CP&L

Carolina Power & Light Company

Brunswick Nuclear Plant
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U.S. Nuclear Regulatory Commission
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BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
REPLY TO A NOTICE OF VIOLATION

Gentlemen:

The Brunswick Steam Electric Plant (BSEP) has received NRC Inspection Report 50-325/92-35 and 50-324/92-35 and finds that it does not contain information of a proprietary nature. This report included a Notice Of Violation.

Enclosed is Carolina Power & Light Company's response to that Notice Of Violation.

Very truly yours,

R E Morgan

R. E. Morgan, Interim Site Manager
Brunswick Nuclear Plant

TMJ/

Enclosure

cc: Mr. S. D. Ebneter
Mr. R. H. Lo
BSEP NRC Resident Office

IE01

ENCLOSURE

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 VIOLATION

VIOLATION A:

A. Technical Specification 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the activities recommended in Appendix "A" of Regulatory Guide 1.33, November 1972 including administrative procedures for authorities and responsibilities for safe operation and shutdown.

Plant Operating Manual Volume 1, Book 1, Administrative Procedure, Revision 145, requires Shift Supervisors, Senior Reactor Operators, and Reactor Operators to collectively perform operations to maintain the plant in a safe condition at all times in accordance with procedures contained within the Plant Operating Manual and Technical Specifications.

Operating Instruction OI-01, Conduct of Operations, Revision 47, requires the Plant Monitor Reactor Operator to inform the Unit Senior Reactor Operator/Shift Supervisor of any significant changes in plant parameters and to refrain from becoming involved in evolutions that are not directly related to the frequent monitoring of plant parameters.

Brunswick Site Procedure BSP-50, Site Procedure for Command, Control, and Communication, Revision 1, requires that an evolution affecting or potentially affecting Control Room indication requires Unit Senior Reactor Operator approval prior to initiation.

Contrary to the above, on October 2, 1992, these procedures were not adequately implemented in that the Unit 1 Reactor Operator did not obtain Senior Reactor Operator approval prior to initiation of an evolution affecting Control Room indication, did not inform the Unit Senior Reactor Operator/Shift Supervisor of a significant change in a plant parameter, and did not refrain from becoming involved in an evolution not directly related to the frequent monitoring of plant parameters. This resulted in reactor vessel water level being allowed to decrease to the low level 1 Engineered Safety Features actuation set point resulting in an automatic Reactor Protection System and Primary Containment Isolation System actuation to prevent further decrease in reactor vessel water level.

This is a Severity Level IV violation (Supplement I).

RESPONSE TO VIOLATION A:

Admission or Denial of Violation:

Carolina Power & Light Company (CP&L) admits the violation.

Reason for the Violation:

At the time of the violation, Unit 1 was in Operational Condition 4 (Cold Shutdown) and the plant was configured such that level was directly controlled by the Reactor Operator (RO) within the established control band of 200 to 240 inches above the top of the fuel guide. Water was continually added by the Control Rod Drive (CRD) system at approximately 30 gpm and then drained by the RO as it approached the upper limit. The level increase from 200 inches to 240 inches required approximately three and one half hours. The draining evolution required four to five minutes. The plant had been in this configuration for thirteen days prior to this event and for nine days during August because of removal of the Reactor Water Clean-Up (RWCU) system for outage work. At 1312 on October 2, 1992, the RO began draining the vessel without informing the Senior Reactor Operator (SRO), who was on the phone coordinating drywell work. Additionally, the second RO was not aware of the evolution because he was on the plant public address system.

The interpretation of the requirement to inform the SRO of significant changes in plant parameters varied from shift to shift. Unplanned parameter changes that may lead to, or actually involve transients, are immediately announced to the control room staff. However, the reporting requirement was not enforced by shift supervision or Operations Management for routine activities or those that have come to be seen as routine (such as this method of level control); therefore, such activities were not generally reported. As a result, no one in the control room, other than the involved operator, was aware that lowering of the vessel level was in progress.

Corrective Steps Which Have Been Taken and Results Achieved:

OP-17, Residual Heat Removal System Operating Procedure, section 8.6 has been revised requiring a second operator to monitor RPV level and specifying a maximum rate of level decrease when rejecting reactor inventory to Radwaste.

A memorandum to all licensed operators has been issued which states those parameters which the reactor operators may not affect without giving prior notice to the Unit SRO. It also states that the Unit SRO must be in control of and direct all control room activities.

To improve control room monitoring and minimize distractions:

Work pre-approval packages from the Site Work Force Control Group (SWFCG) are no longer processed by Unit SROs while they are overseeing reactor operations.

The Production Assistant's work station has been re-located.

Unit and sub-unit managers are performing on-shift assessments.

Professionalism coaching has been conducted and is continuing.

