



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

Report Nos.: 50-348/84-20 and 50-364/84-20

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 Dates: July 11 - August 15, 1984

Inspection at Farley site near Dothan, Alabama

Inspectors: W. H. Ruland for
 W. H. Bradford, Senior Resident Inspector

8/30/84
 Date Signed

W. H. Ruland
 W. H. Ruland, Resident Inspector

8/30/84
 Date Signed

Approved by: F. S. Cantrell
 F. S. Cantrell, Section Chief
 Division of Reactor Projects

8/31/84
 Date Signed

SUMMARY

Scope: This routine inspection involved 182 inspector-hours on site in the areas of monthly surveillance observation, monthly maintenance observation, operational safety verification, independent inspection effort, engineered safety feature system walkdown, and reactor trip breakers.

Results: Two violations were identified. Violation of 10 CFR 50, Appendix B, criterion II and criterion XII.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

J. D. Woodard, Plant Manager
D. N. Morey, Assistant Plant Manager
W. D. Shipman, Assistant Plant Manager
R. S. 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, 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 throughout the report period and on August 16, 1984, with the assistant plant manager and selected members of his staff. The violations described in paragraphs 7 and 9 were discussed in detail. The licensee acknowledged the findings.

3. Licensee Action on Previous Enforcement Matters (92702)

Not inspected.

4. Unresolved Items*

There were 2 unresolved items identified during this inspection. See paragraph 9.

*Unresolved items are matters about which more information is required to determine whether they are acceptable or involve violations or deviations.

5. Monthly Surveillance Observation (61726)

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 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-2-STP-33.0 - SSPS Train A Operability Test.
- FNP-1&2-STP-1.0 - Operations Daily and Shift Surveillance Requirements Modes 1, 2, 3 and 4.
- FNP-2-STP-16.1 - Containment Spray Pump 2A - IST.
- FNP-1-STP-22.19 - AFW Normal Flow Path Verification.
- FNP-1-STP-612.0, Rev. 11 - RCP Bus Reactor Trip U.V. Relay Calibration.
- FNP-2-STP-33.1 - Safeguards Test Cabinet Train A Functional Test.

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

6. 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:

- a. Unit 1 component cooling water 20 inch butterfly valve Q1P16VG07C.
- b. Unit 2B reactor trip breaker.
- c. Unit 1 boric acid transfer pump.
- d. 1-B diesel generator.

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

7. Operational Safety Verification (71707)

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 inspectors verified compliance with selected Limited Condition for Operation (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 components cooling water systems.
- Units 1 and 2 suction and discharging piping and valves on auxiliary feed water 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).

The following discrepancies were identified:

- a. On July 25, 1984, at 10:29 a.m., Motor Control Center (MCC) 1-F was inadvertently deenergized. This caused a loss of control room lighting, control room ventilation and radiation monitor R-35. Emergency lighting came on and unit operation was not affected. The response of control room personnel was very good; the problem was diagnosed and corrected quickly.

The loss of power was caused by two electricians who opened a breaker compartment door on MCC 1-F which is interlocked to trip the electrical feed to the MCC. There was a sign on the door which warned that opening the door would trip the breaker. The electricians were looking for a spare compartment in which to store their tools until the next job.

The shift supervisor and/or the control room operators had not been notified and were unaware that a compartment door on MCC 1-F was to be opened. The inspectors have found that licensee personnel previously have opened safety-related and non safety-related electrical breaker compartments, for inspection and other reasons, without an approved work request and without the knowledge or permission of the shift supervisor.

- b. On July 16, 1984, at 8 a.m., the inspector found the manual operator portion of valve No. Q1P16V007C, located in the Unit 1 component cooling water pump room, disconnected from the valve stem and stored in cable tray No. AIDA1Z. The valve was being repaired under MWR-96648.

A similar incident was brought to the attention of the licensee in inspection report 348/84-10. The protection of electrical cable trays was discussed in the exit interview of April 10, 1984.

- c. On July 20, 1984, and throughout the report period, the inspectors identified several cable trays on which the cable tray covers were not properly attached and other problems associated with electrical cables.

