



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

Report Nos.: 50-348/85-42 and 50-364/85-42

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 Conducted: October 11 - November 18, 1985

Inspectors: *W. H. Bradford* 12/2/85
W. H. Bradford Date Signed

B. R. Bonser 12/2/85
B. R. Bonser Date Signed

Approved by: *F. S. Cantrell* 12/2/85
F. S. Cantrell, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope: This routine, unannounced inspection entailed 154 inspector-hours on site in the areas of licensee action on previous enforcement matters, monthly surveillance observation, monthly maintenance observation, operational safety verification, and engineered safety system inspection, and TMI item II B.1.3., and containment building electric hydrogen recombiners.

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

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REPORT DETAILS

1. Licensee Employees

Persons Contacted

J. D. Woodard, Plant Manager
D. N. Morey, Assistant Plant Manager
W. D. Shipman, Assistant Plant Manager
R. D. Hill, Operations Superintendent
C. D. Nesbitt, Technical Superintendent
R. G. Berryhill, Systems Performance and Planning Superintendent
L. A. Ward, Maintenance Superintendent
L. W. Enfinger, Administrative Superintendent
J. E. Odom, Operations Sector Supervisor
B. W. Vanlandingham, Operations Sector Supervisor
T. H. Esteve, Planning Supervisor
J. B. Hudspeth, Document Control Supervisor
L. K. Jones, Material Supervisor
R. H. Marlow, Technical Supervisor
L. M. Stinson, Plant Modification Supervisor
W. G. Ware, Supervisor, Safety Audit Engineering Review

Other licensee employees contacted included technicians, operations 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 throughout the report period, with the general plant manager and selected members of his staff. The inspection findings were discussed in detail.

The licensee did not identify as proprietary any material reviewed by the inspector during this inspection.

3. Licensee Action on Previous Enforcement Matters (92702)

(Closed) Violation 348/84-17-01 - Based on a review and inspection of the corrective action described in the licensee letter of response dated August 21, 1984, this item is closed.

(Closed) Violation 348/84-20-01 - Based on a review and inspection of the corrective action described in the licensee letter of response dated September 29, 1984, this item is closed.

(Closed) Violation 348, 364/84-32-01 - Based on a review and inspection of the corrective action described in the licensee letter of response dated February 18, 1985, this item is closed.

(Closed) Violation 364/85-24-01 - Based on a review and inspection of the corrective action described in the licensee letter of response dated July 22, 1985, this item is closed.

(Closed) Violation 364/84-17-01 - Based on a review and inspection of the corrective action described in the licensee letter of response dated August 21, 1984, this item is closed.

(Closed) Violation 364/84-20-01 - Based on a review and inspection of the corrective action described in the licensee letter of response dated September 28, 1984, this item is closed.

4. Monthly Surveillance Observation (61726)

The inspectors 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 were met; that test results met acceptance criteria 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 inspectors witnessed/reviewed portions of the following test activities:

- FNP-2-STP 22.18 - Auxiliary Feedwater Automatic Valve Position Verification.
- FNP-2-STP 22.19 - Auxiliary Feedwater Normal Flow Path Verification.
- FNP-2-STP 33.0A - Solid State Protection System Train A Operability.
- FNP-2-STP 33.2A - Reactor Trip Breaker Train A Operability Test.
- FNP-2-STP 121 - Power Range Axial Offset Calibration.
- FNP-1&2 STP 109.0 - Power Range Neutron Flux Channel Calibration.
- FNP-1&2 STP 1.0 - Operation Daily and Shift Surveillance Requirements.
- FNP-2-STP 80.1 - Diesel Generator 2B Operability Test.
- FNP-2-STP-201.19 - RCS Loop Calibration and Functional Test.

Within the areas inspected no violations or deviations were identified.

5. Monthly Maintenance Observation (62703)

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 operations 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 to determine the status of outstanding jobs to assure that priority was assigned to safety-related equipment maintenance which may affect system performance. The following maintenance activities were observed/reviewed:

- Unit 2 TDAFW pump steam admission valve HV-3226 MWR 11597 and 11597A.
- 1C diesel generator "A" starting air compressor.
- Unit 2 TDAFW pump discharge check valve.
- 2C charging pump service water cooler.
- PCN-S8422530-Replacement of fire protection solenoid valve.
- 1C diesel generator PCN-S-831-1459 FNP-O-MP-28.182 ammeter/voltmeters.
- 1A hydrogen recombiner.

Within the areas inspected no violations or deviations were identified.

6. Operational Safety Verification (71707)

- a. The inspectors observed control room operations, reviewed applicable logs and conducted discussions with control room operations 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.
- b. The inspectors verified compliance with selected Limited Condition for Operations (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.