Corrective Actions Which Will Be Taken to Avoid Further Violations:

The referenced memorandum will be incorporated into OI-01, Operating Principles and Philosophy by January 14, 1993. As part of the revision process a Standing Instruction will be issued informing the Operators of the revision. Additionally, revisions to OI-01 are reviewed in operator training on a periodic basis; this revision will be included.

Operations management will perform a control room activity study to include a review of the level, organization, prioritization, and conduct of activities in the control room by April 1, 1993. Additionally, this study will review the roles and responsibilities of the operators in order to clearly vest the responsibility of oversight in each position, provide for continuity within the various operator positions, and provide the time to exercise this responsibility.

Date When Full Compliance Will Be Achieved:

CP&L is in full compliance.

VIOLATION B:

B. Technical Specification 6.8.1.a requires that written procedures shall be established, implemented, and maintained covering the activities recommended in Appendix "A" of Regulatory Guide 1.33, November 1972, including administrative procedures for equipment control (e.g., locking and tagging).

Administrative Instruction AI-58, Equipment Clearance Procedure, Revision 38, provides the requirements for administering equipment clearances.

Contrary to the above, AI-58 was not properly established in that requirements for communicating to Licensed Operators the disablement of equipment and instrumentation caused by clearances were not included. This resulted in the disablement of the Unit 1 Reactor Vessel High/Low Level Alarm, 1-A-7, Window 2-2, by Local Clearance 1-92-2158, Digital Feedwater Control System Modification, on September 15, 1992 without informing control room personnel. At the time, reactor vessel level control was Operator controlled and was dependent upon the low level alarm to lessen the potential for inadvertent draining.

This is a Severity Level IV violation (Supplement III).

RESPONSE TO VIOLATION B:

Admission or Denial of Violation:

CP&L admits the violation.

Reason for Violation:

The clearance procedure does not specifically require the identification of peripheral equipment affected by a clearance. The procedure does provide for "clearance information tags" (CITs); however, their use is not required. This option is intended to be used to sensitize personnel to the affected equipment.

The clearance process is the final administrative barrier intended to prevent such events during modification installation. Additional barriers include the efforts of the modification developing engineer, the inter-disciplinary and plant reviews of the modification prior to approval, and the subsequent oversight by the implementing organization. The development and review of the digital feedwater modification was inadequate in that provisions for the loss of instrumentation (i.e., compensatory actions) and recommendations for the best plant configuration to support the modification were not made. A list of instrumentation expected to be out of service was provided; however, the list did not identify the loss of the annunciator. Recommendations as to the best plant configuration to support modification installation were not, and typically are not, included in the modification development process. The plant review of the modification has historically been confined to the efficacy of the finished product and to compliance of the installation to plant procedures and processes. Given that the developers and reviewers do not know when in the outage the modification will be installed, the plant configuration necessary to install it has been left up to the Operations Engineer, the developers of the clearances, and the shift that hangs them.

In this case, the review of the modification and the clearance preparation by the Operations Engineer and the SROs in the clearance center and on shift did not identify the loss of the level alarm. Additionally, outage planning considered waiting until condenser cooling was available to install the modification but perceived the condition to be a low risk and allowed the installation to proceed. The upper limit of the level band was established to protect workers repairing valves adjacent to the main steam lines and the lower limit to ensure circulation within the core. Installation of a temporary high or low level alarm was not considered. Cognizance of level was maintained only by the alertness of the operator. Maintenance accepted the attentiveness of the operator as the only barrier to the introduction of water into the main steam lines; however, the loss of the audible low level alarm was not recognized. The correct action would have been to provide compensatory actions such as a temporary low level alarm and a temporary high level alarm or main steam line plugs. The appropriate time for determination of compensatory actions is prior to clearance development to support installation. Therefore, NED and Operations are evaluating the modification development and review process for inclusion of necessary plant conditions for modification installation. Additionally, Outage Management is performing Shutdown Risk Assessments on major outage activities and changes

thereto. A procedure institutionalizing the program for performing the assessments will be approved by January 29, 1993.

Corrective Actions Which Have Been Taken:

A temporary RPV low level alarm set at 195" has been installed.

OP-17, Residual Heat Removal System Operating Procedure, section 8.6 has been revised requiring a second operator to monitor RPV level and specifying a maximum rate of level decrease when rejecting reactor inventory to Radwaste.

Corrective Actions Which Will Be Taken to Avoid Further Violations:

Operations will assess the formalization of alarm and indication ranges to reflect the actual established level control bands by January 15, 1993.

NED and Operations are evaluating the modification development and review process for inclusion of necessary plant conditions for modification installation. The evaluation due date is January 15, 1993.

The procedure institutionalizing the Shutdown Risk Assessment process on major outage activities and changes thereto will be approved by January 29, 1993.

Date When Full Compliance Will Be Achieved:

CP&L is in full compliance.