



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

Report Nos.: 50-348/85-43 and 50-364/85-43

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: November 19 - December 18, 1985

Inspectors: AW Johnson for
W. H. Bradford

1/9/86
Date Signed

AW Johnson for
B. R. Borner

1/9/86
Date Signed

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

1/9/86
Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed 105 inspector-hours on site in the areas of licensee action on previous enforcement matters, monthly surveillance observation, monthly maintenance observation, operational safety verification, and new fuel receipt and inspection.

Results: Within the areas inspected, one violation was identified in that approved procedures were not adhered to during new fuel receipt and inspection. This is discussed in paragraph 7.

REPORT DETAILS

1. Licensee Employees Contacted:

J. D. Woodard, General Plant Manager
D. N. Morey, Assistant General Plant Manager
W. D. Shipman, Assistant General 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 and on December 18, 1985, with the general plant manager and selected members of his staff. The inspection findings were discussed in detail. The licensee acknowledged the violation.

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

3. Licensee Action on Previous Enforcement Matters (92702)

This area was not inspected during this inspection period.

4. Monthly Surveillance Observation (61726)

During the inspection period, the inspector verified plant operations were in compliance with various TS requirements. Typical of these requirements were confirmation of compliance with the TS for reactor coolant chemistry, refueling water storage tank, emergency power systems, safety injection, emergency safeguards systems, control room ventilation, and direct current electrical power sources. The inspection verified that surveillance testing was performed in accordance with the approved written procedure, test

instrumentation was calibrated; limiting conditions for operation were met, appropriate removal and restoration of the affected equipment was accomplished, test result met requirements and were reviewed by personnel other than the individual directing the test; and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

Typical of the surveillance items that were witnessed in part or in full were various calibrations of the nuclear instrumentation radiation monitoring systems instrumentation, battery testing, auxiliary feedwater system testing, heat removal system testing, diesel generator testing and reactor protection system testing.

The following surveillance tests are discussed:

a. FNP-2-STP 33.2B - Reactor Trip Breaker Train B Operability Test.

On 12/16/85 during the performance of surveillance test STP-33.2B on Unit 1 B train reactor trip breaker, the trip breaker was opened and would not reclose.

The licensee declared a 6 hour LCO and immediately began troubleshooting. The problem was narrowed down to the breaker cubicle or a spurious trip signal. The licensee then determined that there was no problem with the trip breaker itself by placing a Unit 2 reactor trip bypass breaker in the Unit 1 B train trip breaker cubicle and determining that it also would not close. The problem was found in the trip contact actuated by the Auto Shunt Trip trip button. The contact had stuck in the closed position when the Auto Shunt Trip trip button had been depressed while performing the STP.

The problem with the contact was corrected and the surveillance test was performed again to verify operability of the B train reactor trip breaker. The problem with the trip breaker did not result in a reactor trip. The B train bypass breaker was closed throughout the entire event. The limiting condition for operation was not exceeded.

b. FNP-2-STP-80.5 - Diesel Generator Operability With Safety Injection Test Signal.

On 12/9/85 an 18 month surveillance test STP-80.5 was performed on 2B diesel generator. The surveillance test is designed to verify that on a Safety Injection test signal the diesel will auto start and all except specified essential auto diesel trips are automatically bypassed.

During the performance of the test after the diesel had automatically started, and in accordance with the test procedure, the Emergency Start reset pushbutton on the Emergency Power Board was depressed. The 2B diesel shutdown when the button was depressed. This was contrary to the requirements of the surveillance test.

An evaluation by the licensee determined that the shutdown signal came from a shutdown relay, with a 140 second timer, which was energized when the stop pushbutton or NEEP relay pushbutton was depressed earlier in the procedure. When the Emergency Start reset pushbutton was depressed before the 140 second timer had timed out the 2B diesel shutdown on a non-essential trip signal. This condition resulted from a circuit modification which the licensee had not incorporated into the test procedure; however, safety of the emergency diesels was not effected.

