

NOTICE OF VIOLATION
AND
PROPOSED IMPOSITION OF CIVIL PENALTIES

Carolina Power and Light Company
Brunswick Nuclear Plant

Docket Nos. 50-325, 50-324
License Nos. DPR-71, DPR-62
EA 96-354

As a result of an NRC inspection completed on September 17, 1996, violations of NRC requirements were identified. In accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions", NUREG-1600, the NRC proposes to impose civil penalties pursuant to Section 234 of the Atomic Energy Act of 1954, as amended (Act), 42 U.S.C. 2282, and 10 CFR 2.205. The particular violations and associated civil penalties are set forth below:

- A. 10 CFR 50.49 (d) requires, in part, the licensee to prepare a list of electric equipment important to safety covered by 10 CFR 50.49 (b), and include information concerning performance specifications, electrical characteristics and environmental conditions for this electric equipment in a qualification file; and, keep the list and information in the file current and retain the file in auditable form for the entire period during which the covered item is installed in the plant or is stored for future use.

10 CFR 50.49 (f) requires, in part, that each item of electric equipment important to safety be qualified by testing of, or experience with, identical or similar equipment, and that such qualification shall include a supporting analysis to show that the equipment to be qualified is acceptable.

10 CFR 50.49 (j) requires, in part, a record of the qualification in auditable form to permit verification that each item is qualified and meets its specified performance requirements under predicted environmental conditions.

10 CFR 50.49 (k) states that electric equipment important to safety which was previously required to be qualified in accordance with NRC's "Guidelines for Evaluating Environmental Qualification of Class 1E Electrical Equipment in Operating Reactors," November 1979 (Division of Operating Reactors (DOR) Guidelines), need not be requalified to 10 CFR 50.49. However, DOR Guidelines require that the radiation service condition include the sum of the gamma and beta doses unless it can be shown by assuming a conservative unshielded surface beta dose of 2.0×10^8 RADS and considering shielding factors, that the beta dose to radiation sensitive equipment internals would be less than or equal to 10 percent of the total gamma dose to which an item of equipment has been qualified. The DOR Guidelines further require that qualification records be complete and auditable for qualification to be considered valid.

Enclosure

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Contrary to the above, as of June 14, 1996, environmental qualification requirements were not met, as evidenced by the following examples:

1. The licensee failed to: (1) include the R.G. Laurence solenoid valves in the post-accident sampling system (PASS) and residual heat removal system of Units 1 and 2, identified by plant tag numbers 1(2)-RXS-SV-4180, 4181, 4193, 4194, and 1(2)-E11-SV-F079A, F079B, F080A, and F080B on the list of electric equipment important to safety required to be qualified under 10 CFR 50.49, (2) test or demonstrate that the subject Laurence solenoid valves were identical or similar to an appropriately tested configuration, and (3) document the qualification of the subject Laurence solenoid valves in the auditable form.
2. The licensee failed to: (1) include the Target Rock solenoid valves in the PASS of Units 1 and 2, identified by plant tag numbers 1(2)-RXS-SV-4182, 4183, 4184, 4185 and 4192, on the list of electric equipment important to safety required to be qualified under 10 CFR 50.49, (2) provide an analysis demonstrating that the subject Target Rock solenoid valves were acceptable, and (3) document qualification of the subject Target Rock solenoid valves in an auditable form.
3. The licensee failed to: (1) include Target Rock open and close limit switches for PASS Valves 1(2)-RXS-SV-4182, 4183, 4184, and 4185, on the list of electric equipment important to safety required to be qualified under 10 CFR 50.49, (2) provide an analysis demonstrating that the subject Target Rock limit switches were acceptable, and (3) document qualification of the subject Target Rock limit switches in an auditable form.
4. The licensee failed to maintain the Environmental Qualification (EQ) equipment list and EQ files current and in an auditable form, in that: (1) the EQ equipment list was not being maintained current as demonstrated by hundreds of items identified on the list as environmentally qualified without a reference to a qualification data package (QDP), the document utilized to establish environmental qualification; (2) several QDPs had been in revision for over two years; (3) several QDPs had never been issued, (4) Enertech/Herion solenoid Valve 2-B32-SV-F019 was installed and declared operational without a QDP being issued and placed in the EQ File; (5) the QDPs did not include the latest Reactor Building environmental profiles which are required to establish predicted environmental condition; (6) Hydrogen Water Chemistry modifications changed the radiation profiles and they had not been addressed in the EQ files; and (7) Beta radiation effects were not addressed in the EQ files.
5. The licensee failed to provide documentation in an auditable form to verify qualification of the safety-related Motor Control

