



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

Report Nos. 50-348/81-29 and 50-364/81-32

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

Docket Nos. 50-348 and 50-364

License Nos. NPF-2 and NPF-8

Inspection at Farley site near Dothan, Alabama

Inspector:	<u><i>Vergil L. Brownlee Jr</i></u>	<u>1/28/82</u>
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SUMMARY

Inspection on November 16 - December 15, 1981

Areas Inspected

This inspection involved 190 inspector-hours on site by the resident inspectors in monthly surveillance observation, monthly maintenance observations, operational safety verification, Unit 1 outage, independent inspection effort, review of non-routine events, Unit 1 refueling, strike contingency plan, emergency exercise, plant trips, and IE Bulletin followup.

Results

Of the eleven areas inspected, no violations were found in eight areas; two violations were found in two areas (violation of Technical Specifications - paragraph 8) and (failure to follow procedures - paragraph 8).

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
C. Nesbitt, Technical Superintendent
L. Williams, Training Superintendent
R. G. Berryhill, Systems Performance and Planning Superintendent
L. A. Ward, Planning Supervisor
W. C. Carr, Chemistry and Health Physics Supervisor
M. W. Mitchell, Health Physics Supervisor
R. D. Rogers, Technical Supervisor
J. Odom, Operations Sector Supervisor
R. Bayne, Chemistry Supervisor
T. Esteve, Operations Sector Supervisor

Other licensee employees contacted included technicians, operating personnel, maintenance and I&C personnel, security force members, Westinghouse contract refueling and maintenance personnel, and office personnel.

2. Exit Interview

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

3. Licensee Action on previous Inspection Findings

(Closed 348/81-09-01 and 364/81-11-01) This item concerned the use of an inadequate crimping tool for connecting electrical leads to connecting lugs. The licensee has procured and placed into service calibrated crimping tools. The inspectors reviewed FNP-0-MP-5010 Calibration of Crimping Tools and FNP-0-MP-60-1 Crimping Tool Qualification Procedure.

The inspectors had no further questions.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. Monthly Surveillance Observation

The inspectors observed 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, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

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

FNP-2-STP-413(2)(1)	Power Range Functional Test - Channel 43
FNP-2-STP--38.0	Manual Reactor Trip Verification
FNP-2-STP-22.4	Auxiliary Feedwater Pumps 2A and 2B Auto Start Test
FNP-2-STP-42.0	Turbine Trip Functional Test
FNP-2-STP-29.1	Cycle 1 Shutdown Margin Calculation
FNP-2-STP-63.0	Area Temperature Monitoring
FNP-2-STP-70.0	Containment Sump Surveillance
FNP-1-ETP-310	Steam Generator Warming Test
FNP-1-STP-16.1	Containment Spray Pump 2A Inservice Test
FNP-1-STP-27.1	A. C. Source Verification

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

6. 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 and industry codes or standards and in conformance with Technical Specifications.

The following items were considered during this 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 used 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 is assigned to safety-related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

- A. 1-C Diesel Generator
- B. 2-C Diesel Generator
- C. RHR Pump seal replacement
- D. FNP-0-STP-160.11, Letdown line from 600 PSI Piping to VCT Hydrotest
- E. Leak reduction program
- F. Containment electrical penetration repair
- G. Unit 1 main electrical generator repair
- H. Various instrument calibration and repair throughout the plants

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

7. 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, turbine building and containment were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations. The inspectors by observation and direct interviews verified that the physical security plan was being implemented in accordance with the station security plan.

The inspectors observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection control. The inspectors walked down accessible portions of the following safety-related systems on Units 1 and 2 to verify operability and proper valve alignment:

- (1) RHR/Lo Head Safety Injection
- (2) Hi Head Safety Injection
- (3) Containment Isolation
- (4) Auxiliary Feed Water
- (5) Component Cooling Water

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

8. Unit 1 Outage

- a. On December 9, 1981 on the 7.a.m. to 3.p.m. shift the licensee was filling the Unit 1 steam generators (S/G's) to 25% level in preparation of certain testing. In the process of filling the S/G's with the auxiliary feedwater system, 1.B and 1.c S/G's were overfilled and pressurized to the point of lifting the power operated relief valves (PORV's) on the main steam lines on the associated S/G's. This is contrary to the requirement of step 3.5 of System Operating Procedure No. 16.3 - "Steam Generator Filling and Draining" which requires that prior to filling a S/G, verify that the

associated PORV is unisolated and open to prevent overpressurization. The manual valves before the PORV were open; the PORV's had not been opened.

