



Carolina Power & Light Company

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Brunswick Steam Electric Plant
P. O. Box 10429
Southport, NC 28461-0429
May 20, 1985

FILE: B09-13510E
SERIAL: BSEP/85-0934

Dr. J. Nelson Grace, Administrator
U.S. Nuclear Regulatory Commission
Suite 2900
101 Marietta Street NW
Atlanta, GA 30323

BRUNSWICK STEAM ELECTRIC PLANT UNITS 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
SUPPLEMENTAL RESPONSE TO INFRACTIONS OF NRC REQUIREMENTS

Dear Dr. Grace:

The Brunswick Steam Electric Plant (BSEP) received I&E Inspection Report 50-325/84-39 and 50-324/84-39 and on April 26, 1985, submitted a supplemental response to the violation and an Inspector Follow-Up Item (Serial No. BSEP/85-0764). Following appropriate review of the supplemental response, line 7 in the second paragraph, part II, of the response section was omitted during final printing of the response. This submittal reflects the entire contents of the prior supplemental response.

Very truly yours,

C. R. Dietz, General Manager
Brunswick Steam Electric Plant

RMP/clh

Enclosure

cc: NRC Document Control Desk

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VIOLATION:

Technical Specification 6.8.1.a requires written procedures be implemented covering procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972. Item A.4 of Appendix A requires procedures be established for procedure adherence and temporary change method.

Section 4.1 of OI-01, Operating Principles and Philosophy, states that procedure compliance is mandatory.

Section 4.3.1.3 of OI-01 states that an operator may omit a step only if the step is applicable under a given condition as described in the step and is determined to be inapplicable by the operator, or if only a given portion of a procedure is required to be completed (i.e., performance of only a portion of a periodic test is required to satisfy a given PMTR).

Contrary to the above, the licensee failed to implement procedure OI-01, in that while performing Section 5 of OP-17, Residual Heat Removal (RHR) System Operating Procedure, on November 27 and 28, 1984, a water sample was not obtained from the RHR System to verify that the conductivity of the RHR System was less than 10 $\mu\text{mho/cm}$ as required by Steps 17 and 41.

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

RESPONSE:

I. Admission or Denial of the Alleged Violation

Carolina Power & Light Company acknowledges that Section 4.3.1.3 of OI-01 was not properly implemented.

II. Reason for Violation

The intent of the steps in OP-17 related to sampling is to ensure an adequate flush of the RHR System to prevent communication of potentially high conductivity water with the reactor vessel upon entry into shutdown cooling. It was determined that the intent was met in an alternate manner; i.e., the duration of the flush (approximately three hours) assured displacement of any high conductivity water from the RHR System. In the judgement of the Shift Operating Supervisor and Shift Foreman, both of whom were Senior Reactor Operator licensed, these steps were not applicable based upon the inability to take a sample and the alternative assurance of the intent being met. It was their belief that allowance is given procedurally for such action as outlined below.

OI-01 states in paragraph 4.1 that the operator must always be on the lookout for conditions which would make a procedure invalid, such as maintenance work in progress, clearances, modifications to systems, inoperable equipment, or changes in equipment status. In an unusual condition where a procedure is not available to cover the situation at hand, action should be taken to place the plant in a safe condition from

which a procedure can be used or written. In addition, paragraph 4.3.1 of OI-01 states that if only a portion of a procedure is to be used, appropriate start and stop points may be designated by the Shift Foreman. Assumption that OI-01 provided procedural allowance for determination that certain procedural steps could be marked "not applicable" resulted in the marking of the OP-17 procedural steps as not applicable.

Administrative Procedure Sections 5.5.2 and 5.5.3 state that a procedure change may be permanent or temporary, depending on the reason for the change. If the revision does not change the intent of the original procedure, a temporary procedure may be used. A temporary change requires that two members of plant staff, one of which holds an SRO license, approve the change and that it be processed as a change within 14 days. The steps in OP-17 which were identified as "NA" due to the inoperability of the sample system received a review equivalent to the review/approval required by the Administrative Procedure. The required 14-day time requirement for review and final approval of temporary changes was not performed as the Operations personnel felt that OI-01 provided guidance for inoperability which superseded the Administrative Procedure.

III. Corrective Actions Which Have Been Taken

Through discussion of this matter with various other plant management personnel and Site Resident Inspectors, the current Operations Management has gained a clearer understanding of the appropriate action for such conditions when they occur during procedure execution. An Engineering Work Request has been written to review and correct as necessary the problem with the vacuum in the sample line with the system running.

