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

Report Nos.: 50-348/83-30 and 50-364/83-28

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

Docket Nos.: 50-348 and 50-364

License Nos.: NPF-2 and NPF-8

Facility Name: Farley 1 and 2

Inspection at Farley site near Dothan, Alabama

Inspectors: K. C. Butcher for W. H. Bradford, Senior Resident Inspector — 12/28/83 Date Signed

K. C. Butcher for W. H. Ruland, Resident Inspector — 12/28/83 Date Signed

Approved by: K. C. Butcher for F. S. Cantrell, Section Chief
Division of Project and Resident Programs — 12/28/83 Date Signed

SUMMARY

Inspection on November 11 - December 10, 1983

Areas Inspected

This routine inspection involved 168 inspector-hours on site in the areas of plant status, monthly surveillance observation, monthly maintenance observation, operational safety verification, independent inspection effort, physical protection, Technical Specification compliance, licensee event reports, Westinghouse hydrogen recombiner deficiency, Unit 2 RCS pressure transient, personnel qualification program, and IE Bulletin followup.

Results

In the areas inspected, no violations or deviations were found.

## REPORT DETAILS

1. Persons Contacted

   Licensee Employees

   W. G. Hairston, Plant Manager
   J. D. Woodward, Assistant Plant Manager
   D. Morey, Operations Superintendent
   R. S. Hill, Operations Supervisor
   W. D. Shipman, Maintenance Superintendent
   C. Nesbitt, Technical Superintendent
   L. Williams, Training Superintendent
   R. G. Berryhill, Systems Performance and Planning Superintendent
   L. A. Ward, I&C Supervisor
   M W. Mitchell, Health Physics Supervisor
   K. D. Rogers, Technical Supervisor
   J. Odom, Operations Section Supervisor
   T. Esteve, Planning Supervisor
   R. Bayne, Chemistry Supervisor
   J. Hudspeth, Document Control Supervisor
   K. Jones, Material Supervisor
   R. H. Graham, Security Supervisor
   L. W. Enfinger, Administrative Superintendent
   W. G. Ware, Supervisor, Safety Audit Engineering Review

   Other licensee employees contacted included technicians, operation personnel, maintenance and I&C personnel, security force members, and office personnel.

2. Exit Interview

   The inspection scope and findings were summarized during management interviews held throughout the reporting period on a weekly basis with the plant manager and selected members of his staff. The licensee acknowledged the inspection findings.

3. Licensee Action on Previous Enforcement Matters

   (Closed) Violation (50-348/83-23-01) The inspectors have reviewed the corrective action described in the licensee's letter of response dated November 10, 1983, and find the corrective action to be acceptable.

4. Unresolved Items

   Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. One unresolved item was identified. This item is discussed in paragraph 13.

5. Plant Status

Unit 1 and Unit 2 operated at normal power levels throughout this report period.

Non-routine maintenance activities included replacement of one cylinder liner, piston and connecting rod and other repair work on 1-2A diesel generator; the lower crank shaft on 2-C diesel generator thrust bearing was found to be scored and is being replaced; and a bushing (1 inch diameter x 1 inch long) from the discharge check valve on 1A - motor driven auxiliary feed pump was found to be missing and is assumed to be somewhere in the auxiliary feed water line or in a steam generator.

The licensee has performed an engineering evaluation to justify continued operation. This evaluation is available in the licensee docket control room.

6. Monthly Surveillance Observation

The inspector observed and reviewed Technical Specification required surveillance testing and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated; that limiting conditions for operation were met; that test results met acceptance criteria requirements and were reviewed by personnel other than the individual directing the test; that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel; and that personnel conducting the tests were qualified.

The inspector witnessed/reviewed portions of the following test activities:

FNP-1-2-STP-1.0 - Operations Daily Shift Surveillance Requirements.

FNP-1-STP-37.0 - Power Distribution Surveillance (Plant Computer Inoperable).

FNP-2-STP-9.0 - RCS Leakage Test.

FNP-1-STP-^2.18 - AFW Automatic Valve Position Verification.

FNP-2-STP-27.2 - On Site AC Distribution.

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

7. Monthly Maintenance Observation

Station maintenance activities of safety-related systems and components were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides, industry codes and standards, and were in conformance with Technical Specifications.

The following items were considered during the review: limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials were properly certified; radiological controls were implemented; and fire prevention controls were implemented.

Work requests were reviewed as follows to determine the status of outstanding jobs to assure that priority was assigned to safety-related equipment maintenance which may affect system performance:

a. Various instrument calibration and maintenance located throughout the plant.

b. Diesel generator 1-2A.

c. Diesel generator 2-C.

d. 1A motor driven auxiliary feedwater pump discharge check valve.

e. Various maintenance activities throughout the plant on unit 1 and unit 2 - safety-related and nonsafety-related.

