



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

FEB 12 1986

Report Nos.: 50-348/86-02 and 50-364/86-02

Licensee: Alabama Power Company
600 North 18th Street
Birmingham, AL 35291

Docket Nos.: 50-348 and 50-364

License Nos.: NPF2 and NPF-8

Facility Name: Farley 1 and 2

Inspection Conducted: January 13-17, 1986

Inspection at Farley site near Dothan, Alabama

Inspector: T. R. Collins 2/3/86
Date Signed

Approved by: C. M. Hosey 2/8/86
Date Signed
C. M. Hosey, Section Chief
Division of Radiation Safety and Safeguards

SUMMARY

Scope: This routine, unannounced inspection involved 38 inspector-hours on site during regular hours in the area of radiation protection including external exposure control; internal exposure control; training and qualifications of personnel; radioactive materials control, posting and labeling; and program for maintaining exposures as low as reasonably achievable (ALARA).

Results: No violations or deviations were identified.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

J. Woodard, General Manager
D. Morey, Acting General Manager, Operations
C. D. Nesbitt, Technical Manager
R. D. Hill, Manager of Operations
M. W. Mitchell, Health Physics Group Supervisor
P. E. Farnsworth, Health Physics Sector Supervisor
B. P. Patton, Plant Health Physicist
J. K. Osterholtz, SSAER
W. G. Ware, Quality Control Supervisor

Other licensee employees contacted included five technicians, two operators, two mechanics, three security force members, and two office personnel.

NRC Resident Inspectors

W. H. Bradford, Senior Resident Inspector
B. R. Bonser, Resident Inspector

2. Exit Interview

The inspection scope and findings were summarized on January 17, 1986, with those persons indicated in paragraph 1 above. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters

(Closed) Violation 50-348/85-34-01 and 50-364/85-34-01, Failure to comply with burial ground requirements in that sludge lancing filters in drums had greater than 0.5% free standing liquid. The inspector reviewed and verified the corrective actions as stated in Alabama Power Company's letter of September 26, 1985.

(Closed) Violation 50-348/85-34-02 and 50-364/85-34-02, Failure to adequately establish a procedure for filter sludge handling. The inspector reviewed and verified the corrective actions as stated in Alabama Power Company's letter of September 26, 1985.

4. Training and Qualifications (83723)

a. Basic Radiation Protection Training

The licensee was required by 10 CFR 19.12 to provide basic radiation protection training to workers. Regulatory Guides 8.27, 8.29, and 8.13, outline topics that should be included in such training. Chapters 12 and 13 of the FSAR contain further commitments regarding training. The inspector discussed the initial and refresher general employee radiation protection training (GET) with the Training Supervisor and reviewed lesson plans to determine what changes had been made in GET training and the scope of these changes. The inspector attended site specific GET training sessions for selected topics where the program had been changed. The inspector reviewed the GET training records for several workers to determine if records reflected adequate completion of GET initial and refresher training.

b. Radiation Protection and Chemistry Technician Qualification

The licensee was required by Technical Specification 6.3 to qualify radiation protection and chemistry technicians in accordance with ANSI N18.1-1971. The inspector observed the radiological controls established by a radiation protection technician covering the receipt of new fuel. The inspector discussed with the technician these observed controls and those specified on the RWP. The inspector reviewed training records for selected technicians to assure all topics were completed. The inspector discussed, with one radiation protection technician-in-training, the qualification program and assignments to assure that they had not been assigned to work independently and had been qualified for assigned tasks.

The inspector reviewed the program for qualification of contract radiation protection technicians. The inspector also discussed the training and qualification program the licensee had provided, what limits had been placed on their activities, and controls that should be established for one task they were qualified to perform. The inspector reviewed the resumes, training records, and tests for selected contract technicians.

c. Radiation Protection and Chemistry Foreman Qualifications

Technical Specification 6.4 required radiation protection and chemistry supervisory staff have four years experience in their specialty. The inspector discussed, with the Health Physics' Group Supervisor, the qualifications of selected foreman from the radiation protection, section training and experience and selected duties and responsibilities of the respective positions. The inspector reviewed the records of these individuals' experience.

d. Respiratory Protection Training

The licensee was required by 10 CFR 20.103 to establish a qualification program for workers who wear respiratory protective equipment. Elements of the qualification program outlined in 10 CFR 20.103 were delineated in NUREG-0041. The inspector observed workers using respirators while they were performing maintenance in the auxiliary building. The inspector discussed this use with the radiation protection technician covering the job. The inspector reviewed selected workers' respirator qualification records. The inspector reviewed recent changes in the respirator qualification program and discussed these changes with the Health Physics' Group supervisor.

No violations or deviations were identified.

