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

JUL 31 1984

Report Nos.: 50-325/84-18 and 50-324/84-18

Licensee: Carolina Power and Light Company
411 Fayetteville Street
Raleigh, NC 27602

Docket Nos.: 50-325 and 50-324

License Nos.: DPR-71 and DPR-62

Facility Name: Brunswick

Inspection Date: July 9 - 13, 1984

Inspection at Brunswick site near Southport, North Carolina

Inspector: for R. H. Albright — Date Signed: 7/27/84

Approved by: G. R. Jenkins, Section Chief, Division of Radiation Safety and Safeguards — Date Signed: 7/27/84

SUMMARY

Areas Inspected

This routine, unannounced inspection involved 33 inspector-hours on site in the areas of licensee action on previous enforcement matters, organization and management controls, training and qualification, external exposure control and personal dosimetry, the ALARA program, licensee audits and surveillances, transportation of radioactive material, and inspector follow-up items.

Results

No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*G. Cheatham, Manager - Environmental and Radiation Control
*W. Dorman, QA - Supervisor
*K. Enzor, Director - Regulatory Compliance
B. Failor, Radiation Control Foreman
*A. Hegler, Superintendent - Operations
*M. Hill, Manager - Administrative and Technical Support
*B. Hinkley, Manager - Technical Support (Acting)
*J. Holder, Manager - Outages
*P. Howe, Vice President - Brunswick Nuclear Project
R. Queener, Principal Specialist, Radiation Control
T. Priest, Radiation Control Foreman
*L. Tripp, Radiation Control Supervisor

Other licensee employees contacted included eight technicians, five environmental and chemistry personnel and one training instructor.

Other Organizations

*L. C. Suttle, Power Agency Site Representative

NRC Resident Inspectors

*L. Garner, Resident Inspector
*T. Hicks, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on July 13, 1984 with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

a. (Closed) Violation 324/81-16-01, Overexposure of an individual to 4.2 rems in a quarter. The inspector verified implementation of corrective action described in licensee response dated October 30, 1981.

b. (Closed) Violation 324/81-16-02, Inadequate evaluation of stay time which resulted in personnel overexposure. The inspector verified implementation of corrective action described in licensee response dated October 31, 1981.

c. (Closed) Violation 324/81-16-03, Failure of the Radiation Control Technician to meet the qualification requirements of Technical Specification 6.3.1. The inspector verified implementation of corrective action described in licensee responses dated October 31, 1981 and December 23, 1981.

d. (Closed) Violation 325/83-18-03, Failure to provide adequate air sampling during contaminated trash sorting. The inspector verified implementation of corrective action described in licensee response dated August 4, 1983.

e. (Closed) Violation 325/83-18-04, Failure to provide adequate air sampling during abrasive cleaning which created airborne radioactive particles. The inspector verified implementation of corrective action described in licensee response dated August 4, 1983.

f. (Closed) Violation 325/83-23-02, Failure to comply with the Certificate of Compliance for a container used to ship a Type B quantity. The inspector verified implementation of corrective action described in licensee responses dated September 23, 1983 and December 7, 1983.

g. (Closed) Violation 325/80-45-35, Failure to post radiation areas. After review or additional information contained in licensee response dated April 4, 1984, this violation was withdrawn.

4. Organization and Management Controls (83722)

Technical Specification 6.2.2 describes the licensee's organization.

The inspector reviewed the licensee's organization, staffing level and lines of authority as they related to radiation protection and radioactive material control and verified that the licensee had not made organizational changes which would adversely affect the ability to control radiation exposures or radioactive material.

No violations or deviations were identified.

5. Training and Qualification (83723)

Technical Specification 6.3.1 requires that each member of the facility staff defined in Technical Specification Figure 6.2.2-1 meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions. Paragraph 4 of ANSI N18.1 states, in part, that technicians in responsible positions shall have a minimum of two years of working experience in their specialty. The inspector reviewed the experience of selected senior contract health physics technicians. In addition, the inspector reviewed the results of a written examination covering radiological protection fundamentals given to contract technicians.

The inspector reviewed changes being made in the licensee's training policies, goals, program and methods, related to radiation protection radioactive material control and plant chemistry, discussed the changes with licensee representatives and verified that the changes should not adversely affect the licensee's program.

Technical Specification 6.4.1 states that a retraining and replacement training program for the facility staff shall be in accordance with ANSI N18.1-1971. Paragraph 5.5 of ANSI N18.1 states that a training program shall be established which maintains the proficiency of the operating organization through periodic training exercises, instruction periods and reviews.

Plant procedure TI-103 establishes the training/retraining program for radiation control and chemistry.

The inspector discussed the replacement training and refresher training program for radiation control and chemistry personnel with licensee representatives and reviewed selected training records.

No violations or deviations were identified.

6. External Exposure Control and Personal Dosimetry (83724)

10 CFR 20.202 requires each licensee to supply appropriate personnel monitoring equipment to specific individuals and require the use of such equipment. During tours of the plant, the inspector observed workers wearing appropriate personnel monitoring devices.