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

8. Operational Safety Verification

The inspectors observed control room operations, reviewed applicable logs, and conducted discussions with control room operators during the report period. The inspectors verified the operability of selected emergency systems, reviewed tagout records, and verified proper return to service of affected components. Tours of the auxiliary, diesel, and turbine buildings were conducted to observe plant equipment conditions, including fluid leaks and excessive vibrations.

The following systems and components were observed/verified operational:

a. Station electrical boards in the control room and various boards throughout the plant for proper electrical alignment.

b. Certain accessible hydraulic snubbers.

c. Accessible portions of service water systems and component cooling water system.

d. Unit 1 feedwater suction and discharge and steam supply to the turbine driven auxiliary feedwater pumps.

e. Diesel generators and support systems.

f. High pressure safety injection.

g. Certain fire protection systems.

h. Unit 2 RHR pump rooms and heat exchangers.

i. Portions of various other systems (safety-related and nonsafety-related) were observed for proper alignment and operation on various plant tours throughout the report period.

On November 16, 1983, at 7:15 a.m., the inspector noted that a deficiency sticker was attached to unit 1 annunciator panel F. The operator informed the inspector that the audible alarm function of this annunciator panel was found to be non-functional at 12:10 a.m. A log entry had been made in the reactor operator's log, a work request had been issued and the item was noted on both the operator and the shift supervisor shift turnover forms.

The audible alarm was still nonfunctional at 2:30 p.m. No corrective action had been initiated. Corrective action was initiated at this time by the unit 1 shift supervisor. The audible alarm was repaired and became functional at 4:28 p.m. The audible alarm was nonfunctional for a period of 16 hours and 18 minutes.

There are in excess of 500 annunciator alarms on each unit control board; panel "F" has 37 alarm windows. Panel F annunciator alarms consist of: source range, intermediate range and power range alarms; other nuclear instrumentation alarms; and various alarms relating to reactor control rods. Panel F is located directly over the reactor control board section.

The nonfunctional audible alarm for this extended period of time places an undue burden on the reactor operator in that he is forced to be more attentative to this alarm panel which tends to divert his attention from the remainder of the control board. This situation should have been corrected in the earliest possible time.

The licensee states that the 11 p.m. to 7 a.m. shift supervisor determined that there were other work items of more importance to be completed due to a limited number of maintenance personnel on that shift. A work request was completed and sent to the planning section. This work request was discussed by the licensee during their morning meeting, as are all maintenance work requests. The decision was made to work on this item on the 4 p.m. - 11 p.m. shift.

This work request should have been given top priority for the reasons discussed above, and promptly corrected. The inspector will monitor work requests to insure they are being properly classified for prompt corrective action. This is inspector followup item (50-348/83-30-01).

9. Independent Inspection Effort

The inspectors routinely attended meetings with certain licensee management and observed various shift turnovers between shift supervisors, shift foremen and licensed operators during the reporting period. These meetings and discussions provided a daily status of plant operating and testing activities in progress as well as discussion of significant problems or incidents.

The inspectors observed various operator actions throughout the plant. The central work stations for these operators were reviewed to assure that proper up-to-date procedures and drawings were used and maintained.

The inspectors conducted plant inspection tours throughout the reporting period. These tours are for the purpose of observing housekeeping practices, fire protection and prevention, and general plant operations.

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

10. Physical Protection

The inspectors verified by observation and interviews during the reporting interval that measures taken to assure the physical protection of the facility met current requirements. Areas inspected included the organization of the security force, the establishment and maintenance of gates, doors, and isolation zones in the proper condition, that access control and badging were proper, and procedures were followed.

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

11. Technical Specification Compliance

During the reporting interval, the inspectors verified compliance with selected LCO and results of selected surveillance tests. The verifications were accomplished by direct observation of monitoring instrumentation, valve positions, switch positions and review of completed logs, records, and chemistry results. The licensee's compliance with LCO action statements were reviewed as they happened.

No violations or deviations were identified.

12. Westinghouse Hydrogen Recombiner Deficiency

The inspectors contacted the licensee concerning a 10 CFR 50.55(e) report dated August 26, 1983, on Westinghouse Hydrogen Recombiners Deficiency. The Westinghouse recombiners do not provide for bushings to protect the heater power cables which pass from a junction box on the side of the recombiner into the recombiner cabinet. Contact with the rough/sharp edges of the cabinet can cause damage to the power cable sheath.

The licensee has investigated their recombiners through Westinghouse Corporation. Westinghouse Corporation has informed them that the recombiners installed inside unit 1 and unit 2 containments do not have bushings installed on the power cable penetration. The licensee has requested resolution for this deficiency prior to unit 1 refueling outage scheduled for February 10, 1984. The licensee plans to correct this problem on unit 1 at this time. No time has been identified to correct the deficiency on unit 2 as yet.

