CP&L

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SERIAL: BSEP 97-0036
10 CFR 2.201

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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324/LICENSE NOS. DPR-71 AND DPR-62
REPLY TO NOTICE OF VIOLATION

Gentlemen:

On January 2, 1997, the Nuclear Regulatory Commission (NRC) issued a Notice of Violation for the Brunswick Steam Electric Plant, Units 1 and 2. The basis for the violation is provided in NRC Inspection Report 50-325/96-16 and 50-324/96-16.

Carolina Power & Light Company admits the violations occurred as described in NRC Inspection Report 50-325/96-16 and 50-324/96-16. Enclosure 1 provides Carolina Power & Light Company's response to the violations in accordance with the provisions of 10 CFR 2.201.

Carolina Power & Light Company finds the inspection does not contain information of a proprietary nature. Please refer any questions regarding this submittal to Mr. M. A. Turkal at (910) 457-3066.

Sincerely,

William Levis
Director - Site Operations

SFT/sft

Enclosures
1. Reply to Notice of Violations
2. List of Commitments

cc: Mr. L. A. Reyes, Regional Administrator, Region II
Mr. D. C. Trimble, Jr., NRR Project Manager - Brunswick Units 1 and 2
Mr. C. A. Patterson, Brunswick NRC Senior Resident Inspector
The Honorable R. Hunt, (Acting) Chairman - North Carolina Utilities Commission



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ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNITS 1 and 2
NRC DOCKET NOS. 50-325 & 50-324
OPERATING LICENSE NOS. DPR-71 & DPR-62
REPLY TO NOTICE OF VIOLATIONS

VIOLATIONS:

During an NRC inspection conducted from October 27 through December 7,1996, two violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," NUREG-1600, the violations are listed below:

VIOLATION A:

Technical Specification (TS) 6.8.1 requires that written procedures shall be established, implemented, and maintained covering the applicable activities recommended in Appendix A of Regulatory Guide 1.33, November 1972.

Regulatory Guide 1.33, recommends that maintenance activities which can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Brunswick Site Procedure BSP-35, Outage Planning requires that schedule changes be made after obtaining final approval of the Superintendent - Outage Management.

Brunswick Engineering Procedure, 0PLP-30, Engineering Service Requests, requires that a system impact evaluation be performed to identify any impact that the modification would have on plant operations.

Modification Administrative Procedure 0MAP-005, Implementation of Major Modifications, requires that prerequisites are verified prior to start of work and that work shall be performed in accordance with the instructions drawings, sketches, design documents, and procedures as specified in the Work Request/Job Order (WR/JO). Precautions contained in the WR/JO required the performance of a pre-job briefing with operations to discuss precautions to be taken during implementation of the modification.

Contrary to the above, these procedural requirements were not met for the following three examples for structural modifications on instrument rack 1-H21-P022 containing reactor pressure switch 1-B32-PS-N018B. Jarring of the pressure switch caused a Group 8 containment isolation which resulted in a loss of shutdown cooling for Unit 1 on October 11, 1996.

1. In September 1996, an outage scheduler moved the structural modification to the instrument rack before completion of core off-load. This change allowed work activities to be conducted when associated instrumentation was required to be operable resulting in a loss of shutdown cooling. This schedule change did not receive the required BSP-35 final approval.

2. In July 1995, the system impact evaluation performed for Engineering Service Request 94-406 was not appropriate to the circumstances because it failed to address the affect

the structural modification would have on shutdown cooling.

3. On October 11, 1996, craft personnel failed to perform a pre-job briefing with operations prior to start of work associated with WR/JO 95-AENB6.

This is a Severity Level IV Violation (Supplement I). This is applicable to Unit 1 only.

RESPONSE TO VIOLATION A:

Admission or Denial of Violation:

Carolina Power & Light admits this violation.

Reason for Violation:

Engineering Service Request (ESR) 94-406 installation instructions required the modification of instrument racks H21-P006 and H21-P022 to be performed at a time when the affected instrument loops were not required to be operable. The instrument rack work was originally scheduled correctly and validated by the outage risk assessment. Subsequently, the work was rescheduled inappropriately without additional risk assessment. Personnel responsible for the scheduling change did not fully understand the impact of the change on plant operation and did not ensure an additional risk assessment was performed once the schedule was changed.

The system impact evaluation information contained in ESR 94-406 did not identify the 1-E11-F008 valve as equipment affected by the instrument rack work. However, the evaluation did identify impacts to the 1-E11-F009, Shutdown Cooling Inboard Suction Isolation Valve and other Residual Heat Removal system components. The instrument rack work with the potential to affect the 1-E11-F009 valve was rescheduled along with the work with the potential to affect the 1-E11-F008 valve into a time when shutdown cooling was required to be operable. This indicates that the personnel responsible for scheduling the work approved the change in the schedule without a clear understanding of the potential impacts to the Residual Heat Removal system.

In addition, the instrument rack modification work package required a pre-job brief with Operations; however, the individuals responsible for ensuring proper pre-job briefs were performed prior to work start failed to ensure such a briefing was conducted with Operations. Consequently, Operations was not given the opportunity to assess the impact of the work on plant operations prior to the event.

Corrective Actions Which Have Been Taken and Results Achieved:

Following restoration of shutdown cooling, instrument rack related work was suspended until the shift outage manager could complete a review of scheduled outage related instrument rack work.

ESR 94-406 was revised to include additional potential adverse effects that could result from jarring the instrument racks and a discussion of impacts during times when shutdown cooling is needed.

