u>	
1-SW-V19	MN STM to FWP & TURB BP, SG A
1-E41-F002	HPCI Steam Supply Line Isolation MO
1-E41-F007	HPCI Pump Discharge MO
1-E41-F012	HPCI Bypass to Suppression Pool MO
1-E11-F020A	RHR 1A & 1C Suppression Pool Suction Valve MO
1-SW-V17-MO	Conventional SW PMP C Discharge Valve
1-SW-V18-MO	Conventional SW PMP C Discharge Valve
<u>Pump Motors</u>	
1-SW-1A-NUC-PMP-M	1A Nuclear Service Water Pump Motor
2-SW-2A-NUC-PMP-M	2A Nuclear Service Water Pump Motor
2-SW-2B-NUC-PMP-M	2B Nuclear Service Water Pump Motor
1-SW-1B-NUC-PMP-M	1B Nuclear Service Water Pump Motor
<u>Ventilation Fan</u>	
2-VA-B-EF-DG	4160 VAC E2 Exhaust Fan
<u>Switchgear</u>	
1-E1	Unit 1 4KV Emergency SWGR E1
2-E3	Unit 2 4KV Emergency SWGR E3
2-E4	Unit 2 4KV Emergency SWGR E4
<u>Breakers</u>	
4 KV E3 Compartment "AJ5"	Tie Breaker To SWGR E1
4 KV E1 Compartment "AG0"	Tie Breaker To SWGR E3
<u>Communications</u>	
1-SPP-JAC-AH0	Sound Powered Phone Jack @ E2 4KV SWGR AH0
<u>Emergency Diesel Generators</u>	
2-DG4-GEN	Diesel Generator No. 4
<u>Instruments</u>	
1-CAC-TR-4426-1A	Suppression Pool Temperature (MCR)
1-CAC-LR-2602	Suppression Pool Level (MCR)

1-B21-PI-R605A	Reactor Pressure (MCR)
1-C32-LI-R606A	Reactor Water Level (MCR)
1-B21-LI-R604A	Reactor Water Level (MCR)
1-CO-LIT-1160	CST Level (local at CST)
1-B21-LI-5977	Reactor Water Level (RSDP)
1-E51-FIC-3325	RCIC Flow Controller (RSDP)
1-CAC-TR-778	Suppression Pool Water Temperature (RSDP)

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 1ASSD-04, "Unit 1 Train A Shutdown," Rev. 24
 1ASSD-05, "Unit 1 Reactor Building North," Rev. 25
 1ASSD-06, "Unit 1 Reactor Building South," Rev. 19
 2ASSD-03, "Unit 2 Train B Shutdown," Rev. 22
 2ASSD-04, "Unit 2 Train A Shutdown," Rev. 22
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 1EOP-01-RVCP, "Reactor Vessel Control Procedure,"
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 0MST-ELU11FY, "Emergency Lighting Unit Battery Discharge Test," Rev. 0
 0OP-41, Attachment 3, Fire Protection System Valve Line-up, Rev. 0
 0PFP-013, "General Fire Plan," Rev. 36
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 0PLP-01.5, "Alternative Shutdown Capability Controls," Revision 11
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 0PS-NGGC-1000, "Fleet Conduct of Operations," Rev. 5
 0FPP-005, "Fire Watch Program," Rev. 29
 0FPP-13, Transient Fire Load Evaluation, Rev. 50
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 1EOP-01-RSP, "Unit 1 Reactor Scram Procedure," Rev. 8
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LIST OF ACRONYMS AND ABBREVIATIONS

AR	Action Request
BNP	Brunswick Nuclear Plant
BTP	Branch Technical Position
CAP	Corrective Action Program
CFR	Code of Federal Regulations
EC	Engineering Change
EOP	Emergency Operating Procedure
ERFBS	Electrical Raceway Fire Barrier System
FA	Fire Area
FHA	Fire Hazards Analysis
FPP	Fire Protection Program
FZ	Fire Zone
IMC	Inspection Manual Chapter
MCC	Motor Control Center
IP	Inspection Procedure
NCR	Nuclear Condition Report
NFPA	National Fire Protection Association
NRC	United States Nuclear Regulatory Commission
OMA	Operator Manual Action
PRR	Procedure Revision Request
RB	Reactor Building
RCIC	Reactor Core Isolation Cooling
Rev	Revision
ROP	Reactor Oversight Process
RSDP	Remote Shutdown Panel
SDP	Significance Determination Process
SER	Safety Evaluation Report
SSA	Safe Shutdown Analysis
SSCs	Structures, Systems and Components
SSD	Safe Shutdown
UFSAR	Updated Final Safety Analysis Report