The following is a partial list of discrepancies:

- Cable tray covers were found bowed into cable trays in Unit 1 cable spreading room. It appeared that excessive weight had been placed on the cable tray covers. The covers were not affixed to the cable trays.
- Cable tray covers as not properly attached to tray BIDD33.
- Cable tray cover loose in tray BHGZ21.
- 3 cable tray covers were not attached to any tray in Unit 1 auxiliary building west cable chase.

Conclusion of the inspector:

Unauthorized opening of electrical switchgear compartments for any reason without the knowledge and consent of the shift supervisor could cause safety related equipment to be rendered inoperable. In case of

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The placing of foreign equipment in electrical cable trays could cause damage to electrical cables and inhibit operation of safety related components. Cable trays cover deficiencies previously noted indicate a failure to maintain equipment in the as-built condition.

The above examples indicate inadequate protection and control of certain structures, systems and components important to safety as required by the licensee's accepted quality assurance program. This program is identified in chapter 17 of the FSAR.

This is a violation (348, 364/84-20-01).

8. Independent Inspection Effort (92706)

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 and testing activities in progress, as well as discussion of significant problems or incidents.

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

9. Engineered Safety Features System Walkdown (71710)

The inspectors performed a complete walkdown of the Auxiliary Feedwater (AFW) systems to verify system operability. The inspector verified that the system checklist in FNP-1/2-SOP-22.0, Rev. 10/6 AFW system, matched the system piping and instrumentation drawings. The applicable portions of the auxiliary steam system were verified against FNP-1/2-SOP-17.0 Rev. 15/9, Main and Reheat Steam. Correct valve, breaker and switch positions were verified. The following items were identified:

- a. Flexible conduit had pulled away from the solenoid valves for Q1N12V001B and Q2N12V001B, steam line 1C & 2C to TDAFW pump shutoff valve. The environmental qualification of the solenoids was not compromised. The licensee repaired the condition promptly.

- b. Manual operator for Q1N12V001B, steam line C to Turbine Driven Auxiliary Feedwater (TDAFW) pump shutoff valve, may have been partially restricting the movement of the valve. This incident was identified on August 15, 1984. This item is an Unresolved Item pending further inspector review. (348/84-20-04).
- c. Stainless steel bolts were used in the bonnet for carbon steel check valve Q1N23V002E. The check valve prevents back flow through the motor driven AFW discharge line for steam generator 1B. This item was identified by the inspector on August 15, 1984. This is an Unresolved Item pending further inspector review (348/84-20-05).
- d. The licensee has not recently verified that each automatic Flow Control Valve (FCV) in the flow path of the AFW system actuates to its correct position per Technical Specification 4.7.1.2.2.b.1. The licensee did perform FNP-1-ETP-4501 on November 25, 1982 and FNP-2-ETP-4542 on March 2, 1982. These procedures verified the modifications performed on the AFW systems. The surveillance test is required to be performed every 18 months during shutdown. The licensee will discuss this issue with NRR. AFW flow control valve testing is an Inspector Followup Item (348/84-20-03 and 364/84-20-03).
- e. On July 23, while walking down the Auxiliary Feedwater system and instrumentation, the inspector noted that LI 4132A&B for the Unit 1 Condensate Storage Tank (CST), indicating 0.5 to 11 feet of water, uses the same graduations as the RWST level indicators LI 4075A&B. While the RWST level is readable, the same graduations cannot be used for the CST indicators. PCN SM 79-5E installed the CST transmitters and indicators. The PCN required a new face to be constructed which was not done. Also, after installation, the transmitters and indicators were calibrated during March, 1981 and have not been calibrated since. These instruments are used during an accident to determine when to switch the suction of the AFW pumps from the CST to the service water system, and therefore are used in safety-related activities. As such, they fall within the bounds of the QA program and must be calibrated at specified intervals. No such interval was specified.

This is a violation (348, 364/84-20-02).

10. Reactor Trip Breakers (DS-416)

Reactor trip breaker B for Unit 2 failed to close during testing on August 14, 1984. The licensee found dirty contacts in the motor cut-off switch. The dirty contacts prevented the spring release coil from energizing, not permitting the breaker to close. The motor cut-off switch is common to all 600V load center breakers at Farley. The problem does not appear generic. No other breaker has had the same problem. The licensee has modified the reactor trip breaker maintenance procedure to include a resistance reading of the closing circuit. The inspectors had no further questions.

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