



Carolina Power & Light Company

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ROBINSON NUCLEAR PROJECT DEPARTMENT
POST OFFICE BOX 790
HARTSVILLE, SOUTH CAROLINA 29550

SEP 26 1985

Robinson File No: 13510E

Serial: RNP/85-3127

Dr. J. N. Grace
Regional Administrator
United States Nuclear Regulatory Commission
Region II
101 Marietta Street, N. W., Suite 3100
Atlanta, Georgia 30323

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
REGION II INSPECTION REPORT 85-24

Dear Dr. Grace:

Carolina Power and Light (CP&L) has received and reviewed the subject report and provides the following response.

A. Severity Level IV Violation (RII-85-24-01-SL4)

10CFR20.201(b) requires each licensee to make or cause to be made such surveys as (1) may be necessary for the licensee to comply with the regulations in this part, and (2) are reasonable under the circumstances to evaluate the extent of radiation hazards that may be present. 10CFR20.201(a) defines "survey" as an evaluation of the radiation hazards incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation under a specific set of conditions. When appropriate, such evaluation includes a physical survey of the location of materials and equipment, and measurements of levels of radiation or concentrations of radioactive material present.

10CFR20.103(a)(3) requires the licensee to use suitable measurements of concentrations of radioactive material in air for detecting and evaluating airborne radioactivity in restricted areas.

Contrary to the above, the licensee failed to make or cause to be made such surveys as may be necessary to detect or evaluate airborne radioactivity in restricted areas in that, on July 16, 1985, six individuals were allowed to enter the Seal Table Room inside the containment vessel without performing air samples (surveys) to evaluate the airborne radioactivity hazard present.

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1. Admission or Denial of the Alleged Violation

Carolina Power & Light acknowledges the violation.

2. Reason for the Violation

On July 14, 1985, six individuals entered the seal table room in the containment to replace one of the movable incore detector cables. These cables are stored on a take-up reel inside a box. The box had to be opened, the old cable cut and rolled off the reel, new cable installed, and the box closed. Apparently, when the old cable was being removed, contaminated particles on the cable went airborne and were inhaled by the six individuals.

Containment air samples had not shown an airborne problem prior to the job starting. Replacement of similar cabling had been successfully accomplished several times in the recent past without a major problem (as recently as three weeks prior to this incident). The work groups involved found no obvious evidence that led them to suspect they would be creating an airborne problem. This led to complacency with this particular job which is the major contributor to not identifying the potential for the area to go airborne during the replacement of the cable.

A portion of the incore detector thimbles resides within the core and becomes highly radioactive. As the detectors traverse the system, wear occurs between the detector cable and its respective thimble. The minute particles of metal are free to move under the influence of the drive cable. Eventually, these particles reach the drive boxes where the cable exits the closed system and is wound on the take-up reel.

Evidence supporting this transfer mechanism is found in the presence of Zn 65. The only source of Zinc in the system is the path indexers. These units are Zinc plated. For Zn 65 to exist, it must first be activated and then be returned to the drive box. As the drive cable passes through the indexer, minute amounts of Zinc are worn away and work inward as the cable moves into the core. The Zinc is activated and available to return to the drive boxes with future cable movement.

Once the material reaches the drive boxes, the flexing of the cable causes some of the material to come loose and eventually contaminates the inside of the box. The smear data taken inside the box indicates this is occurring.

Air samples are not required prior to entering the seal table room. However, the individuals should have been in respirators with the potential that existed to take the area airborne with the work to be performed. Air sampling should have been performed prior to and during the job to identify if the area went airborne and the quantity of that activity. This event occurred because the individuals did not recognize the potential for airborne activity due to their successful past experience with the job.

3. Corrective Steps Which Have Been Taken and Results Achieved

A discussion was held with the RC Technicians to elaborate on the carelessness of the incident and corrective action taken. They were cautioned to look at all parts of a job, and not to allow themselves to become complacent.

Immediate corrective action was to require respiratory protection where there is smearable contamination greater than 50,000 dpm/100 cm², until such time as air samples prove that respiratory protection devices are not needed.

Another incore detector was replaced approximately one month later without incident.

4. Corrective Steps Which Will Be Taken to Prevent Further Violation

The requirement to wear respirators, discussed above, will be proceduralized.

5. Date When Full Compliance Will Be Achieved

Full compliance has been achieved with the use of a memorandum requiring the wearing of respirators as discussed above. This requirement will be proceduralized by November 30, 1985.

B. Severity Level IV Violation (R11-85-24-02-SL4)

Technical Specification 6.5.1.1.1 requires that written procedures be established, implemented, and maintained covering applicable procedures recommended in Appendix "A" of Regulatory Guide 1.33, Rev. 2, February, 1978. Appendix "A" Regulatory Guide 1.33 states that the licensee should have radiation protection procedures governing a radiation work permit system and respiratory protection.

Contrary to the above, the requirements of the Technical Specifications were not met in that on July 16, 1985, six individuals who entered the seal table room:

- a. Performed work under a radiation work permit which was not appropriate for the specific task they were performing as required by Plant Programs Procedure PLP-016, Radiation Work Permit (RWP) Program, and
- b. Failed to utilize respiratory protection devices and/or stay times to maintain internal exposures as low as reasonably achievable as required by Health Physics Procedure HPP-006, Radiation Work Permits.

1. Admission or Denial of the Alleged Violation

Carolina Power & Light acknowledges the violation.

2. Reason for the Violation

The RC Foreman that decided to use a routine RWP was involved in this task on previous occasions, none of which involved an airborne hazard of this magnitude. The decision was made to use a routine RWP based on his knowledge of the task and previous experience. A non-routine RWP should have been used because this included work in a locked high radiation area that required continuous coverage and involved an exposure rate of greater than 1 R/Hr. The decision to use respirators, without the guidance of an airborne sample, as discussed in Violation A, is left up to the discretion of the RC personnel issuing the RWP and covering the job. Without clear guidance, an error was made based on an individual's previous experience with this particular task.

3. Corrective Steps Which Have Been Taken and Results Achieved

The corrective action in Violation A above discussed the new requirement to wear respirators where there is smearable contamination greater than 50,000 dpm/100 cm², until such time as air sample results prove that respiratory protection devices are not needed. This provides the specific instruction to wear respirators. This relieves the RC technician from making that determination based solely on his experience when guidance from air sampling is not available. Discussions were held with the RC technicians on this event with regard to the use of respiratory protection and non-routine radiation work permits for work in highly contaminated areas.

4. Corrective Steps Which Will Be Taken to Prevent Further Violation

A catalog of known industry radiological events is being compiled by components and will be available to the RC technicians issuing RWPs. This catalog should assist the RC technician in identifying radiological hazards that previously may not have been apparent.

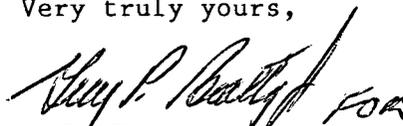
5. Date When Full Compliance Will Be Achieved

Full compliance has been achieved. The catalog of industry radiological events will be available for use by September 30, 1985.

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If you have any questions concerning this response, please contact
Mr. David C. Stadler at (803) 383-4524, extension 2363.

Very truly yours,

A handwritten signature in cursive script, appearing to read "R. E. Morgan".

R. E. Morgan
General Manager

H. B. Robinson S. E. Plant

CLW:sdm