The work associated with the 1-H21-P006 and P022 instrument racks was rescheduled during an appropriate outage window. Similar instrument rack work scheduled for implementation during the B111R1 outage was reviewed to ensure appropriate scheduling of the work and released for work completion.

The ESR population scheduled for implementation during the B111R1 outage was reviewed for engineering products with engineering scope or operational vulnerability similar to the instrument rack modifications. Due to similarities, the Seismic Qualification Utilities Group (SQUG) modification ESR 96-407 was reviewed to ensure proper system window scheduling.

Engineering stand-downs were conducted with SQUG modification personnel to discuss recent event issues and the potential for similar conditions with the SQUG modifications. Expectations for performing pre-job briefs with the responsible engineer, project manager, implementation supervision, and craft prior to resuming SQUG modification work were discussed.

Stand-downs were conducted with craft personnel to review this event and reinforce expectations for proper work practices.

A stand-down with scheduling personnel was conducted to reinforce management expectations related to scheduling changes.

Management has taken appropriate administrative action with the personnel involved with the scheduling error.

Corrective Steps Which Will Be Taken to Avoid Further Violations:

To prevent similar outage scheduling errors the site procedure for managing outage risk is being revised. This procedure provides the framework for outage planning and scheduling and implements an independent assessment of the outage schedule just prior to the start of planned outages to verify shutdown safety is maintained during the outage. The revised procedure formalizes and defines the process for making schedule changes once the pre-outage risk assessment has commenced. Changes will be reviewed and approved by the Outage Senior Reactor Operator and Superintendent of Outages until the Shift Outage Manager (SOM) position is manned. The SOM is then responsible for approving schedule changes until the reactor mode switch is placed in Mode 2 for the purposes of reactor startup at which time the on-line work control processes takes responsibility for schedule changes.

Date When Full Compliance Will Be Achieved:

Carolina Power and Light believes that it is in full compliance with the requirements of Technical Specification 6.8.1.

VIOLATION B:

Technical Specification 6.8.1 requires that procedures shall be established, implemented, and maintained covering the activities recommended in Appendix A, Paragraph G, "Procedures for Control of Radioactivity" of Regulatory Guide 1.33, dated November 1972.

> 10 CFR 20.1502 (a)(2) requires the licensee to monitor occupational exposure to radiation by declared pregnant women likely to receive a dose in excess of ten percent of the applicable limit of 500 millirem in one year from sources external to the body.
>
> Contrary to the above, Carolina Power and Light Standard Procedure DOS-NGGC-0002, "Dosimetry Issuance", Revision 1, dated August 12, 1996, within Paragraph 9.9.5, fails to require monitoring of occupational exposure to radiation by declared pregnant women likely to receive a dose in excess of ten percent of the applicable limit of 500 millirem.

This is a Severity Level IV Violation (Supplement IV). This is applicable to both units.

RESPONSE TO VIOLATION B:

Admission or Denial of Violation:

Carolina Power & Light admits this violation.

Reason for Violation:

The controls specified in DOS-NGGC-0002 for monitoring of occupational exposure to declared pregnant women were inadequate for ensuring compliance with the requirements of 10 CFR 20.1502. The guidance provided in NUREG/CR-6204 was used as the basis for these controls. Environmental & Radiation Control (E&RC) and Corporate Dosimetry management personnel's understanding of the NRC guidance in NUREG/CR-6204 was inconsistent with the intent of 10 CFR 20.1502 (a) (2). Brunswick Nuclear Plant personnel erroneously believed that declared pregnant women could be considered "Members of the Public", and consequently, monitoring would not be required. In addition, information related to the final rule published in the Federal Register on July 13, 1995, (60 FR 36038) was not adequately reviewed by E&RC personnel.

Corrective Actions Which Have Been Taken and Results Achieved:

Declared pregnant women are being monitored for occupational radiation exposure.

A review by calculation was performed to determine the dose accumulated by the declared pregnant women working outside the restricted area. The results of this review demonstrate that the most conservative dose received by these individuals does not exceed federal requirements.

The definitions for "occupational dose" and "member of the public" consistent with federal regulations has been reviewed with the Radiation Control Superintendent and Dosimetry Supervisor.

A revision to procedure DOS-NGGC-0002 has been implemented to require monitoring of occupational radiation exposure by declared pregnant women likely to receive a dose in excess of ten percent of the applicable limit of 500 millirem. This procedure is applicable to the three Carolina Power & Light Company nuclear sites.

A review with Environmental and Radiation Control technical staff and supervisory personnel was performed to emphasize the importance of thorough reviews of regulations and associated changes.

Corrective Steps Which Will Be Taken to Avoid Further Violations:

A review will be performed to ensure site dose monitoring procedures are consistent with monitoring requirements specified in 10 CFR 20 and any deficiencies identified and corrected.

Date When Full Compliance Will Be Achieved:

Carolina Power and Light believes that it is in full compliance with the requirements of Technical Specification 6.8.1.

Enclosure 2
List of Regulatory Commitments

The following table identifies those actions committed to by Carolina Power & Light Company in this document. Any other actions discussed in the submittal represent intended or planned actions by Carolina Power & Light Company. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager-Regulatory Affairs at the Brunswick Nuclear Plant of any questions regarding this document or any associated regulatory commitments.

| | Commitment | Committed date or outage |
|---|---|---|
| 1. | The site procedure for managing outage risk will be revised to formalize and define the process for making schedule changes once the pre-outage risk assessment has commenced. | This procedure revision will be effective by 3/7/97. |
| 2. | A review will be performed to ensure site dose monitoring procedures are consistent with monitoring requirements specified in 10 CFR 20 and any deficiencies identified and corrected. | 4/30/97 |