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

Report Nos. 50-348/81-03 and 50-364/81-04

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

Facility Name: Farley Nuclear Plant

Docket Nos. 50-348 and 50-364

License Nos. NPF-2 and NPF-8

Inspection at Farley site near Dothan, Alabama

Inspectors: Virgil Brownlee for — 2/26/81
W. H. Bradford, Senior Resident Inspector — Date Signed

Virgil Brownlee for — 2/26/81
J. P. Mulkey, Resident Inspector — Date Signed

Approved by: P. Kellogg — 2/27/81
P. Kellogg, Section Chief, Projects Branch 2 — Date Signed

SUMMARY

Inspection on January 1-31, 1981

Areas Inspected

This routine inspection involved 140 inspector-hours onsite by two inspectors in the areas of plant tours, unit No. 1 plant operations, plant security, licensee event reports, Unit No. 1 containment integrated leak rate test, open items, Unit 2 pipe hanger review, Units 1 and 2 masonry walls modifications, Unit 2 pre-operational test program.

Results

Of the 8 areas inspected, no violations or deviations were identified.

DETAILS

1. Persons Contacted

   Licensee Employees

   W. G. Hairston, Plant Manager
   J. D. Woodard, Assistant Plant Manager
   D. Morey, Operations Superintendent
   R. S. Hill, Operations Supervisor
   W. D. Shipman, Maintenance Superintendent
   R. W. McCraken, Technical Superintendent
   D. E. Mansfield, Unit 2 Startup Superintendent
   Charles Nesbitt, C&HP Supervisor
   L. Williams, Training Superintendent
   J. A. Mooney, Project Manager Construction
   B. Hollands, QA Supervisor
   K. Pursell, Systems Completion Verification Supervisor

   Other Organizations

   Eugene Stover, Daniels Piping Project Engineer

2. Exit Interview

   The inspection scope and findings were summarized during management interviews, on January 16 and 30, 1981, with the Plant Manager and selected members of his staff. The licensee acknowledged the inspection findings.

3. Licensee Action on Previous Inspection Findings

   Not inspected.

4. Unresolved Items

   Unresolved items were not identified during this inspection.

5. Plant Tours

   Tours of selected plant areas were conducted throughout the reporting period. The following items, as available, were observed.

   a. Fire Equipment

      Operability and evidence of periodic inspection of fire suppression equipment.

b. Housekeeping

Minimal accumulations of debris and maintenance of required cleanliness levels in systems and areas during the Unit 1 refueling outage and preoperational testing of Unit 2.

c. Equipment Preservation
Maintenance of special preservative measures for installed equipment as applicable.

d. Component Tagging

Implementation and observance of equipment tagging for safety or equipment protection.

e. Communication

Effectiveness of public address systems in all areas toured.

f. Equipment Controls

Effectiveness of jurisdictional controls in precluding unauthorized work on systems tagged out for maintenance and for preoperational testing.

g. Security

Implementation of security provisions for both units.

6. Unit No. 1 Plant Operations

The inspectors reviewed plant operations to ascertain conformance with regulatory requirements, Technical Specifications and Administrative Procedure No. 16, "Conduct of Operation Operation Group". Station logs, such as the shift supervisor, shift foreman, control room operators, shift turnover, the out of service equipment log, night order log book, and the limited condition of operation log were reviewed. Observations were made of plant operations, monitoring instrumentation, radiation controls, fluid leaks, piping vibration, pipe hangers, certain valve positions, and control room alarm status indications. Discussions were conducted with plant operators throughout the plant concerning certain alarm functions and plant operation. Within the areas inspected, there were no violations or deviations identified.

7. Plant Security

The inspector verified that physical barriers were intact and that gates into the protected areas were closed and locked if not attended, that doors into vital areas were closed and locked or attended, and that isolation zones were free of visual obstruction.

The inspector verified that access into protected areas was controlled, that persons and packages were identified and authorized prior to entry into protected areas, and that all persons, packages and vehicles were searched prior to entry in accordance with regulatory requirements and security procedures.

Within the areas inspected, no violations or deviations were identified.

8. Review of Nonroutine Events Reported by the Licensee

The following licensee event reports were reviewed for potential generic problems, to determine trends, to determine whether the information included in the report meets the NRC reporting requirements, and to consider whether the correctrive action discussed in the report appears appropriate. Licensee action with respect to selected reports was reviewed to verify that the events were reviewed and evaluated by the licensee as required by the Technical Specifications, that corrective action was taken by the licensee, and that safety limits, limiting safety settings, and limiting conditions of operations were not exceeded. The inspector examined selected plant operations review committee minutes, incident reports, logs and records, and interviewed selected personnel.