10 CFR 20.203 specifies the posting, labeling and control requirements for radiation areas, high radiation areas, airborne radioactivity areas and radioactive material. Additional requirements for control of high radiation areas are contained in Technical Specification 6.12.

Plant procedure Environmental Radiation Control (E&RC) 0250 contains additional information on the posting and control of radiological areas.

During tours of the plant, the inspector reviewed the licensee's posting and control of radiation areas, high radiation areas, airborne radioactivity areas, contamination areas, radioactive material areas and the labeling of radioactive material.

No violations or deviations were identified.

7. ALARA Program (83728)

10 CFR 20.1c states that persons engaged in activities under licenses issued by the NRC should make every reasonable effort to maintain radiation exposure as low as reasonably achievable (ALARA). The recommended elements of an ALARA program are contained in Regulatory Guide 8.8, Information Relevant to Ensuring that Occupational Radiation Exposure at Nuclear Power Stations will be ALARA , and Regulatory Guide 8.10, Operating Philosophy for Maintaining Occupational Radiation Exposure ALARA.

The inspector reviewed plant procedure E&RC-4100 which establishes the program for keeping occupational exposures ALARA and discussed the administrative aspects of the program with licensee representatives.

The inspector discussed the ALARA goals and objectives for the current year with licensee representatives and reviewed the man-rem estimates and results for the current year.

As of June 30, 1984, the actual collective exposure for calendar year 1984 was 2054 man-rem which represented 56 percent of the estimated exposure for the year.

No violations or deviations were identified.

8. Licensee Audits and Surveillances (83723,83724)

The inspector discussed the audit and surveillance program related to radiation protection with licensee representatives. The inspector reviewed the following Quality Assurance Surveillance Reports (QASR):

QASR No. 83-01 - Dosimetry Program
QASR NO. 84-18 - Radiation Safety Violations
QASR No. 84-28 - General Radiation Control Practices
QASR No. 84-31 - General Radiation Control Practices
QASR NO. 84-33 - Respiratory Protection Training

No violations or deviations were identified.

9. Transportation of Radioactive Material (86721)

10 CFR 71.5 requires that licensees who transport licensed material outside the confines of its plant or other place of use, or who deliver licensed material to a carrier for transport, shall comply with the applicable requirements of the regulations appropriate to the mode of transport of the Department of Transportation in 49 CFR Parts 170 through 189.

The inspector reviewed changes made to procedure E&RC-0510 and verified that the changes were properly made and consistent with regulations.

The inspector reviewed selected radioactive material shipping records and applicable certificates of compliance for certified containers for the period January 1984 to June 1984 to ensure that shipping papers met the regulation. The applicable certificates of compliance were compared with the shipping papers to ensure that the form type and quantities of materials shipped in selected certified containers were appropriate.

No violations or deviations were identified.

10. Solid Radioactive Waste (84722)

The licensee implemented a radioactive waste volume reduction program in mid 1983. The total volume of waste shipped this year as of June 25, 1984 is 13,172.2 cubic feet, which represents an approximate 81% reduction in comparison to the 69,108.9 cubic feet shipped during a similar period in 1983. Waste volume on hand had increased by approximately 10% which still indicated a net reduction of slightly over 70%.

11. Inspector Follow-up Items (92701)

a. (Closed) Inspector Follow-up Item (IFI) 325/79-36-02, This item concerned the control of potentially contaminated clothing and trash. Licensee practices for surveying and disposing of clean and contaminated material to prevent unauthorized disposal of radioactive material were reviewed with licensee personnel.

b. (Closed) IFI 325/80-45-04. This item concerned the need for an individual with health physics experience to audit the health physics program. Licensee corporate personnel informed the inspector that an individual with health physics experience accompanies the audit teams when the health physics area is audited.

c. (Closed) IFI 325/80-45-05, This item concerned the need for formalized training procedures for radiation protection general employee training. The inspector reviewed the revised training procedures and lesson plans.

d. (Closed) IFI 325/80-45-17, This item concerned the need for accurate stay time records on RWPs. The inspector reviewed the licensee practice of recording stay time in RWP areas.

e. (Closed) IFI 325/80-45-30, This item identified that the liquid radwaste discharge monitor was located in an area that flooded frequently and had high background radiation. The flooding had been corrected and a determination made that background does not affect the use of the monitor during discharges.

f. (Closed) IFI 80-45-31, This item concerned the need for a path to backflush the liquid radwaste line if a discharge is terminated. The licensee is modifying the discharge piping to provide a backflush path.

g. (Closed) IFI 325/80-45-32, This item concerned the need for spill containment around the portable waste solidification unit. The inspector observed that a curb to contain spills has been erected around the portable solidification unit.

h. (Closed) IFI 325/80-45-33, This item concerned the need for a HEPA filter maintenance program to deal with portable HEPA filter units. The inspector reviewed the procedures for the portable HEPA filter maintenance program.

i. (Closed) IFI 324, 325/82-40-05, This item concerned the need to enter the date and area entered on the standing RWP. No changes to the form have been necessary since no dose control problems had been encountered.

j. (Closed) IFI 324, 325/82-40-06, This item concerned the need to add the applicable survey numbers to the RWP. Survey numbers were added to the RWP.