



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30303

APR 20 1984

Report No.: 50-395/84-09

Licensee: South Carolina Electric and Gas Company
Columbia, SC 29218

Docket No.: 50-395

License No.: NPF-12

Facility Name: Summer

Inspection at Summer site near Jenkinsville, South Carolina

Inspector: W. W. Peery
W. W. Peery

4/12/84
Date Signed

Approved by: G. R. Jenkins
G. R. Jenkins, Section Chief
Division of Radiation Safety and Safeguards

4/13/84
Date Signed

SUMMARY

Inspection on March 26-30, 1984

Areas Inspected

This routine, unannounced inspection involved 30 inspector-hours on site in the areas of organization and management controls; control of radioactive materials and equipment; occupational exposures during extended outage; ALARA; solid wastes and transportation.

Results

Of the seven areas inspected, no violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *O. W. Dixon, Vice President, Nuclear Operations
- *J. G. Connelly, Deputy Director, Operations and Maintenance
- *B. G. Croley, Group Manager, Technical and Support Service
- *M. N. Browne, Manager, Technical Support
- *G. E. Higginbotham, Corporate Health Physicist
- *L. A. Blue, Manager, Support Services
- *J. W. Cox, Associate Manager, Health Physics
- *A. R. Coon, Associate Manager, Regulatory Compliance
- *H. I. Donnelly, Senior Nuclear Licensing Engineer
- *J. W. Derrick, Associate Manager, Maintenance and Engineering
- *A. B. Harrison, Nuclear Licensing
- *F. H. Zander, Nuclear Licensing
- *H. C. Fields, Regulatory Interface Engineer
- *E. R. Robinson, Health Physics Supervisor
- P. Shultz, Health Physics Supervisor
- *R. M. Tuttle, Security Operations Supervisor

Other licensee employees contacted included three technicians and one operator.

NRC Resident Inspector

C. H. Hehl

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on March 30, 1984, with those persons indicated in paragraph 1 above.

3. Licensee Action on Previous Enforcement Matters

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Organization and Management Controls

Changes in the basic Plant Health Physics organization were not observed which would significantly affect the ability to control radiation and radioactive material. The permanent Health Physics organization includes 22 technicians, 5 supervisors, and 1 manager. In addition, for the current outage, 43 contract Health Physics personnel and 56 decontamination personnel were brought on site. Discussions with training personnel, reviews of resumes and training records revealed that Health Physics Personnel on site have apparently received proper and adequate training and successfully passed training tests. The licensee formed a specific Health Physics Outage Organization for the current outage which has apparently been effective in direction and coordination of Health Physics in various activities thus far in the outage. Review of documentation of Health Physics Management to Plant Management evaluating Health Physics manpower and other needs for the outage revealed that management has been adequately apprised and responded positively by approving the recommended Health Physics program. Licensee Audit, CGSS-12119, dated January 30, 1984, covered the Health Physics program and review of the audit and response from station Health Physics (CGSS-07-0327-NO) all appeared to be satisfactory. The inspector also reviewed Problem Reports generated by Health Physics to identify weaknesses in the program and found that apparent proper corrective actions have been taken. The inspector had no further questions.

6. Control of Radioactive Materials and Contamination, Survey, and Monitoring

- a. Reviews of audits were as contained in paragraph 5 above. The inspector reviewed changes in instrumentation, equipment and procedures since the last inspection and determined that there have been no significant changes. Numerous survey instruments, friskers, Health Physics facilities and equipment were observed during the inspection and no inadequacies noted in operability, timely calibration, quantity or quality. Plans are underway to provide additional physical space for the Health Physics Dosimetry Group which would be a definite improvement. The inspector reviewed the licensee's program for surveys and monitoring activities. The licensee's system for assuring that required surveys have been conducted was reviewed. Records of routine and special surveys, including those associated with Radiation Work Permits (RWP) and Special Radiation Work Permits (SWP) were reviewed and no inadequacies with the requirements of the license or 10 CFR20 were noted. During tours of the plant, posted survey data for specific areas and associated with RWP's and SWP's were observed to be current and independent surveys by the inspector of several selected areas showed reasonable agreement with licensee readings.
- b. The licensee has placed a great deal of emphasis on the proper use of portal monitors and friskers. This aspect of the program is covered in training and retraining for all personnel. Health Physics personnel are charged with the responsibility of closely observing to see that friskers and portal monitors are properly used, particularly at control points to specific areas. By personal experience in passing through

