CP&L

Carolina Power & Light Company

Brunswick Steam Electric Plant
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U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

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

Dear Dr. Grace:

The Brunswick Steam Electric Plant (BSEP) has received I&E Inspection Report 50-325/88-021 and 50-324/88-021 and finds that it does not contain information of a proprietary nature.

This report identified three items that appeared to be in noncompliance with NRC requirements. Enclosed is Carolina Power & Light Company's response to these violations.

Very truly yours,

J. L. Harness, General Manager
Brunswick Steam Electric Plant

MJP/bvc

Enclosure

cc: Mr. B. C. Buckley
Dr. J. N. Grace
BSEP NRC Resident Office

IE01
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VIOLATION A

10CFR50.49(d) requires that each licensee prepare a list of electrical equipment requiring environmental qualification and that information be provided which demonstrates that the equipment will perform its design function during and following design basis accidents.

10CFR50.49(b)(2) requires that electrical equipment important to safety include nonsafety-related electric equipment whose failure under postulated environmental conditions would prevent the satisfactory accomplishment of safety functions.

Contrary to the above, on and before May 13, 1988, the silicon controlled rectifier temperature controllers for the Units 1 and 2 A and B Standby Gas Treatment (SBGT) trains (electrical devices whose failure would render the SBGT trains inoperable) were not included in the licensee's list of qualification equipment nor was information available which demonstrated that the devices were qualified.

RESPONSE TO VIOLATION A

I. Admission or Denial of the Alleged Violation

CP&L acknowledges the violation as described. As a result of the investigation into this event, it was identified the Unit 2 HPCI auxiliary oil pump did not have an environmentally qualified electrical splice. A response to this event is also addressed in the report.

II. Reason for the Violation

These violations are attributed to an inadequate assessment of skid-mounted equipment. The SBGT violation is attributed to an inadequate assessment of the heater control logic which was reflected in the original SBGT review report dated September 15, 1987. The silicon controlled rectifier (SCR) controllers were addressed in this report; however, they were incorrectly assessed to be fully isolated through the contact action of the control relay which is environmentally qualified as opposed to being bypassed but not isolated. The HPCI violation is attributed to an inadequate assessment of cable splices on skid-mounted equipment.

III. Corrective Steps Which Have Been Taken

1. Engineering Evaluation Report/Justification for Continued Operation (EER/JCO) 88-0255 was prepared to evaluate and provide technical justification for continued operation of both units with the installed configuration of the SCR controllers. The evaluation analyzed potential failure modes and conservatively concluded that the SCR controllers would not fail in a way to cause the 480 Vac power supply to the SBGT skid to trip. This EER/JCO initiated corrective actions to either fuse/isolate or qualify the controllers. Continuing research provided supplemental information based upon tests performed by the SBGT skid supplier that further substantiated the basis for the analysis.

2. A second, independent review of skid systems (SBGT and HPCI) was initiated with particular emphasis on addressing the issue of qualification or isolation of passive components. Two reports summarizing the results of this second review (one for SBGT, one for HPCI) were completed on June 6, 1988. For SBGT, this second review did not identify any additional qualification issues and concluded that skid-mounted components which could potentially affect the operability of the skid/system are either environmentally qualified or properly isolated. Several minor EQ list corrections were identified which will be incorporated into the next EQ list revision and publication.

   The results of the HPCI skid review indicated there was no evidence of inspection/documentation on the qualification of the HPCI auxiliary oil pump (AOP) motor power lead splices. In response to the potential issue, the splices for the Unit 1 and Unit 2 AOP motors were inspected. This inspection concluded the motor termination splices were made during the time of original plant construction. The Unit 1 splices were evaluated as satisfactory; however, they were replaced as a conservative measure. The Unit 2 splices were evaluated as unacceptable, particularly with respect to one of the splices having holes which penetrated the splice insulating tape. The Unit 2 splices were replaced to establish their conformance with EQ requirements. (See LER 2-88-012 for more details regarding the failure of the Unit 2 HPCI AOP splice.)

   Protective fuses were installed on Units 1 and 2 to ensure isolation of the SBGT SCR controllers and conformance with 10CFR50.49.

IV. Corrective Actions Which Will Be Taken and When Full Compliance Will Be Achieved

   Further action is not planned as full compliance concerning this item has been achieved.

VIOLATION B

Technical Specification 6.8.1.a requires that written procedures shall be implemented for the applicable procedures recommended in Appendix A of Regulatory Guide 1.33, November 1972. Procedures for performing maintenance which can affect the performance of safety-related equipment are identified in Item I.1 of Appendix A.

Contrary to the above, procedure 0PIC-FIC001-R2 was not correctly implemented in that Step 6.2.1.1 of Attachment 1 to 0PIC-FIC001-R2, which required the performance of PT-09.2 to verify High Pressure Coolant Injection (HPCI) operability, was not performed prior to declaring HPCI operable on June 16, 1988.

RESPONSE

I. Admission or Denial of the Alleged Violation

CP&L acknowledges the violation as described.

