



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA ST., N.W., SUITE 3100
ATLANTA, GEORGIA 30303

APR 27 1981

In Reply Refer To:

RII:JRW

50-325/80-45

50-324/80-43

Carolina Power and Light Company
ATTN: J. A. Jones, Senior Executive
Vice President and Chief
Operating Officer
411 Fayetteville Street
Raleigh, NC 27602

Gentlemen:

Subject: Health Physics Appraisal

During the period of December 8-19, 1980, the NRC conducted a special appraisal of the health physics program at the Brunswick facility. This appraisal was performed in lieu of certain routine inspections normally conducted in the area of health physics. Areas examined during this appraisal are described in the enclosed report (50-325/80-45 and 50-324/80-43). Within these areas, the appraisal team reviewed selected procedures and representative records, observed work practices, and interviewed personnel. It is recommended that you carefully review the findings of this report for consideration in improving your health physics program.

The appraisal conducted at the Brunswick facility was part of the NRC's general program to strengthen the health physics programs at nuclear power plants. As a first step in this effort, the Office of Inspection and Enforcement is conducting these special appraisals of the health physics programs at all operating power reactor sites. These appraisals were previously identified to you in a letter dated January 22, 1980, from Mr. Victor Stello, Jr., Director, NRC Office of Inspection and Enforcement. One of the objectives of the health physics appraisals is to evaluate the overall adequacy and effectiveness of the total health physics program at each site and to identify areas of weakness that need to be strengthened. We also intend to use the findings from these appraisals as a basis for improving NRC requirements and guidance. Consequently, our appraisal encompassed certain areas which may not be explicitly addressed by current NRC requirements. The next step that is planned in this overall effort will be the imposition of a requirement by the Office of Nuclear Reactor Regulation (NRR) that all licensees develop, submit to the NRC for approval, and implement a Radiation Protection Plan. Each licensee will be expected to include in the Radiation Protection Plan sufficient measures to provide lasting corrective action for significant weaknesses identified during the special appraisals of the current health physics programs. Guidance for the development of this plan will incorporate pertinent findings from the special appraisals and will be issued for public comment prior to the end of this calendar year.

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The findings of this appraisal at the Brunswick facility indicate that, although your overall health physics program is adequate for present operations, significant weaknesses exist. These include the following:

- a. The internal exposure control program has not been adequately implemented in the areas of respiratory protection and internal dosimetry;
- b. Contamination control surveillance at the radwaste building dock and outside of the radiation control area has not been adequate to preclude contamination in clean areas;
- c. Inleakage of seawater through the condenser pit and subsequent intermixing with contaminated water has been adversely affecting liquid radwaste operations and increasing solid radwaste storage and disposal; and
- d. Surveillance of operating parameters for the standby gas treatment filter systems, control building emergency filter system, and turbine building filter systems has not been adequate to ensure design criteria operability.

These items were identified to your plant management during the exit interview on December 19, 1980. They were also discussed with you by telephone on December 23, 1980, by R. C. Lewis of the Region II office. The results of this conversation and our understanding of your planned corrective actions were also discussed in a letter to you from James P. O'Reilly dated December 24, 1980.

These findings are discussed in more detail in Appendix A, "Notice of Significant Appraisal Findings". We recognize that regulatory requirements pertaining to the significant weaknesses identified in Appendix A may not currently exist. However, to assist us in determining whether adequate protection will be provided for the health and safety of workers and the public, you are requested to submit a written statement within twenty-five (25) days of your receipt of this letter describing your corrective action for the significant weaknesses identified in Appendix A, including: (1) steps which have been taken; (2) steps which will be taken; and (3) a schedule for completion of action. This request is made pursuant to Section 50.54(f) of Part 50, Title 10, Code of Federal Regulations.

During the inspection, it was found that certain activities under your license appear to violate NRC requirements. These items and references to pertinent requirements are listed in the Notice of Violation enclosed herewith as Appendix B. A written response is required. Elements to be included in your response are delineated in Appendix B.

In accordance with Section 2.790 of the NRC "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC Public Document Room. If this report contains any information that you believe to be proprietary, it is necessary that you make a written application within 25 days to this office to withhold such information from public disclosure. Any such application must include the basis

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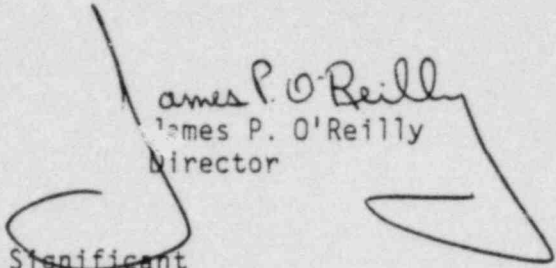
Carolina Power and Light Company

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for claiming that the information is proprietary and the proprietary information should be contained in a separate part of the document. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,


James P. O'Reilly
Director

Enclosures:

1. Appendix A, Notice of Significant Appraisal Findings
2. Appendix B, Notice of Violation
3. Inspection Report Nos. 50-325/80-45 and 50-324/80-43

cc w/encl:

C. R. Dietz, Plant Manager

APPENDIX A

NOTICE OF SIGNIFICANT APPRAISAL FINDINGS

Carolina Power and Light Company
Brunswick 1 and 2

Docket Nos. 50-325 and 50-324
License Nos. DPR-62 and DPR-71

Based on the Health Physics Appraisal conducted on December 8-19, 1980, the following items appear to require corrective actions: (Section references are to the Details portion of the enclosed Inspection Report)

- A. The internal exposure control program was deficient in the areas of respiratory protection and internal dosimetry. The appraisal found: (1) respiratory protection training was weak in scope and content; (2) quantitative respirator fitting and quality control testing was not being conducted; (3) correlations of bioassay and air sample results were not routinely evaluated; (4) there were no procedures for the evaluation and corrective action requirements of 10 CFR 20.103(b)(2) for intakes above 40 MPC-hours; and (5) there were no internal dosimetry procedures as recommended by Regulatory Guide 8.26 and ANSI N343-1978 (Sections 7.a-d).
- B. Contamination control surveillance at the radwaste building dock area was inadequate to preclude potentially contaminated personnel and equipment from exiting to clean areas without contamination monitoring. Also, contamination control surveillance in areas outside of radiation control areas was not adequate to detect and prevent the presence of a contaminated boot in a clean tool storage area, a contaminated drain in the oil storage area and contaminated wood in a scrap pile outside of the protected area (Sections 8.e-g).
- C. Seawater leaking into the condenser pit was being allowed to intermix with contaminated water, resulting in excessive quantities of high conductivity liquid radioactive waste. This condition contributed to liquid radwaste system problems, flooding of the pipe tunnel and radwaste building at the -03 foot elevation, and increased solid radioactive waste handling, storage and shipments for disposal (Section 10.c).
- D. Routine surveillance of operating parameters (such as differential pressure, flowrate and humidity) for the standby gas treatment filter systems, control building emergency filter system, and turbine building filter systems was not adequate to assure that they would adequately perform their design functions (Section 10.b).

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