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Centers 1(2)XA, 1(2)XB, 1(2)XC, 1(2)XD, 1(2)XE, 1(2)XF, 1(2)XH, 1(2)XM, 1(2)XA-2, 1(2)XB-2, 1(2)XDA, and 1(2)XDB which are located in the Reactor Building in that the heat transfer analysis included in the file to demonstrate qualification was not based on the most severe design basis accident conditions that had been postulated based on the licensee's Reactor Building Environmental Report, Revision 4.

6. The licensee failed to: (1) include the following equipment important to safety on the EQ equipment list required to be qualified to 10 CFR 50.49: 120/208 AC distribution panels such as but not limited to Panels 1(2)A-RX, 1(2)B-RX, 1(2)C-RX, 1(2)D-RX, and 1(2)AB-RX; Potentiometers 1-1XE-EBO-POT, 1-1XF-EE2-POT, 2-2XE-EBO-POT, and 2-2XF-EE2-POT; various types of fuses identified as FRN-R, FNA, NOS, RES, NON, and SC; and thread sealants, (2) test or demonstrate that the equipment listed in (1) above, was similar to a tested configuration, and (3) document qualification of the equipment listed in (1) above, in an auditable form.
7. The licensee failed to maintain the EQ equipment list current by deleting the 300 EQ components listed in CP&L Great Idea numbers NED-326 and NED-327 without adequate justification and management review. Specifically, subsequent review of these EQ data changes in 1995 and 1996 disclosed that more than 50 of the 300 components had been downgraded, i.e., removed from the licensee's EQ Program, incorrectly. (01013)

This is a Severity Level III violation (Supplement I).
Civil Penalty - \$50,000.

- B. 10 CFR 50, Appendix B, Criterion XVI, requires that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected.

10 CFR 50, Appendix B, Criterion V, requires that activities affecting quality be prescribed by documented instructions or procedures, and shall be accomplished in accordance with these instructions or procedures.

Carolina Power and Light Company Plant Program Procedure PLP-4, Corrective Action Management, implements the requirements of 10 CFR 50, Appendix B, Criterion XVI, at the Brunswick Nuclear Plant.

Contrary to the above, as of the dates indicated, the licensee failed to assure that conditions adverse to quality were promptly identified and corrected and failed to follow Procedure PLP-4 as described in the examples below:

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1. CP&L Procedure PLP-4, Revisions 4 through 17, dated December 26, 1990 through May 31, 1996, requires managers to assure that assigned corrective actions are implemented.
 - a. Corrective actions associated with Adverse Condition Report (ACR) 91-181 which was identified in April 1991 regarding maintenance of the EQ program required by 10 CFR 50.49 were not implemented as of June 14, 1996.
 - b. Corrective actions identified on ACR number N93-0101 which was identified in August 1993 and subsequently reissued as ACR number 94-00980 in June 1994 regarding associated circuits were not implemented as of June 14, 1996.
2. Paragraph 6.0 of CP&L Procedure PLP-4, Revision 14, dated March 24, 1995, requires individuals identifying a condition to consult with their supervisors and initiate a Condition Report (CR). A condition is defined in paragraph 4.5 of PLP-4 as an adverse condition or a condition not meeting expectations.

Condition Reports (CRs) were not initiated to document and correct the following conditions not meeting expectations:

 - a. The finding that EQ related QDPs had not been updated to account for the impact of hydrogen water chemistry increased radiation levels on EQ equipment, as documented in Engineering Service Request (ESR) 9400752, dated May 11, 1995.
 - b. The finding that QDPs potentially impacted by engineering changes may require revision, as documented in ESR 9400742, dated May 11, 1995.
 - c. The finding that procedures covering application of thread sealants for EQ equipment required revision and that unqualified thread sealants may have been used in EQ equipment applications, as documented in ESR 9400743, dated March 29, 1995.
3. Paragraphs 4.2 of CP&L Procedure PLP 4, Revision 15, dated June 7, 1995, requires managers and personnel to ensure CRs are initiated when they become aware of adverse conditions.