LER-80-57 Residual Heat Removal Overprotection removed from service prior to Technical Specification requirements. (Plant Incident Report 1-80-403 and PORC meeting minutes No. 623 dated October 17, 1980)

LER-80-58 Reactor building containment tendon surveillance - unexpected lift off forces. (PORC Meeting Minutes No. 629- dated October 28, 1980)

LER-80-59 Penetration room exhaust and air filtration system - train B inoperable. (Plant Incident Report 1-80-450 and PORC Meeting Minutes No. 633, dated November 3, 1980)

LER-80-60 Inoperable diesel generator due to short circuit in voltage regulator. (Plant Incident Report 1-80-462 and PORC Meeting Minutes No. 636, dated November 6, 1980)

LER-80-61 Fire protection water storage tanks A and B level below limits (Plant Incident Report 1-80-514 and PORC Meeting Minutes No. 643, dated November 14, 1980)

LER-80-62 Diesel Generator 1-2A inoperable. (Plant Incident Report 1-80-500 and PORC Meeting Minutes No. 643, dated November 14, 1980).

LER-80-63 Emergency core cooling Valve 1-CVC-MOV-1150 inoperable. (Plant Incident Report 1-80-501 and PORC Meeting Minutes No. 647, dated November 18, 1980).

LER-80-64 Diesel Generator 1-B inoperable. (Plant Incident Report 1-80-502 and PORC Meeting Minures No. 644, dated November 17, 1980).

LER-80-65 Reactor Coolant Pump seal controlled leakage exceeded technical specification requirements. (Plant Incident Report 1-80-503 and PORC Meeting Minutes No. 645, dated November 17, 1980).

LER-80-66 Containment monitors R-11 and R-12 inoperable (Plant Incident Report 1-80-504/507 and PORC Meeting Minutes No. 654, dated November 24, 1980).

LER-80-67 Service water train A 125 VDC battery system inoperable. (Plant Incident Report 1-80-518 and PORC Meeting Minutes No. 649, dated November 19, 1980).

LER-80-68 River water pumps "B" train inoperable. (Plant Incident Report 1-80-510, 511, 512, 513, and PCRC Meeting Minutes No. 654, dated November 24, 1980).

LER-80-69 Service water lube and cooling water train A and B cross connected on Unit 1 and Unit 2. (Plant Incident Report 1-80-515 and PORC Meeting Minutes No. 655, dated November 25, 1980).

LER-80-70 Service water train "A" 125 VDC battery system inoperable.. (Plant Incident Report 1-80-523 and PORC Meeting Minutes No. 653, dated November 24, 1980).

LER-80-71 Containment monitors R-11 and R-12 inoperable (Plant Incident Report 1-80-505, 506, and PORC Meeting Minutes No. 654, dated NOvember 24, 1980)

LER-80-72 River water pumps train "B" inoperable (PLant Incident Report 1-80-509 and PORC Meeting Minutes No. 654, dated November 24, 1980).

9. Containment Integrated Leakage Rate Testing (CILRT) - Unit 1

The inspectors reviewed the licensee's Unit 1 containment Integrated Leakage Rate Test (CILRT) Procedure FNP-1-STP-117.0, Revision 1 and observed the performance of the testing. During the test procedure review and the observation of the CILRT the inspectors verified the following:

a. Instrumentation used for the test had been calibrated and the calibration dates were current.

b. Test prerequisites and initial conditions for the test had been met.

c. The appropriate and approved test procedure was used during the performance of the test.

d. Personnel conducting the test were knowledgeable of the test; personnel conducting the test were qualified and were able to interpret the test results.

e. Test data was collected and documented.

The CILRT commensed on January 14, 1981, and met the test acceptance criteria on January 16, 1981. the maximum allowable leakage rate (La) at the peak test pressure (Pa) of 48 + 4 - 0 Psig is 0.15%/day of the contained air mass.

To allow for possible deteriation of the containment boundary between periodic test, the leakage rate determined during the CILRT cannot exceed 75% of the above maximum allowable leakage rate values. The maximum allowable operational leakage rate for the CILRT is 0.113%/day. The calculated leakage rate at the peak test pressure of 51 psig is 0.044%/day. The 95% upper confidence limit is 0.050%/day.

