



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

JUN 16 1988

Docket No. 50-261
License No. DPR-23
EA 87-166

Carolina Power and Light Company
ATTN: Mr. E. E. Utley
Senior Executive Vice President
Power Supply and Engineering
and Construction
Post Office Box 1551
Raleigh, North Carolina 27602

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY
(NRC INSPECTION REPORT NO. 50-261/87-10)

This refers to the inspection conducted on May 4-8, 1987, at H. B. Robinson Steam Electric Plant Unit 2, during which violations of NRC requirements were identified by the NRC inspectors. The violations involved failure to demonstrate qualification for plant electrical equipment in accordance with 10 CFR 50.49, Environmental Qualification (EQ) of Electric Equipment. Inspection Report No. 50-261/87-10, documenting these violations, was sent to you by letter dated July 23, 1987. On September 17, 1987, an Enforcement Conference was held with you and members of your staff in the Region II office to discuss these violations, their causes, and your corrective actions.

The violations described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) involved failure to demonstrate qualification for plant electrical cable inside containment, failure to qualify connectors and shrink-fit sleeves used as parts of the containment electrical penetrations, multiple qualification deficiencies in four valve operators, use of unqualified tape splices, failure to seal cable entrances on several solenoid valves and transmitters, and failure to adequately address instrument accuracies for various transmitters and resistance temperature detectors. As a result, between November 30, 1985, the deadline for EQ compliance, and May 8, 1987, the end of the referenced NRC inspection, the plant operated with unqualified electric equipment in multiple systems and components because the equipment qualification had not been verified by testing, nor was documentation available in the central file to demonstrate that the equipment would perform its intended safety function under postulated accident environmental conditions. It is recognized that the plant was not restarted until corrective actions had been taken or a schedule was established to take corrective actions for the deficiencies identified.

The NRC believes that Carolina Power and Light Company clearly should have known about the EQ deficiencies identified above and would have discovered many of them had adequate field verification inspections and modification package reviews been performed. For a number of the identified deficiencies, the licensee had information available which discussed EQ concerns of similar

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components. Specifically, the need to properly qualify electrical cable was discussed in both Inspection and Enforcement (IE) Bulletin 79-01B (Attachment 2) and IE Circular 78-08. The need to seal the housings for ASCO solenoid valves and Rosemount transmitters was provided in the vendor test reports. In the case of the qualification deficiencies associated with the Limitorque valve operators, the need to qualify terminal blocks was discussed in both IE Notice 82-03 and IE Circular 78-08 while IE Notice 83-72 discussed unqualified terminal blocks as well as various other problems associated with qualification of Limitorque valve operators. Vendor acceptance criteria were available to assist the licensee in Raychem splice installation yet such criteria were not met. For both Crouse-Hinds electrical connectors and the tape splices, the licensee recognized the need to demonstrate EQ but the testing performed and analysis conducted overlooked obvious necessary considerations. Finally, the need to consider the instrument accuracies during EQ testing is a basic requirement of the NRC Division of Operating Reactors (DOR) guidelines for establishing EQ of electrical equipment important to safety.

To emphasize the importance of environmental qualification of electrical equipment at H. B. Robinson Steam Electric Plant Unit 2, I have been authorized, after consultation with the Commission and the Deputy Executive Director for Regional Operations, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Enclosure 1) in the amount of Four Hundred and Fifty Thousand Dollars (\$450,000) for the violations described in the enclosed Notice. In accordance with the "Modified Enforcement Policy Relating to 10 CFR 50.49," contained in Generic Letter 88-07 (Enclosure 2), the violations described in the enclosed Notice have been determined to be an extensive problem, having affected numerous systems and components, and therefore is considered to be an EQ Category A problem. Such a classification was concluded to be appropriate because, considering the cable and electrical connector problems alone, virtually all the systems important to safety, inside containment, were affected. The base value of a civil penalty for an EQ Category A problem is \$300,000.

In determining the civil penalty amount, the NRC considered the four factors set forth in the "Modified Enforcement Policy Relating to 10 CFR 50.49," for escalation and mitigation of the base civil penalty amount. These factors consist of (1) identification and prompt reporting of the EQ deficiencies ($\pm 50\%$); (2) best efforts to complete EQ within the deadline ($\pm 50\%$); (3) corrective actions to result in full compliance ($\pm 50\%$); and (4) duration of violation which is significantly below 100 days (-50%).

The escalation and mitigation factors were considered as follows. Escalation of the base civil penalty by 25 percent is appropriate because the NRC identified many of the EQ violations involved in this matter. Further escalation of the base civil penalty by an additional 50 percent is appropriate because of your lack of best efforts to complete environmental qualification of electrical equipment within the November 30, 1985 deadline, as evidenced by the fact that significant fundamental EQ program deficiencies such as the lack of appropriate qualification documentation existed for such basic components as the cables serving numerous Class IE electrical systems. Mitigation of the base civil

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penalty by 25 percent is appropriate because of your extensive corrective actions once EQ deficiencies were properly identified and you fully understood what action was needed to bring the plant into full compliance with 10 CFR 50.49. Since the duration of the violations was greater than 100 days, mitigation for duration was determined to be inappropriate in this case.

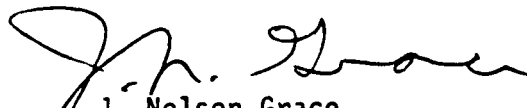
You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions, and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, PL No. 96-511.

Should you have any questions concerning this letter, please contact us.

Sincerely,


J. Nelson Grace
Regional Administrator

Enclosures:

1. Notice of Violation and
Proposed Imposition of
Civil Penalty
2. Generic Letter 88-07

cc w/encls:

G. P. Beatty, Jr., Vice President
Robinson Nuclear Project Department
R. E. Morgan, Plant General Manager