Managers in the Design Control Group in the Brunswick Engineering Site Support Organization did not ensure that CRs were initiated to document and correct numerous deficiencies in the Brunswick EQ program which were documented in an unpublished, undated document, titled EQ Self-Assessment, when it was discussed with them in November 1995 through January 1996. The individual who identified the conditions also failed to initiate a CR.

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4. Paragraph 6.0 of CP&L Procedure PLP-4, Revisions 14 through 17, dated March 24, 1995 through May 31, 1996, requires managers to ensure that assigned corrective actions are effective and are implemented.

Corrective actions to resolve discrepancies in the EDBS safety classification for EQ equipment documented on CR 95-00513, dated February 22, 1995, were not effective and were not properly implemented as of June 14, 1996.

5. Paragraph 4.2 of CP&L Procedure PLP-4, Revisions 17 and 18, dated May 13, 1996 and August 7, 1996, requires managers to assure CRs are initiated for adverse conditions and events.
 - a. On August 22, 1996, the NRC identified that a CR had not been initiated to document the fact that Control Room personnel on duty at 3:00 P. M. on July 18, 1996 had not been informed regarding compensatory measures for potential failure of valves on the Post Accident Sampling System.
 - b. On August 6, 1996, the NRC identified that a CR had not been initiated to document that the Target Rock open and close limit switches for the PASS valves 1(2)-RXS-SV-4182, 4183, 4184, and 4185 were not EQ qualified. (02013)

This is a Severity Level III violation (Supplement I).
Civil Penalty - \$100,000.

Pursuant to the provisions of 10 CFR 2.201, Carolina Power and Light Company (Licensee) is hereby required to submit a written statement or explanation to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, within 30 days of the date of this Notice of Violation and Proposed Imposition of Civil Penalties (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each alleged violation: (1) admission or denial of the alleged violation, (2) the reasons for the violation if admitted, and if denied, the reasons why, (3) the corrective steps that have been taken and the results achieved, (4) the corrective steps that will be taken to avoid further violations, and (5) the date when full compliance will be achieved. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked or why

such other action as may be proper should not be taken. Consideration may be given to extending the response time for good cause shown. Under the authority of Section 182 of the Act, 42 U.S.C. 2232, this response shall be submitted under oath or affirmation.

Within the same time as provided for the response required above under 10 CFR 2.201, the Licensee may pay the civil penalties by letter addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, with

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a check, draft, money order, or electronic transfer payable to the Treasurer of the United States in the amount of the civil penalty proposed above, or the cumulative amount of the civil penalties if more than one civil penalty is proposed, or may protest imposition of the civil penalties in whole or in part, by a written answer addressed to the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission. Should the Licensee fail to answer within the time specified, an order imposing the civil penalties will be issued. Should the Licensee elect to file an answer in accordance with 10 CFR 2.205 protesting the civil penalties, in whole or in part, such answer should be clearly marked as an "Answer to a Notice of Violation" and may: (1) deny the violations listed in this Notice, in whole or in part, (2) demonstrate extenuating circumstances, (3) show error in this Notice, or (4) show other reasons why the penalties should not be imposed. In addition to protesting the civil penalties in whole or in part, such answer may request remission or mitigation of the penalties.

Any written answer in accordance with 10 CFR 2.205 should be set forth separately from the statement or explanation in reply pursuant to 10 CFR 2.201, but may incorporate parts of the 10 CFR 2.201 reply by specific reference (e.g., citing page and paragraph numbers) to avoid repetition. The attention of the Licensee is directed to the other provisions of 10 CFR 2.205, regarding the procedure for imposing a civil penalties.

Upon failure to pay any civil penalties due which subsequently have been determined in accordance with the applicable provisions of 10 CFR 2.205, this matter may be referred to the Attorney General, and the penalties, unless compromised, remitted, or mitigated, may be collected by civil action pursuant to Section 234c of the Act, 42 U.S.C. 2282c.

The response noted above (Reply to Notice of Violation, letter with payment of civil penalty, and Answer to a Notice of Violation) should be addressed to: James Lieberman, Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852-2738, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission, Region II and to the Resident Inspector at the Brunswick facility.

Because your response will be placed in the NRC Public Document Room (PDR), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction. However, if you find it necessary to include such information, you should clearly indicate the specific information that you desire not to be placed in the PDR, and provide the legal basis to support your request for withholding the information from the public.

Dated at Atlanta, Georgia
this 19th day of November 1996