The licensee had placed tygon tubing on the S/G wide range level taps for local indication of water level. The S/G's wide range level instrumentation did not show a level in the control room. The proceeding shift turnover indicated that the steam generators were drained. The instrument valves at the tygon tubing were opened but the level instrumentation root valves at the S/G's were not checked open. These valves had been closed and tagged on a previous tagging order to allow the relocation of the level transmitters per a design change.

The valve line up to the S/G level indication instrumentation had not been verified to be in service and operable prior to adjusting S/G levels as required by Section 5.3 of Administrative Procedure No. 16 - "Conduct of Operation - Operations Group", which states that - "System checklists are performed as a prerequisite requirement for the associated system operations."

The reactor operators log book did not contain entries which described the overfilling and pressurizing of 1-B and 1-C S/G.

Section 6.1 of Administrative Procedure No. 16 - "Conduct of Operation - Operations Group" requires that pertinent operations/evolutions which are necessary to provide adequate information or could be of significant historical value to be logged.

The above items represent three examples of failure to follow procedures. This is a violation of section 6.8. of the technical specifications. (50-348/81-29-01)

- b. On December 10, 1981 at 10 p.m. the licensee performed a "Loss of Offsite Power/Safety Injection (LOSP/SI) test on Unit No. 1. This test is required once per 18 months. The inspector observed this test. During the conduct of the test, 2-C diesel generator did not start as required. Investigation by the licensee revealed that isolation valves on both starting air receivers to diesel 2-C had been closed. These valves are required to be open for the diesel generator to be operable.

The licensee immediately complied with the action statement of the Unit 2 technical specifications. The air receiver were unisolated and the required surveillance testing was performed satisfactory. The diesel was declared operable.

Subsequent investigation by the licensee indicates that the air receivers were isolated in error and that the diesel was inoperable for 48 hours.

Diesel generator 2-C is a swing diesel and will supply emergency power to Unit 1 and Unit 2. Unit 2 was in operation and had been in operation since

November 30, 1981. The major load which this diesel supplies is the river water pumps which supply water to the service water lake.

The inoperable diesel generator is a violation of Section 3.8.1.1.b of Unit 2 technical specifications which requires that two diesel generator sets be operable when the reactor is in mode 1. (50-364/81-32-01)

The licensee has initiated corrective action to prevent the recurrence of this violation. This action consists of locking valves on the diesel generator air system in the correct position. The keys to the locks are under shift supervisory supervision. Any changes to the valve lineup will require a tagging order.

9. Independent Inspection Effort

The inspectors routinely attended meetings with certain licensee management and various shift turnovers between shift supervisors, shift foreman 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.

During plant tours the inspectors noted that lighting in certain areas was deficient due to burned out light bulbs. The area specifically noted was Unit 2-121 ft. level penetration room. This was pointed out to the licensee. The licensee has given priority to the maintenance and replacement of both A. C. and D. C. lighting.

The inspectors had no further questions.

10. Review of Nonroutine Events Reported by the Licensee

The following licensee events 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 corrective action discussed in the report appears appropriate. Licensee action with respect to selected reports was reviewed to verify that the event were 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 plant operations review committee minutes, incident reports, logs and records, and interviewed selected personnel.

Unit 1 LER's

81-09	Diesel Generator 1-2A inoperable
81-10	Diesel Generator 1B inoperable
81-12	Snubber inoperable
81-14	Turbine Driven Auxiliary Feedwater pump inoperable

81-17 Load Sequencer inoperable
 81-19 Radiation Monitors inoperable
 81-21 Diesel Generator 2C inoperable
 81-23 Diesel Generator 1-2A inoperable
 81-24 Diesel Generator 1-2A inoperable
 81-26 Diesel Generator 1C inoperable
 81-27 Diesel Generator 1-2A inoperable
 81-29 Fire main rupture
 81-30 Load sequencer inoperable
 81-31 Diesel Generator 1B inoperable
 81-32 Diesel Generator 1C inoperable
 81-40 Diesel Generator 1-2A inoperable
 81-41 Diesel Generator 1C inoperable
 81-42 Radiation Monitors inoperable
 81-43 Load Sequencer inoperable
 81-47 Inadvertent actuation of fire protection
 81-69 Charging pump aligned to bus without emergency power backup

