



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

Report Nos. 50-348/81-17 and 50-364/81-20

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

Facility Name: Farley Nuclear Plant

Docket Nos. 50-348 and 50-364

License Nos. NPF-2 and NPF-8

Inspection at Farley, site near Dothan, Alabama

Inspectors: Virgil H. Brownlee for 8/4/81
 W. H. Bradford Date Signed

Virgil H. Brownlee for 8/4/81
 T. A. Peebles Date Signed

Approved by: Virgil H. Brownlee 8/4/81
 V. L. Brownlee, Acting Section Chief, Division of Date Signed
 Resident and Reactor Project Inspection

SUMMARY

Inspection on June 16 - July 15, 1981

Areas Inspected

This routine inspection involved 230 inspector-hours on site by the resident inspectors in operational safety verification, monthly surveillance observation, monthly maintenance observation, Unit 2 licensing condition, Unit 2 startup testing, independent inspection effort, review of plant operation, Unit 2 steam generator tube leak, licensee event reports, IE Bulletins and independent inspection effort.

Results

Of the 11 areas inspected no violations or deviations were found in ten areas; one violation was found in one area (violation of Technical Specifications - paragraph 5).

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
R. W. McCracken, Technical Superintendent
D. E. Mansfield, Unit 2 Startup Superintendent
C. Nesbitt, C&HP Supervisor
L. Williams, Training Superintendent
W. C. Carr, Supervisor of SAER
K. W. Kale, SAER Engineer
R. D. Rogers, Technical Supervisor
R. H. Marlow, Engineering Supervisor
L. A. Ward, Planning Supervisor
R. G. Berryhill, Systems Performance and Planning Superintendent
H. McClelland, Plant Engineer

Other licensee employees contacted included technicians, operating 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 on June 25, 1981 and July 15, 1981 with the plant manager and selected members of his staff. The licensee acknowledged the inspection findings.

3. Licensee Action on Previous Inspection Findings

Not inspected.

4. Unresolved Items

Unresolved items were not identified during this inspection.

5. 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 potential fire hazards, fluid leaks, and excessive vibrations and to verify that

maintenance requests had been initiated for equipment in need of maintenance. 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 the accessible portions of various safety-related systems on Units 1 and 2 to verify operability. The inspectors also witnessed portions of the radioactive waste system controls associated with radwaste shipments.

These reviews and observations were conducted to ascertain that facility operations were in conformance with regulatory requirements, Technical Specifications and Administrative Procedure No. 16, "Conduct of Operation - Operations Group".

On March 17, 1981 Unit No. 1 reactor was in Mode 5 (cold shutdown). During this time, at 1855 hours, diesel generator 1-2A was made inoperable by changing the diesel selector switch from mode 1 to mode 3 position. At 2320 hours, during the time diesel 1-2A was inoperable, Unit No. 1 reactor was changed from mode 5 to mode 4 (hot shutdown). Technical Specification section 3.8.1.1. is applicable in reactor Modes 1, 2, 3 and 4. At 2355 hours diesel generator 1-2A mode selector switch was changed from mode 3 (inoperable status) to mode 1 (operable status) and diesel generator 1-2A was declared operable.

This was identified and reported by the licensee in LER 348-81-09. The licensee also states that a plant operator had been instructed to place diesel generator 1-2A mode selector switch into the mode 1 position prior to entering mode 4 on Unit 1 reactor. This was not done.

On May 29, 1981 at 1200 hours, Unit No. 1 reactor was in mode 1 (Power Operation) and Unit No. 2 reactor was in mode 2 (Hot Standby). Diesel generator 1-2A mode selector switch was changed from mode 1 to mode 3 which made it inoperable. During the time diesel generator 1-2A was inoperable, Unit No. 2 reactor was changed from mode 2 to mode 1 (Power Operation). At 2235 hours diesel generator 1-2A was returned to operable status.

During the above event, the licensed reactor operators were aware that diesel generator 1-2A was not operable, but did not inform the shift supervisor of the inoperable status or question the reactor mode change or lack of testing of alternate power sources. Technical Specification section 3.8.1.1 requires that surveillances testing of the alternate A.C. power sources be performed within one hour and once each eight hours thereafter until the diesel is returned to service. The outage is not to exceed 72 hours. The operability testing was not accomplished.

This is two examples of an apparent violation of section 3.0.4 of the technical specification which requires that entry into an operational mode shall not be made unless all required equipment as specified in section

3.8.1.1 of the technical specification is operable. This violation is identified as Violation No. (348/81-17-01 and 364/81-20-01).