control points and observing others, the inspector noted that Health Physics personnel were alert to checking for proper use of portal monitors and friskers. Personnel contamination of workers apparently has been closely followed and documented and there has been no apparent case of a detectable uptake of radioactivity. Technicians have been trained in the use of proper survey instruments and methods of surveys. Technicians are required to take special training for specific jobs, successful completion of which earns a Task Certification that is documented in their training records. Survey data is readily available to line supervision, Health Physics management and the ALARA supervisor for work planning and dose control. The inspector observed Health Physics supervision in the process of reviewing survey data which is also made available to Health Physics management. Survey records reviewed appeared to meet the requirements of 10 CFR 20.

- c. Review of records and discussions revealed that the licensee apparently has an effective program in identifying personal contamination and followup for satisfactory decontamination, cause of the contamination and evaluation of the significance including internal uptake. Tours and discussions revealed that Health Physics and other personnel are alert to identifying contamination problems with prompt correction and control of the situation. Proper contamination control and work techniques were observed throughout the plant. The licensee has been successful in decontamination during outages to levels permitting entry to most areas without protective clothing, including the Reactor Building outside the Biological Shield. Health Physics has a component, with a supervisor, devoted to waste handling, and a program to reduce wastes. Review of records, discussions and observations indicate that efforts to reduce waste have been successful and plans to further reduce waste are in progress.

7. Facilities and Equipment

Discussions and observations revealed that there has been no change in Health Physics facilities and equipment that has had an adverse effect on the program.

8. Occupational Exposure During Extended Outages

- a. Discussion and review of documentation revealed that extensive pre-planning for the current outage (removal of Steam Generator snubbers) was made by Health Physics, including the ALARA component. Changes since the last inspection in organization, personnel, facilities equipment, program and procedures are addressed in paragraph 5, 6 and 7 above. Training and qualification of personnel is addressed in paragraph 5 above.
- b. Reviews of records, discussion and observations revealed that the licensee's dosimetry program for external exposures provides adequate and appropriate dosimetry to meet the requirements of the license and 10 CFR 20. Administrative controls are designed to maintain external

exposures ALARA. Review of licensee dosimetry records, reports and notifications apparently meet the requirements of the license and 10 CFR 20.

- c. Determination was made by record review, discussion and observation that the licensee does assess individual intakes of radioactivity as required. Process and engineering controls were observed to be used to limit airborne radioactive materials. An energetic and apparently effective program for contamination control also contributes to lower airborne radioactivity concentrations. Respiratory protection equipment use is based on measured airborne concentrations and is always worn when a system is breached or at anytime there is a question of the magnitude of airborne concentrations. Review of records revealed that records, reports and notification apparently meets the requirements of 10 CFR 20.
- d. Controls of Radioactive Materials and Contamination, Surveys, and Monitoring

These activities are contained in paragraph 6 above.

- e. Maintaining Occupational Exposure ALARA

ALARA concepts are included in worker training and this is emphasized throughout work activities by Health Physics and other work groups. A specific Health Physics component with supervision is assigned specific responsibility for establishing and tracking ALARA goals and objectives. Discussions and reviews of records revealed that the responsibilities have been accomplished. Review of records showed that as of March 29, 1984, 9.498 Man-Rem had been expended for the current outage of a total 43.000 Man-Rem ALARA projected exposures for the entire outage. This represents 22.1% of the ALARA goal. Reviewing the work accomplished, and that remaining for the outage, exposures should level off or decrease so that the goal is attained or are comfortably under the goal.

9. Transportation and Solid Waste

Licensee procedures for packaging and shipping wastes were reviewed and discussed with the Health Physics supervisor responsible for this activity. No inadequacies were noted. The licensee's program for preparing shipping papers, including the requirements of 10 CFR 61, were reviewed and discussed and appeared to meet requirements. Inspection of the waste storage and packaging areas revealed no discrepancies. Relatively small quantities of waste were observed to be on hand and these were mostly dry compactible wastes or filters. A licensee representative stated that only small quantities of waste were on hand at the beginning of the outage. Review of licensee records showed that for the year 1983 the licensee shipped 2177 cubic feet of solid waste. As of May 1984, shipments of 3142 cubic feet had been made, however, this follows outage situations that generated a build-up in wastes to be shipped.