This will be noted as an open item until correction is completed on both units. (348/83-30-03 and 364/83-28-01)

13. Unit 2 RCS Pressure Transient

The licensee stated in a special report to the NRC, dated November 14, 1983, that a RCS pressure excursion of greater than 700 psig occurred on unit 2 on October 15, 1983, at 1415 hours. At the time of the incident unit 2 was in mode 5, RCS pressure control in solid operation at 170°F, "A" RHR train and one charging pump in operation.

The pressure excursion was initiated when instrument air to the piping penetration room and the reactor containment building was inadvertently isolated. Letdown flow from the RCS isolated and the charging line flow fully opened. The RHR pressure relief valve did not limit the excursion as designed. The relief valve is sized to relieve the combined flow of all the charging pumps at relief set pressure.

The licensee inspected the relief valve on October 16, 1983, and found that the reason for the higher than expected pressure transient was improper assembly of the valve. The relief valve was last dissembled for maintenance in February 1978. This event was identified as unresolved pending further investigation (50-364/83-28-02).

14. Review of Nonroutine Events Reported by the Licensee

The following Licensee Event Reports (LERs) were reviewed for potential generic problems to determine trends, to determine whether information included in the report meets the NRC reporting requirements, and to consider whether the corrective action discussed in the report appears appropriate. Licensee action, with respect to selected reports, were reviewed to verify that the event had been reviewed and evaluated by the licensee as required by the Technical Specification, that corrective action was taken by the licensee, and that safety limits, limiting safety settings, and limiting conditions of operation were not exceeded. The inspector examined selected incident reports, logs and records, and interviewed selected personnel. The following reports are considered closed:

Unit 1

*83-068 - Containment sump narrow range level train A inoperable.

83-073 - Chlorine detector train A inoperable.

83-074 - Loop A hot and cold leg instrument channels inoperable.

*83-075 - Control room emergency air clean-up system damper HV-3626 failed.

83-076 - Control room emergency air clean-up system inoperable.

Unit 2

83-041 - Reactor Coolant Pump bus underfrequency relay inoperable.

83-044 - Penetration Room Filtration system A train inoperable.

*83-047 - Loss of off-site power.

83-049 - Reactor Coolant System chloride concentration out of specifications.

*The above licensee event reports were reviewed in depth. Operating and other records were reviewed.

15. Personnel Qualification Program

The inspectors verified that the licensee has established minimum qualification requirements for licensed and nonlicensed supervisors, foremen and operators; technicians, engineers, inspectors and repairmen.

The licensee reviewed the following documents during the inspection:

FNP-O-AP-15, Rev. 7 - Maintenance - Conduct of Operations.

FNP-O-AP-16, Rev. 13 - Conduct of Operations - Operations Group.

FNP-O-AP-17, Rev. 3 - Conduct of Operations - Chemistry and Health Physics Group.

FNP-O-AP-51, Rev. 6 - Instrumentation and Control Group Conduct of Operations.

FNP-O-AP-63, Rev. 1 - Conduct of Operations - Systems Performance Group.

FNP-O-AP-31, Rev. 6 - Quality Control Measures.

FSAR, Sect. 13.1.3. - Qualification Requirements for Nuclear Facility Personnel.

ANSI N18.1 - 1971 - Standard for Selection and Training of Personnel for Nuclear Power Plants.

The inspector noted that all adminsitrative qualification requirements meet the explicit requirements of ANSI N18.1 - 1971 except the qualifications of the Chemistry and Health Physics (C&HP) Technician as stated in AP-17. FSAR, Section 13.1.3.1.2.0, requires that the C&HP Technician have: two years of experience in speciality (chemistry or health physics). ANSI N18.1 - 1971, Section 4.5.2, requires that "technicians in responsible positions shall have a minimum of two years of working experience in their speciality." AP-17, Section 4.4.3, requires two years of experience in their discipline. The licensee currently substitutes the two year Associate of Science degree in Radiation Protection from Central Florida Community College or a four year science degree to fulfill one year of the experience requirement. This is not documented in AP-17. This is an open item (50-348/83-30-02).

The ANSI standard does not explicity allow substitution of training for experience for C&HP technicians. However, ANSI N18.1, Section 4.1, Qualifications - General, states that "training programs, the culmination of which involves actual reactor operation, may qualify as equivalent to nuclear power plant experience on a one-for-one time basis for up to a maximum of one year's credit." This implies that training may be substituted for experience where the individual actually performs job related tasks as part of this training. Three of thirteen HP technicians employed by the licensee use training to meet the experience requirements of ANSI N18.1; two individuals have four year science degrees and one is a Central Florida Community College graduate. Therefore, the inspectors find the substitution of training for experience for C&HP technicians, as implemented by the licensee, acceptable.

The inspectors had no further questions.

16. IE Bulletins

IEB-83-06, Nonconforming Materials Supplied by Tube Line Corporation Facilities.

Based on the inspection review of the licensee action and response dated November 18, 1983, the subject bulletin is closed.