5. Organization and Management Controls (83722)

a. Organization

The licensee was required by Technical Specification 6.2 to implement the plant organization specified in Table 6.2-2. The responsibilities, authorities, and other management controls were further outlined in Chapters 12 and 13 of the FSAR. Technical Specification 6.2 specified the members of the Plant Operations Review Committee (PORC) and outlined its functions and authorities. Regulatory Guide 1.8 specifies certain functions and responsibilities to be assigned to the Health Physics Group Supervisor and radiation protection responsibilities to be assigned to line management.

The inspector reviewed recent changes to the plant organization, to determine their effect on plant radiological controls, by examining the resulting changes to administrative procedures and position descriptions and discussing the changes with the Health Physics Group Supervisor.

The inspector discussed with the radiation protection supervisor and the Plant Health Physicist, the type, methods of, and degree of interaction between plant groups. The inspector discussed with the Health Physics Group Supervisor and selected Radiation Protection Supervisors and Foremen, how frequently they toured the plant and radiation control areas.

b. Staffing

Technical Specification 6.3 specified minimum plant staffing. FSAR Chapters 12 and 13 also outlined further details on staffing. The inspector discussed authorized staffing levels vs. actual on-board staffing separately with the Health Physics Group Supervisor. The inspector examined shift staffing for the day shift on January 15, 1985, to determine if it met minimum criteria for radiation protection.

No violations or deviations were identified.

6. Control of Radioactive Materials and Contamination, Surveys, and Monitoring (83726)

The licensee was required by 10 CFR 20.201(b) 20.403, and 20.401 to perform surveys to show compliance with regulatory limits and to maintain records of such surveys. Chapter 12 of the FSAR further outlines survey methods and instrumentation. Technical Specification 6.8 required the licensee to follow written procedures. Radiological control procedures further outlined survey methods and frequencies.

a. Surveys

The inspector observed, during plant tours, surveys being performed by radiation protection staff. The inspector reviewed two Radiation Work Permits, to determine if adequate controls were specified. The inspector discussed the controls and monitoring with the radiation protection technician assigned. The inspector performed independent radiation level surveys.

During plant tours, the inspector observed radiation level and contamination survey results outside selected cubicles. The inspector performed independent radiation level surveys of selected areas and compared them to licensee survey results. The inspector reviewed selected survey records for the month of January 1985 and discussed with licensee representatives methods used to disseminate survey results. The inspector noted that there were very few locked high radiation areas outside containment. The radiation protection manager informed the inspector that they normally flush systems routinely to eliminate high radiation levels within the auxiliary building.

b. Frisking

During tours of the plant, the inspector observed the exit of workers and movement of material from contamination control to clean areas to determine if proper frisking was performed by workers and that proper direct and removable contamination surveys were performed on materials. The inspector reviewed records of skin contamination occurrences and resulting evaluations and corrective actions. Records and discussions with licensee representatives showed contamination had been promptly removed from the workers using routine washing techniques. Subsequent whole body counts showed less than detectable internal deposition of radioactive material.

c. Instrumentation

During plant tours, the inspector observed the use of survey instruments by plant staff and compared plant survey meter results with results of surveys made by the inspector using NRC equipment. The inspector examined calibration stickers on radiation protection

instruments in use by licensee staff and stored in the radiation protection laboratory. The inspector discussed with radiation protection technicians the methods for doing instrument source checks prior to each use and calibration methods. The inspector reviewed the procedures and methods for calibration of teletector high-range, RO-2a beta calibration, and frisker calibration.

d. Release of Materials for Unrestricted Use

The inspector discussed with selected radiation protection technicians, the program for survey-out of items from contaminated areas and reviewed the procedures for such release. The inspector observed release surveys performed by radiation protection technicians, and documentation of results. During tours of plant areas, the inspector observed posting of containers and performed independent surveys to determine if containers of radioactive material were properly identified.

No violations or deviations were identified.

7. Facilities and Equipment (83727)

FSAR Chapters 1 and 12 specified plant layout and radiation protection facilities and equipment. During plant tours, the inspector observed the contaminated clothing laundry, the flow of traffic thru change rooms, the use of temporary shielding and the use of glove bags, and ventilated containment enclosures.

No violations or deviations were identified.

8. Audits

The licensee was required by Technical Specification 6.2.3 to perform audits of radiological controls and chemistry operations. The inspector reviewed audits of the radiation protection operations dated December 1985; the responses to these audits; and the status of selective corrective actions resulting from the audits. The inspector discussed the results of these audits with licensee representatives. These audits identified several items needing corrective action. Corrective action had been initiated for all items. The audits were conducted using staff without technical backgrounds in radiological controls. The inspector informed licensee management that the audit staff should receive training in the discipline in which they audit to be able to perform more thorough reviews of their programs. Licensee management acknowledged the inspector's concerns.

No violations or deviations were identified.