The following systems and components were observed/verified operational:

- Station electrical boards in the control room and various electrical boards throughout the plant for proper electrical alignment.
 - Certain accessible hydraulic snubbers.
 - Accessible portions of service water and component cooling water systems.
 - Units 1 and 2 suction and discharging piping and valves on auxiliary feedwater system.
 - Diesel generators and support systems.
 - Certain accessible portions of CVCS piping and valves to and from the charging/high head safety injection pumps.
 - Certain portions of RHR and containment spray systems.
 - Portions of various other systems (safety-related and nonsafety-related).
- c. The inspectors routinely attended meetings with certain licensee management and observed various shift turnovers between shift supervisors, shift foremen, and licensed operators. These meetings and discussions provided a daily status of plant operating, maintenance, and testing activities in progress, as well as discussions of significant problems.
- d. The inspector verified by observation and interviews with security force members 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; that access control and badging were proper; and procedures were followed.
- e. A possible generic problem leading to the inoperability of certain air operated valves with Cowan or Bettis piston actuators was discovered by the licensee. On October 9, 1985 following maintenance on the Unit 2 turbine driven auxiliary feedwater (TDAFW) pump steam admission valve (HV-3234B) the valve would not operate. Inspection revealed the valve cylinder exhaust vent plug had been painted over. A new breather plug was installed and the valve operated properly. It appears, with the vent plug painted over, leaking O-rings had allowed pressure to build up on top of the actuator piston and with the aid of spring pressure the valve would not operate. The failure of this valve did not cause the TDAFW pump to be inoperable because the parallel air operated steam admission valve was operable.

Within the exception of containment other air operated valves with actuators manufactured by Cowan Dynamics Limited or Bettis Corporation were inspected by the licensee. Other valves were found to have painted over vent plugs but none were inoperable. The containment air operated valves will be inspected during the next refueling outage on each unit. Also, the licensee is developing a new PM to replace vent plugs on a periodic basis.

7. Licensee Event Reports

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 setting and LCOs were not exceeded. The inspector examined selected incidents reports, logs and records and interviewed selected personnel. The following reports are considered closed:

Units 1 LER's

- | | | |
|-----------|---|--|
| 348/85-01 | - | Unsealed gaps above masonry walls. |
| 348/85-14 | - | Inadvertent start of diesel generator. |
| 348/85-12 | - | Reactor trip. |
| (Rev. 1) | | |
| 348/85-16 | - | Shorts in containment low voltage containment penetration modules. |

8. Engineered Safety Systems Inspection (71710)

The inspectors performed various system inspections during the inspection period. Overall plant conditions were assessed with particular attention to equipment condition, radiological controls, security, safety, adherence to technical specification requirements, systems valve alignment, and locked valve verification. Major components were checked for leakage and any general conditions that would degrade performance or prevent fulfillment of functional requirements. The inspectors verified that approved procedures and up-to-date drawings were used.

Portions of the following systems were observed for proper operation, valve alignment and valve verification:

- Auxiliary feedwater systems.
- Chemical volume control systems.
- Service water systems.
- Boric acid transfer system.
- Containment spray system including chemical additive system.
- Residual heat removal system.

The inspectors reviewed plant electrical alignment for specific AC buses, verified line-ups were in accordance with plant procedures, and as built configurations matched plant drawings. The general condition of equipment was checked to identify any items which could degrade plant performance.

The inspector compared Unit 2 electrical loads diagram (drawing D-203096 Rev. 0) with breaker name plate nomenclature and On-site Distribution Surveillance Test Procedure (STP) 27.2. The following discrepancies were identified: Inverter 2A, 2C and 2D AC supply breaker numbers listed on the loads diagram did not match numbers given in the STP and on the Motor Control Centers (MCC) 2A and 2B. Breaker numbers listed in the STP and on the MCC did match.

This will be carried as an Unresolved Item*. 50-364/85-42-01.

9. TMI Item II B.1 - Reactor Head Vents

Reactor Vessel head vents have been installed on Units 1 and 2. The inspectors have verified that the operation of these vents is included in appropriate plant procedures.

10. Containment Building Electric Hydrogen Recombiner

On March 11, 1985 Westinghouse Electric Corporation issued Technical Bulletin TB-85-08 which addressed possible damage to the insulation of the main power cables inside the Electric Hydrogen Recombiner. The damage could consist of frayed-chaffing of the cable braiding and deterioration of the cable insulation.

The vendor made various recommendations to alleviate possible inoperability of the recombining. The licensee has incorporated these inspection recommendations into Surveillance Test Procedure No. 600, "Electric Hydrogen Recombiner Visual and Electrical Test". This surveillance test is scheduled to be conducted during each refueling outage.

The inspector had no further questions.

*An Unresolved Item is a matter about which more information is required to determine whether it is acceptable or may involve a violation or deviation.