The results of the CILRT including the adjustments, as required, for the local leak rate testing are to be submitted in a test report to the Commission within three months after completing the testing.

Within the areas inspected, no violations or deviations were identified.

10. Open Items

(Closed) Open Item (50-364/80-13-01). This open item concerned the repair and test of leaking General Electric medium voltage penetrations on Unit No. 1. The inspectors verified that corrective action was taken per approved procedures to resolve the electrical penetration air leakage. The inspectors noted that the same corrective action was performed on the Unit No. 2 containment electrical penetrations. The inspectors had no further questions.

Unit No. 2 Pipe Hangers and Piping Restraints

The licensee is performing a final as-built design verification on certain pipe supports on seismic/safety related piping systems.
The inspectors have selected certain pipe hangers and restraints for review and verification that the hanger/restraint is actually installed in accordance with the final as-built approved drawing. This inspection effort will continue on a weekly basis until all hangers/restraints have been completed by the licensee.

The inspectors reviewed the licensee's IEB-79-14 walkdown check list which includes the following:

a. Piping geometry check list.

b. Valve check list

c. Floor and wall penetration check list

d. Field configuration drawings which show actual field measurements and final hanger locations.

The inspectors have reviewed the following pipe hangers/restraints to verify that installation was in accordance with the final approved drawings.

Hanger Number	Field Change Request Number
2CCW-R-129	2M-51125
2SW-R-171	2M-53922
2CVC-R-259	2M-51917
2CVC-R-255	2M-51801
2RHR-R-8	2M-53540
2RHR-R-5	2M-51161
2CV-R-324	2M-51196
2CV-R-306	2M-50624

The licensee has committed to completing the hanger/restraint evaluation and modification prior to achieving initial criticality on Unit No. 2.

Units 1 and 2 Masonry Walls

The licensee found, in the course of preparing a response to IEB 80-11, that a substantial portion of the vertical reinforcing required in masonry walls on Unit 2 was not present. Similar testing was performed on Unit 1. The results of the Unit 1 testing was similar to Unit 2 in that the walls did not meet current design criteria.

The licensee has identified the concrete masonry walls which were deficient on Units 1 and 2 and has determined whether there is safety-related equipment attached to or in proximity to the walls.

The licensee's tabulation of deficient masonry walls is as follows:

	Unit 1	Unit 2
Case I (Safety-related equipment attached to wall)	27	14
Case II (Safety-related equipment in proximity to wall)	18	16
Case III (All remaining walls)	44	15
TOTAL	89	45

The licensee states that all re-evaluation and all repairs of Case I and Case II walls will be completed for Unit 1 prior to the return to criticality upon completion of the current refueling outage. The Unit 2 walls will be completed prior to Unit 2 initial criticality.

The inspector had no further questions.

Unit 2 Preoperational Test Program

The Unit 2 preoperational test status is as follows:

Tests required to be completed prior to initial fuel load.

002-5-002	DC System Cooling and Ventilation System Preop
013-3-001(P)	Fire and Smoke Detection System Cal and Functional Test
013-3-005(P)	Dry and Wet Sprinkler System Cal and Functional Test
013-3-006	Co2 System Cal and Functional Test
014-4-001(P)	Lighting Acceptance (DC Lighting in Control Room)
062-1-001	Inspection of Reactor Vessel Internals
062-5-002	R.V.1 Vib. Checkout Functional Test Inspection
081-5-003	Fuel Transfer System Preop with Dummy Assembly
081-5-004	Manipulator Crane Preop
099-3-001	Security System Preop

The following tests are to be completed prior to entering Mode 4.

009-5-002	River Water Preop
018-5-008	Loss of Air Preop
030-5-002	Control and Computer Room HVAC Preop
032-5-005	H and V (Rad) Preop
040-5-019	CVCS Recycle Preop
058-5-003	Reactor Protection Time Response
059-5-002	PACCGCS Preop
065-3-003	HEPA and Charcoal Filter Testing
065-5-002	Penetration Room Preop
072-5-004(P)	Gaseous Radwaste Preop

The following tests are to be completed prior to entering Mode 3.

002 5-003	Uninterruptible Power Supply Preop

The following tests are to be completed prior to entering Mode 2.

014-4-001(P)	Lighting Acceptance
063-5-006	Steam Generator Blowdown System Resin Processing Preop
069-5-023	Waste Evaporator Preop
076-3-001	Incore Instrument Cal and Functional Test
068-5-002	Solid Waste Preop