Unit 2 LER's

81-02 Steam Generator code safety did not reset
 81-06 Diesel Generator 2B inoperable
 81-08 Load sequencer inoperable
 81-13 Diesel Generator 2B inoperable
 81-14 Load sequencer inoperable
 81-21 Overtemperature delta temperature, loop inoperable
 81-22 Recombiner oxygen analyzer inoperable
 81-23 Boric acid storage tank concentration low
 81-28 Steam flow transmitter inoperable
 81-36 Service water dilution flow recorder inoperable
 81-40 Stack effluent monitor inoperable
 81-41 Pressurizer level instrument inoperable
 81-42 Containment particulate radiation monitor inoperable
 81-44 Air ejector noble gas activity monitor inoperable

11. Unit No. 1 Refueling

The inspectors observed portions of the Unit 1 refueling activities to verify the following:

- a. That refueling activities were conducted by an approved procedure.
- b. That the fuel handling activities were under the direction of an operator holding a senior reactor operator's license who was present on the refueling floor at all times when fuel movements were made.
- c. A licensed operator was present in the control room and was in direct communication with the refueling floor.
- d. Core monitoring during refueling activities was in accordance with the Technical Specifications.

- e. That core maps, status boards and check sheets were maintained in accordance with approved procedures.
- f. The refueling crew had been trained and was experienced in refueling operations.
- g. That boron concentration determinations had been made and was maintained in accordance with Technical Specifications.
- h. That containment integrity was maintained in accordance with Technical Specifications.
- i. That housekeeping was maintained in the refueling area.
- j. That staffing during the refueling was maintained in accordance with Technical Specifications.

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

12. Implementation of Licensee Strike Contingency Plan

On November 23, 1981, a one day walkout was initiated by certain employees of Alabama Power Company at the Farley site. The shifts were manned by the normal licensed personnel. The licensee initiated certain portions of the Strike Contingency Plan.

The inspectors verified by observation, records, and discussion with various personnel that plant staffing during this interim period of operation were fully qualified to perform their functions and that shift manning met the requirement of the Technical Specifications.

The inspectors verified that normal shift operations resumed the following day.

13. Annual Radiation Emergency

The inspector witnessed the conduct of an emergency drill conducted on November 19, 1981. Portions of the drill were observed from the Technical Support Center, main control room and the health physics office.

The purpose of the drill was to train individual plant groups, test emergency equipment, evaluate Emergency Implementing Procedures and Emergency Procedures and to test communication systems with offsite agencies. The drill was coordinated with local county's civil defense organizations, the states of Alabama, Georgia and Florida, and Alabama Power company corporate offices.

Licensee Personnel involved in the exercise included radiation monitoring teams, emergency repair parties, plant emergency vehicle drivers, emergency

directors, technical staff, operating staff, plant fire brigade, plant security staff and chemistry and health physics staff.

The inspector attended a critique of the emergency exercise on November 20, 1981.

14. Plant Trips

- a. On November 30, 1981 Unit 2 tripped on loss of reactor coolant flow when No. 3 reactor coolant pump tripped on low voltage underfrequency. The unit sustained a loss-of-offsite power to "B" train when workmen in the switch yard control building jarred two auxiliary relays which caused two individual 230 KV feeder breakers to open which supply vital power to the unit. The appropriate diesel generators started and loads were sequenced back in service. All systems functioned as designed and the unit remained stable. The unit was placed back in service within four and one-half hours.

The inspectors had no further questions.

B. Power Reductions on Unit 2

There were two power reductions during the inspection period caused by O-ring failure in contact with EHC fluid. On November 25 an O-ring on the turbine controls to the turbine of 'A' main feedwater pump failed. On December 4 an O-ring on the control to a turbine intercept valve failed.

The operations staff responded rapidly to the problems and the systems responded properly.

15. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presented in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

IEB-80-09 Hydramotor Actuator Deficiencies

IE-80-15 Possible Loss of Emergency Notification System (ENS) with Loss of Offsite Power

IEB-80-23 Failures of Solenoid Valves Manufactured by Valcor Engineering Corporation

IEB-80-24 Prevention of Damage due to Water Leakage Inside Containment (October 17, 1980 Indian Point 2 Event).

IEB-80-16 Potential Misapplication of Rosemont Inc. Models 1151 and 1152
Pressure Transmitters with either "A" or "D" Output Codes

IEB-80-06 Engineered Safety Feature Reset Controls