9. External Occupational Dose Control and Personal Dosimetry (83724)

During plant tours, the inspector checked the security of the locks of several locked high radiation areas and observed posting of survey results and the use of controls specified on two radiation work permits (RWPs).

a. Use of Dosimeters and Controls

The licensee was required by 10 CFR 20.202, 20.201(b), 20.101, 20.102, 20.104, 20.402, 20.403, 20.405, 19.13, 20.407, and 20.408 to maintain worker's doses below specified levels and keep records of and make reports of doses. The licensee was required by 10 CFR 20.203 and Technical Specification 6.12 to post and control access to plant areas. FSAR Chapter 12 also contained commitments regarding dosimetry and dose controls. During observation of work in the plant, the inspector observed the wearing of TLDs and pocket dosimeters by workers. The inspector discussed the assignment and use of dosimeters with the Health Physics Group Supervisor and several technicians. During plant tours, the inspector observed the posting of areas and made independent measurements of dose to assure proper posting. The inspector reviewed recent changes to plant procedures regarding the use of TLDs and dosimeters.

b. Dosimetry Results

The inspector reviewed the TLD results for 1985. These results showed that no individuals received greater than five rems in 1985. For four individuals who received greater than 1.25 rems in one quarter, the inspector examined each individual's dosimetry file to determine if NRC Form 4's had been completed.

c. Management Review of Dosimetry Results

The inspector discussed the dosimetry results with the Plant Health Physicist and the Health Physics Group Supervisor. The inspector discussed administrative dose control extensions with selected supervisors and staff. The inspector discussed these cases with selected involved individuals and reviewed corrective actions.

No violations or deviations were identified.

10. Internal Exposure Control and Assessment (83725)

The licensee was required by 10 CFR 20.103, 20.201(b), 20.401, 20.403, and 20.405 to control uptakes of radioactive material, assess such uptakes, and keep records of and make reports of such uptakes. FSAR Chapter 12 also includes commitments regarding internal exposure control and assessment.

a. Control Measures

During plant tours, the inspector observed the use of temporary ventilation systems, containment enclosures, and respirators. The inspector discussed the use of this equipment with the Health Physics Group Supervisor and radiation protection technicians. The inspector reviewed recent changes to respiratory protection procedures.

b. Respiratory Maintenance and Issue

The inspector observed the issuance of respirators and reviewed records for several workers who were issued respirators to determine if they were qualified for the respirators issued. The inspector reviewed recent changes to respirator maintenance and issue procedures.

c. Uptake Assessment

The inspector observed operation of the whole body counter. The inspector also reviewed the results of the analyses performed for selected positive counts during 1985. The inspector reviewed the MPC-hour log for the third and fourth quarter 1985.

No violations or deviations were identified.

11. Maintaining Occupational Doses ALARA (83728)

10 CFR 20.1(c) specifies that licensees should implement programs to keep workers' doses ALARA. FSAR Chapter 12 also contains licensee commitments regarding worker ALARA actions.

a. ALARA Procedure Changes

The inspector reviewed recent changes to administrative procedures that implemented the elements of ALARA. The inspector discussed these changes with the Health Physics Group Supervisor and the ALARA Coordinator.

b. ALARA Reviews

The inspector reviewed the ALARA review documentation for activities during 1985 and discussed resulting actions with the ALARA Coordinator.

c. ALARA Reports

The inspector reviewed selected ALARA Reports for 1985 and the 1985 ALARA summary report and discussed the results with the ALARA Coordinator. The summary of tasks estimate for 1985 was 892.5 man-rems. The total cumulative dose for 1985 was 799.76 man-rems.

No violations or deviations were identified.

12. Radiological Deficiency Reports

The inspector selectively examined the Radiological Deficiency Reports for 1985 and resulting corrective actions and discussed these selected reports with the radiation protection manager.

No violations or deviations were identified.

13. Preparation for April 1985 Outage

a. Work Packages

The inspector discussed the preparations for the April 1986 outage with the Health Physics Group Supervisor and ALARA Coordinator and concluded from these discussions that work to be performed during the April outage had been reviewed. Also, a man-rem projection for the year of 1986 was 668.41 man-rem which is a 16% exposure reduction from the actual exposure received during 1985.

b. Radiation Protection and Chemistry Staffing

The inspector discussed with the Health Physics Group Supervisor and the ALARA Coordinator, the plans for supplemental staffing, including decon, shielding, and laundry staff, during the outage and subsequent startup. The inspector discussed methods to be used to select and qualify the staff with contractor support, proposed methods of supervision and limitations on task assignments.

No violations or deviations were identified.

14. IE Information Notice (92717)

The following IE Information Notice were reviewed to ensure receipt and review by appropriate licensee management.

- 85-06, Contaminated Breathing Air Systems
- 85-07, Contaminated Radiography Source Shipments
- 85-12, Recent Fuel Handling Events
- 85-43, Radiography Events at Power Reactors
- 85-46, Clarification of Several Aspects of Removable Radioactive Surface Contamination Limits
- 85-48, Respirators Users Notice: Defective Self-Contained Breathing Apparatus Air Cylinders
- 85-52, Errors in Dose Assessment Computer Codes and Report
- 85-92, Surveys of Wastes Before Disposal From Nuclear Reactor Facilities