II. Reason for the Violation

On June 14, 1988, at 1810 hours, maintenance associated with Work Request/Job Order (WR/JO) 88-NTC241 for 1-E41-FIC-R600 of the Unit 2 HPCI System was completed in accordance with preventive maintenance (PM) route 2-E-BA-218. In planning the postmaintenance testing requirements (PMTR), the involved maintenance job planner did not stipulate within Section A of the PMTR worksheet that Operations procedure PT-09.2 be performed as is specified by OPIC-FIC001. On June 15, 1988, the documentation of WR/JO 88-NTC241 was stamped "PMTR NOT REQUIRED." As a result, when the involved limiting condition for operation (LCO) on the HPCI System was canceled at 1435 hours on June 16, 1988, PT-09.2 was not performed. Following discovery of this event at 1530 hours on June 17, 1988, an appropriate LCO was initiated on the HPCI System until operability of the system could be established through satisfactory completion of the PMTR. PT-09.2 was performed satisfactorily and at 0524 hours on June 18, 1988, the subject LCO was canceled.

The acceptance criteria in Section 6.0 of revision 0 of OPCI-FIC001, approved on August 12, 1986, did not address a requirement to perform PT-09.2. In addition, preventive maintenance route 2-E-BA-218 was also established with no reference to a requirement to perform PT-09.2 as a PMTR. Subsequently, on September 22, 1987, revision 1 to OPIC-FIC001 was implemented to include a recommendation in Section 6.2 of the procedure to perform the PT. This requirement is specified in Section V.C.5.b of Maintenance Procedure (MP)-14A and is also referenced in Section IV.C.c.(18) of MP-10. Unaware of revision 1 to OPIC-FIC001, the involved maintenance job planner implemented preventive maintenance route 2-E-BA-218 without a requirement to perform PT-09.2.

The root cause of the failure to identify the postmaintenance testing requirements in the procedure of route 2-E-BA-218 is attributed to personnel error, an inadequate review of Section 6.2 of OPIC-FIC001.

III. Corrective Actions Which Have Been Taken

Following discovery of this event, appropriate references to the subject PMTR were incorporated into the preventive maintenance routes of OPIC-FIC001.

IV. Corrective Actions Which Will Be Taken and When Full Compliance Will Be Achieved

Maintenance job planners will be counseled to be cognizant of the necessity to employ adequate research and the procedural guidelines MP-14A and MP-10 when establishing PMTR requirements. MP-10 will be revised to stipulate the instructions to be followed by a maintenance job planner when implementing or revising PMTR requirements within maintenance procedures. In addition, Maintenance real-time training will be conducted with Maintenance technicians and mechanics to ensure their awareness of the importance of these requirements. These activities will be completed by October 14, 1988.

VIOLATION C

Technical Specification 3.7.8 requires that all fire barrier penetrations, including fire doors, in fire zone boundaries protecting safety-related areas shall be functional. Action statement "a" for that specification requires, if the nonfunctional fire barrier penetration is not restored within 7 days, submission of a special report to the commission within 30 days outlining the plans and schedule for restoring the fire barrier penetration(s) to functional status. Special Report 1-SR-86-003 dated April 7, 1986. was submitted pursuant to the above specification for Diesel Generator Building fire doors.

Contrary to the above, a special report was not submitted outlining a schedule for restoring fire barrier penetrations to operable status. Special Report 1-SR-86-003 did not contain a schedule for restoring the Diesel Generator Building to operable status.

I. Admission or Denial of the Alleged Violation

CP&L acknowledges that Special Report 1-SR-86-003 failed to contain the information required by technical specification, specifically a schedule for restoring the fire barrier penetrations in the Diesel Generator Building to operable status. It is noted that the requirements for maintaining a fire watch in this area had been adhered to in accordance with technical specifications.

II. Reason for the Violation

This event occurred due to the failure of personnel writing the special report to ensure the specific information required by the technical specifications were included in the report. Contributing to the event were problems encountered designing an appropriate fix to remedy the excessive differential pressure problems in the Diesel Generator Building.

Efforts have been ongoing to develop and implement a modification which would correct the known problem of excessive differential pressures within the Diesel Generator Building cells. This evolution was in progress at the time of this special report and neither a fix nor a schedule was available at that time. The special report should have referenced the work in progress and stated that the report would be supplemented by a given date to provide the proposed fix and the schedule for completion.

III. Corrective Actions Which Have Been Taken

As noted in the body of the inspection report, a supplement to the special report was issued on June 20, 1988, providing a schedule for completing the required corrective action for the fire doors. In addition, a review was made of special reports issued since January 1986 to verify that other reports did not have the same deficiency. Three of these reports contained schedules which were not as specific as they should be; therefore, they have also been revised. Of those three, corrective actions have been completed on two with completion of corrective action regarding the third report pending the acquisition of replacement parts.

As a result of this event, personnel responsible for the writing of special reports have received training on the requirements for special reports. This included counseling to emphasize the need to ensure that each special report required by technical specification is reviewed against the specific requirements of that technical specification as different criteria may exist.

IV. Corrective Actions Which Will Be Taken and Date When Full Compliance Will be Achieved

Further action is not required as full compliance concerning this item has been achieved.