



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

Report Nos. 50-348/80-15 and 50-364/80-18

Licensee: Alabama Power Company
600 North 18th Street
Birmingham, AL 35202

Facility Name: Farley

Docket Nos. 50-348 and 50-364

License Nos. NPF-2 and CPPR-86

Inspection at Farley Nuclear Site, near Ashford, Alabama

Inspector: John R. Wray
J. R. Wray

7/11/80
Date Signed

Approved by: William J. Murray
for A. F. Gibson, Section Chief, FFMS Branch

11 July 80
Date Signed

SUMMARY

Inspection on June 23-26, 1980

Areas Inspected

This routine, unannounced inspection involved 27 inspector-hours onsite in the areas of radioactive waste management for Unit 2 including the installation of filter systems, resin transfer lines, valve actuating radiation monitors, and variations of design from the FSAR; and releases from a recent steam generator tube leak in Unit 1.

Results

Of the areas inspected, no items of noncompliance or deviations were identified.

8009020477

DETAILS

1. Persons Contacted

- *W. G. Hariston, III, Plant Manager
- *J. D. Woodard, Assistant Plant Manager
- *K. W. McCracken, Technical Services Superintendent
- *D. E. Mansfield, Startup Superintendent
- *R. M. Coleman, Supervisor Engineer
- *J. W. Kale, Jr., QA Engineer
- *H. M. McClellan, General Plant Engineer I
- *W. B. Shipman, Maintenance Superintendent
- *C. D. Nesbitt, Chemistry and HP Supervisor
- *W. G. Gripentog, Chemistry and HP Foreman
- M. W. Mitchell, Chemistry and HP Foreman
- F. Watford, Fire Protection Engineer

Other licensee employees contacted included four technicians, two operators, and two security force members.

Other Organizations

- *J. N. Charlton, Lead Startup Engineer, Westinghouse
- L. Lindquist, Startup Engineer, Westinghouse

NRC Resident Inspectors

- *W. H. Bradford
- *J. P. Mulkey

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on June 26, 1980, with those persons indicated in Paragraph 1 above. With regard to the installation of Unit 2's laundry and solid waste processing systems, the plant manager stated that separate processing systems for each unit are not presently under consideration. Unit 2 laundry and solid wastes will be temporarily stored in Unit 2 installed equipment and transferred to Unit 1 for processing.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Valve Actuating Radiation Monitors

The inspector toured Unit 2 accompanied by a licensee representative and observed that the following Process and Effluent Radiological Monitoring System (PERMS) monitors were physically in-place: Plant Vent Gas Monitor (R-14); Boron Recycle System Distillate Monitor (R-16); Component Cooling Liquid Monitor (R-17); Waste Processing System Liquid Effluent Monitor (R-18); Steam Generator Liquid Sample Monitor (R-19); Steam Generator Blowdown Processing System Monitors (R-24 A and B); and the Spent Fuel Pool Exhaust Flow Gas Monitors (R-25 A and B). Section 11.3 of the FSAR describes the function which these monitors perform on a high radiation signal. The inspector reviewed the relative as-built locations of the monitors and the valves which they control, had the licensee functionally test the valve to ascertain the closure times, and concluded that the PERMS monitors listed above will be able to divert or terminate potential radioactive process streams as designed.

6. HEPA and Charcoal Filter Systems

The inspector examined the following gas treatment systems for adequacy of construction and the presence of required equipment: Radwaste Area Filtration System, Containment Purge Filtration System, Fuel Handling Area Filtration System, Steam Jet Air Ejector Filtration System, Penetration Room Filtration System, and the Control Room Filtration System. A licensee representative informed the inspector that the Penetration Room and Control Room Filtration Systems are the only safety-related units in the plant and that the Control Room Filtration System is common to both units. Since the common Control Room Filtration System had been previously inspected during a Unit 1 pre-op inspection, this system was not reviewed during this inspection.

At the time of the inspection, the internal components (pre-filters, HEPA filters and activated charcoal) were not installed in their filter housings. Each system had installed a prefilter/HEPA filter common mounting frame which was continuously welded to the housing in accordance with Regulatory Guide 1.52 (C.3.f), a continuously welded adsorber bank frame, bulkhead doorway entries to the upstream and downstream side of the HEPA filters and the upstream side of the adsorber banks as recommended by Regulatory Guide 1.52 (C.4.c), temperature sensing devices and differential pressure instrumentation, and adequate provisions for lighting as recommended in Regulatory Guide 1.52 (C.4.k).

The inspector noted that no apparent fire protection system was present as recommended by Regulatory Guide 1.52 (c.3.j). A licensee representative stated that the deluge and drain system had been eliminated due to recurring problems experienced at other facilities associated with inadvertant wetting of the adsorber and that in its place, temperature gauges have been installed

to monitor any heat rise in the filter housing. The inspector stated that an internal fire control system, not necessarily a deluge system, appeared to be required by the Regulatory Guide and that the item will remain open pending investigation into the reasons for removal of the deluge system and apparent approval of the revised design (50-364/80-18-01).

