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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

MAR 17 1989

Docket No. 50-261
License No. DPR-23
EA 88-88

Carolina Power & 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: ORDER IMPOSING A CIVIL MONETARY PENALTY

This refers to your letter dated July 15, 1988, in response to the Notice of Violation and Proposed Imposition of Civil Penalty sent to you by our letter dated June 15, 1988. Our letter and Notice describe a violation involving the failure of your 10 CFR Part 50, Appendix K required evaluation model to reflect the most damaging single failure relative to the Emergency Core Cooling System (ECCS) Safety Injection (SI) subsystem. The violation was identified as a result of an NRC request for additional information on January 14, 1988 regarding the automatic bus transfer (ABT) scheme utilized to power SI pump B after we identified a similar deficiency for the Auxiliary Feedwater System. The full scope of the SI system problem was not fully developed until after we raised additional questions on January 29, 1988 about other types of electrical system faults that could result in only one of the three 50% capacity SI pumps being available to mitigate the consequences of a design basis accident. It was at that time that your staff identified several other single failure scenarios and the decision was made by you to shut down H. B. Robinson Unit No. 2. To emphasize the importance of proper evaluation of the ECCS, a civil penalty of Fifty Thousand Dollars (\$50,000) was proposed.

In your response of July 15, 1988 you deny the violation and request full mitigation of the proposed civil penalty. You stated that H. B. Robinson Unit No. 2 complied with the requirements of 10 CFR 50.46 and Appendix K as they relate to the original design criteria described in the Updated Final Safety Analysis Report and other previously submitted documents. This design criteria, which only considered a single active failure, was believed by you to be appropriate as it was repeatedly provided to the staff and not questioned during the staff's various reviews. Your reply made no mention of the single active failure examples identified in the Notice of Violation.

We do not accept your position that the ECCS is required to be designed for only a single active failure for components of electrical systems. The design of the ECCS to withstand a single worst failure, be it active or passive components of electrical systems, is a clear requirement necessary to protect the public health and safety. This definition of single failure for electrical systems was


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codified in 10 CFR Part 50, Appendix A prior to promulgation of the 1974 ECCS rule. The inadequacy of your original design criteria for application to the ECCS rule should have been identified during your review of your various submittals. Under the circumstances of this case and for the reasons given in the evaluation attached to the enclosed order, we have decided to modify the enforcement action as described in the Notice of Violation by deleting scenarios (2) and (3) of the violation. Nevertheless we have concluded, for the reasons in the Appendix attached to the enclosed Order Imposing Civil Monetary Penalty, that the violation occurred as described in the Notice, without considering scenarios (2) and (3), and that a sufficient basis for mitigation of the proposed civil penalty has not been provided. Deletion of the two scenarios does not lessen the safety significance of the violation. Accordingly, we hereby serve the enclosed Order on Carolina Power & Light Company imposing a civil penalty in the amount of Fifty Thousand Dollars (\$50,000). We will review the effectiveness of your corrective actions during a subsequent inspection.

The NRC believes that based on good engineering judgment and industry dialogue concerning ECCS design in the 1974 time frame, you should have known that, regardless of the history of your submissions on ECCS requirements, you are required to implement 10 CFR 50.46 and Appendix K which do not distinguish between failures of active and passive components for electrical systems. We are concerned that your response to the Notice raised a broader safety issue regarding what you considered to be the most damaging single failure used in the original design basis of the plant and backfitted to meet the 1974 ECCS rule (e.g., in your response, "1. Denial of Alleged Violation," you stated that, "...Therefore, failures of batteries and wires breaking are failures of passive components which are outside the scope of the original design basis."). Consequently, under the provision of 10 CFR 50.54(f), you are required to provide the Office of Nuclear Reactor Regulation, within 30 days of receipt of this letter, a written submittal outlining those actions taken or planned to assure that the H. B. Robinson Unit 2 facility complies with the single worst failure requirement of 10 CFR 50.46 and Appendix K. Because of the past problems with the Auxiliary Feedwater System ABT scheme, your submittal should also address your plans to identify and correct single electrical failure (as defined in 10 CFR Part 50, Appendix A) vulnerability problems associated with other safety systems. This information is sought by the NRC to verify compliance with the current licensing basis of your facility and must be submitted as specified in Section 50.4, Written Statements, and signed under oath or affirmation.

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 the enclosure will be placed in the NRC's Public Document Room.


Hugh L. Thompson, Jr.
Deputy Executive Director for
Nuclear Materials Safety, Safeguards
and Operations Support

Enclosure: Order w/Appendix

cc w/encl: See Next Page

Carolina Power and Light Company

cc w/encl:

C. R. Dietz, Manager,
Robinson Nuclear Project Department
R. E. Morgan, Plant General Manager
State of South Carolina