The inspectors verified that the modification had gone through the licensee's internal review process which requires that an evaluation be made which would determine if a procedure change was required, a training change notice be issued, and drawing changes be made if required. The reviewers determined that there was no safety significance to the diesel generator in regard to the affected surveillance test, which is performed on a 18 month basis, and therefore, no procedure change would be required. A training change notice is in the issue process and the appropriate drawings are being changed. The operability of the diesel generator was not compromised.

The licensee now recognizes that this subtle change to the diesel 140 second timer requires a procedure change. The licensee recognized this during the performance of the STP and has changed the procedure.

This is considered to be an isolated event. Inasmuch as this was licensee identified, corrected promptly and was not a violation that could reasonably be expected to have been prevented by the licensee's corrective action for a previous violation, a Notice of Violation will not be issued.

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:

- Replacement of battery cells in Unit 1 auxiliary building 125 V DC battery.
- 2 B diesel generator.
- Unit 1 service water emergency recirculation valve - Header A (pressure switch replacement).
- Unit 1 4160 V ACB's puffer tubes replacement.
- Unit 1 reactor trip breaker.

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 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.
- b. The inspectors verified compliance with selected Limiting Conditions 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 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. The inspectors reviewed the licensee's plans and actions for cold weather operations. The inspectors judge the plans and actions to be adequate.
 - f. The inspectors questioned the operability of the emergency air compressors on Units 1 and 2. These compressors are not included in the Technical Specifications. Their function is to supply emergency operating air to certain valves on the auxiliary feedwater system and the main steam power operated relief valves in case of a complete loss of the normal instrument air supply.

The surveillance which had been performed consisted of annual mechanical preventative maintenance procedure. This procedure required that compressors to be disassembled and checked. The compressor was reassembled and operated for a short period of time.

The licensee has prepared and initiated STP-65.0 "Emergency Air Compressor Operability Test." This procedure is designated "Safety Related" and will be performed by operations personnel.

The inspectors had no further questions.

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

7. Receipt, Inspection and Storage of New Fuel (60705)

On November 21, 1985, the licensee was unloading, inspecting and storing new fuel assemblies in the Unit 2 new fuel storage building. The receipt and inspection of the fuel was carried out under FNP-O-FHP-3.0 "Receipt and

Storage of New Fuel." The inspectors observed this operation for about 4 hour during the morning of November 21 and verified that the operators were briefed on each step of the procedure prior to performing the work, each operator was qualified Senior Reactor Operator who had no other duty assignments other than the fuel handling.

At 2:35 p.m., during the unloading of the last new fuel cask, a new fuel assembly fell from the cask during the unloading operation. The new fuel assembly cradle was being lifted by crane to the upright position. At the vertical position one of the new fuel assemblies pushed open the top clamp and fell out of the cradle. The fuel assembly come to rest in a slight twist position on the concrete floor. The damage observed was buckled grid straps and crushing of the internal spacers between the fuel rods. There was no release of contamination; there were no personnel injuries. The fuel assembly was sent back to Westinghouse corporation to be rebuilt.

The Fuel Handling Procedure, FNP-O-FHP-3.0 requires in step 4.12.4 "to break, but do not unfasten, each of the clamping frame fastener nuts except those on the top frame" prior to raising the new fuel carriage to the vertical position. The incident was caused by the top frame fastener being loosened while the assembly was in the horizontal position. When the assemblies reached the vertical position the assembly pushed open the top frame fastener and fell out. The top frame fastener was released by a licensed operator who came into the new fuel area as the last fuel assemblies were being prepared for unloading. The operator obtained a wrench to help the other operators unfasten the clamp frame assemblies. He had not been briefed on the procedure and was unaware that the top fasteners were not to be loosened. The operator should have been briefed on the fuel handling procedure prior to performing this work.

This is a violation for failure to follow an approved procedure (364/85-43-01).