Regulatory Guide 1.52 (C.2.g) recommends that pertinent pressure drops across and flow rates through atmospheric cleanup systems be instrumented to signal, alarm, and record in the Control Room. The inspector noted that instrumentation exists to signal and alarm such readings in the Control Room, but no apparent recording device is available in the Control Room. This will remain an open item pending further evaluation (50-364/80-18-02).

The inspector noted that challenge atmosphere injection and sampling points were not installed on most systems. A licensee representative stated that the filter testing will be accomplished by an outside contractor and that the test procedure to ensure system integrity has not been written and approved. The inspector informed the licensee that the test procedure, including the location of the challenge atmosphere injection and sample points, will be reviewed during a future inspection (50-364/80-18-03).

A review of the system description of the Radwaste Area Filtration System as described in Section 9.4.3 of the FSAR revealed that certain rooms in the auxiliary building are designed to have individual room charcoal filters to mitigate the spread of potential radioactivity emanating from within. A licensee representative stated that this design was changed for Unit 2 and a single charcoal filter unit is now used to process exhausts from the Chemical and Laundry Drain Tank Room, the Waste Gas Decay Tank Room, the Waste Monitor Tank Room, and the Waste Gas Processing Area. The inspector observed the charcoal filter housing and concluded it was installed in accordance with acceptable industry standards, but expressed concern with the fact that this change in system design was not reflected in the FSAR (see Paragraph 8).

A licensee representative informed the inspector that the new Technical Support Center will possess its own filtration system. The inspector stated that the Technical Support Center Filtration System will be reviewed following installation and also expressed concern that no mention of the Technical Support Center is made in the FSAR (see Paragraph 8).

7. Spent Resin Sluice Lines

The inspector walked the spent resin sluice lines from the two primary demineralizer banks to the Spent Resin Storage Tank and from the Steam Generator Blowdown Processing System demineralizers to the Steam Generator Blowdown Spent Resin Storage Tank. No obstructions which would be likely to cause impaction of the resin during sluicing were observed. In addition, flush line connections were observed providing the ability to flush these lines if some inadvertent plugging develops.

Spent resin sluice lines were examined from the primary and steam generator blowdown spent resin storage tanks to the tie-in with Unit 1. The line leaving the steam generator blowdown spent resin storage tank rises approximately 30 feet prior to its connection with Unit 1. The inspector observed the step-type installation of the pipe run to reduce the possibility of immovable settling of resin if the transfer was terminated and had no questions. The connection lines from the Spent Resin Storage Tanks to Unit 1 run unshielded through the Steam Generator Blowdown System control panel room. The inspector discussed the potential exposure problems of this arrangement and was told that lead brick shielding will be installed at a later date (50-364/80-18-04). The inspector had no further questions or comments.

8. Variations of System Designs From FSAR

Section 11.3.7 of the FSAR states that "the sole release point of gaseous waste to the environment is the vent stack. There are no other building vents." When questioned about the Steam Jet Air Ejector (SJAE) exhaust, a licensee representative informed the inspector that SJAE exhausts to the atmosphere through the turbine building and that the FSAR was apparently in error. The inspector stated that the FSAR is the only official document available for preoperational inspection preparation and that since the FSAR is part of the application for an operating license, it must describe the as-built condition of the plant applying for a license (10 CFR 50.34(b)). The inspector told a licensee representative that this exact issue was raised during a preoperational inspection of Unit 1 (see RII Report 50-348/76-16) and that the plant committed to revising and correcting the FSAR.

In addition, the inspector provided the licensee with the following examples of discrepancies between FSAR sections and as build conditions: the presence of Technical Support Center (and its filtration system), and the change from individual room charcoal filters in the Radwaste Area to a centralized waste gas processing area filtration system.

The inspector also informed the licensee that as a result of post-TMI investigations, a change to 10 CFR 50.71 will require annual updates of the FSAR to ensure that the most current description of systems, components, and analyses are included. The modification to Part 50 will become effective July 22, 1980. A licensee representative stated that changes to the FSAR for Unit 2 to include variations from Unit 1 system designs, components, and analyses will be evaluated.

Updating the FSAR to reflect certain as-built systems on Unit 2 will be reviewed during a future inspection (50-364/80-18-05).

9. Steam Generator Tube Leak

On June 14, 1980, Unit 1 shut down in order to repair an identified tube leak in "B" Steam Generator. The inspector reviewed release data from the

Steam Jet Air Ejector and the Steam Generator Blowdown System as a result of the tube leak. No technical specification or regulatory release limit was exceeded.

The technical specification leak rate limit on primary to secondary leaks is 500 gallons per day. The maximum leak rate experienced was approximately 125 gallons per day. Radioactive releases to the environment are limited to that amount of radioactivity which will result in less than three millirad whole body exposure at the site boundary (worst sector) in any year. The inspector reviewed computer printouts from the on-line radiation effluent monitoring system and determined that all releases so far this year (including those due to the steam generator tube leak) have resulted in only $1.4E-03$ millirad whole body exposure. The inspector noted that the Steam Jet Air Ejector monitor setpoint (2000 cpm) was never exceeded.

A licensee representative informed the inspector that the defective steam generator tube will be plugged with mechanical plugs rather than explosive plugs. The inspector agreed that this should essentially eliminate potential particulate releases during tube plugging and had no further questions or comments.