IV. Corrective Action Which Will Be Taken

1. OI-01 was revised to clarify procedural allowance for marking steps as not applicable. However, subsequent to this revision, follow-up discussions as noted in Item III above have indicated that OI-01 as currently written will not give correct guidance on action to take if a procedural step cannot physically be performed. OI-01 will be revised to provide the correct guidance, which should lead to a temporary change as defined in technical specifications.
2. Appropriate Operations personnel will review this event and receive training on the revision to OI-01.
3. A review of existing plant procedures related to procedure sign-off will be conducted to determine if there exists inappropriate allowance for marking, noting, or otherwise omitting procedural steps. Such allowances will be clarified or revised, as necessary, to ensure the correct action is taken as indicated in the OI-01 revision.

V. Date Full Compliance Will Be Achieved

Corrective actions on the above will be completed by:

Corrective Action IV.1 - May 22, 1985

Corrective Action IV.2 - July 19, 1985

Corrective Action IV.3 - July 19, 1985

INSPECTOR FOLLOW-UP ITEM (paragraph 5c):

The root cause of the water hammer and vessel draining event was determined to be that the output signal of controller E11-SS-F605A was selected to the HI jack as opposed to the LO jack as required for the procedure to perform its intended function. Controller E11-SS-F605A was last calibrated on May 5, 1984, at which time records show that the output signal followed the lower of the two input signals as required. For the output of the controller to be switched from the LO position to the HI position, the controller had to be opened up and the output plug unplugged from the LO position and then plugged into the HI position. Investigation by the licensee to determine how the output plug could have moved provided no explanation. No documentation could be found that performed additional work on the controller.

The inspectors expressed a concern about the apparent lack of adequate controls established concerning manipulations of the output jack of controller E11-SS-F605A. No maintenance or operational procedure could be identified that manipulated the output plug and whatever caused the movement of the plug from the LO position to the HI position did not ensure return of the plug to its proper position. In a telephone conversation on February 1, 1985, the inspector informed the plant General Manager that this issue should be addressed by the plant in its response to this report. This item will be identified as IFI (50-324, 325/84-39-02).

RESPONSE:

An investigation was conducted to determine the cause of the water hammer events. This investigation determined that the E11-F053A valve was traveling to the full open position when the controller was turned on, whereas the E11-F053A valve should remain closed. The E11-SS-F605A HI/LO auto selector station for the E11-F053A valve receives a signal from the E11-LIC-R604A RHR heat exchanger level controller and the E11-PIC-R609 RCIC suction pressure controller. When the E11-SS-R605 signal jack is in the HI position, the higher of the two signals (level/pressure) is used for control of the E11-F053A, and when in LO, the lower of the two is used. Plant procedures require that the jack be left in the LO position. During these events, the E11-SS-R605 jack was in the HI position. Therefore, when the RCIC suction pressure controller was set to auto in accordance with the procedure (OP-17) with a setpoint greater than the actual (existing) RCIC suction pressure, the controller output increased, causing the E11-F053A valve to ramp open. However, the E11-F053A valve was expected to have remained closed until the RHR heat exchanger level controller output was subsequently increased.

To prevent this problem in the future, the following actions have been or will be taken:

1. The signal jack was repositioned to the correct plug.
2. Plant procedures have been revised to require stroke checks or other position verification on the F053 valves prior to opening the downstream F011 valves.
3. Water hammer damage to the supports have been repaired.
4. Engineering will evaluate the need to modify the steam-condensing portion of the system and complete any modifications required.
5. Real-time training on this event is being provided to licensed operators.
6. In a continuing effort to eliminate incidents such as the mispositioning or incorrect installation of equipment, the following subjects will be presented during a special Real-Time Training session for I&C personnel:
 - a. As a part of the special Real-Time Training sessions, MP-14 will be reviewed and special emphasis will be placed on the sections outlining the procedures for changing the scope of work in progress.
 - b. Volume I, Book 1, Section 11.7, independent verification requirements will be presented in detail during the special Real-Time Training sessions.
 - c. Training was presented in February 1985 on the inadvertent bypassing to the full-in position of two control rods in adjacent control cells (reference LER 1-84-35). This training will be presented again during the special Real-Time Training sessions. The training will be repeated to reenforce the awareness of the importance of correctly interpreting and following procedures and obtaining independent verifications when they are required.
 - d. Any other incidents that fall within the category of events that led to the establishing of the special Real-Time Training sessions will be researched and presented.
7. Classes will be scheduled for I&C personnel at regular intervals to discuss MP-14 and Volume I, Book 1, Section 11.7, of the plant Administrative Instructions. Special emphasis will be placed on changing the scope of work.
8. MP-14 will continue to be taught on a regular basis as a part of scheduled procedure/policy promulgation classes for I&C personnel.