The inspectors have reviewed and discussed the licensee's immediate corrective actions concerning the licensed personnel involved in these incidents.

The licensee has counseled the personnel involved and has stressed the importance of communications and strict Technical Specification compliance. The licensee has included these incidents in the licensed operator requalification training.

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: the 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 control were implemented; and, fire prevention controls were implemented.

Work requests were reviewed to determine the status of outstanding jobs and to assure that priority is assigned to safety-related equipment maintenance which may affect system performance.

The following maintenance activities were observed/reviewed:

1. 2B-diesel generator voltage regulator.
2. 1B-charging pump preventive maintenance on the air circuit breaker.
3. Charging pump lube oil cooler gasket replacement.

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

7. Monthly Surveillance Observation

The inspector 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 removal and restoration of the affected components were accomplished, 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-1(2)STP-1.0 - Operations Daily and Shift Surveillance.
 FNP-2-UOP-1.2 - Startup of Unit from hot Standby to Minimum Load.
 FNP-1(2)STP-28.1 - Diesel Generator 1C(2c) Operability Test.
 FNP-2-STP-19.3 - Reactor Cavity Cooling Hydrogen Mixing and Post
 LOCA Vent and Sample Valves Inservice Test.
 FNP-2-UOP-2.1 - Shutdown of Unit from Minimum Load to Hot Standby.
 FNP-2-UOP-1.2 - Appendix 1 - Calculation of Estimated Critical Condition.
 FNP-1(2)-STP-35.1 - Unit Startup Technical Specifications Verification.
 FNP-2-STP-35.1A - Mode 2 Surveillance Check list.
 FNP-2-STP-35.1B - Mode 1 Surveillance Check list.
 FNP-1(2)-EOP-5.0 - Reactor Trip.

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

8. Unit Nos. 1 and 2 NUREG 0737 Requirements

The inspectors verified by direct observation and review of records that the following requirements had been completed.

Task Action Item I.C.6.

Plant verification policies for equipment important to safety include an independent verification by a second person qualified on the system.

Task Action Item II.D.3.

The reactor coolant system relief and safety valves have been provided with a positive indication in the control room which meets the specified requirements.

Task Action Item II.E.4.1

This item is not applicable to these plants as the hydrogen recombiners are inside the containment.

Task Action Item II.E.4.2

Containment isolation dependability changes have been completed to bring the Units into compliance.

Task Action Item III.D.1.1

The leak reduction program has been implemented and witnessed by the inspectors.

9. Unit 2 Startup Testing

The inspectors witnessed portions of the following power escalation testing on all shifts and fully reviewed the test results and evaluations of all testing to date. The performance of each test was evaluated against the requirements of ANSI N18.7-1972 Section 6.0, "Test and Inspection Procedures", ANSI N45.2-1971, Section 12, "Test Control", FSAR Chapter 14, "Initial Tests and Operations", and Regulatory Guide 1.6, 1.9 and 1.41. Testing was satisfactory.

500-7-524 - Turbine Trip at 50% Power Without Reactor Trip
 500-7-211 - Incore/Excore Cross Calibration
 500-7-301 - Thermal Power Measurement and State Point Measurements
 500-7-210 - Reactor Coolant System Flow Measurement at 75% Reactor Power.
 500-7-050 - Radiation Survey (75% Power)
 FNP-2-STP-151.4 - Main Turbine Overspeed and Protective Device Trip
 500-7-532 - 50% Load Reduction Test from 75% Power
 This test was conducted at a 100% per minute ramp rate.

10. 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.

11. Review of Plant Operations

During the report period the inspectors reviewed the following activities:

a. Review and Audits

The inspectors reviewed audits conducted by the Safety Audit and Engineering Review Group. These audits consisted of the following

1. Plant Operations - dated February 9 through April 9, 1981.
2. Corrective action on previous audits dated March 17 through April 21, 1981.
3. Environmental Monitoring dated March 24 through April 24, 1981.

b. Environmental Protection

The inspectors verified the installation and operation of certain environmental monitor stations and associated equipment.

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

12. 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 correction action commitments based on information presentation 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.

IE Bulletin 80-08 - Examination of Containment Liner Penetration Welds.

IE Bulletin 80-21 - Valve Yokes Supplied by Malcolm Foundry Company, Inc.

13. Unit No. 2 Steam Generator Tube Leak

On June 22, 1981 the licensee determined that there was a steam generator tube leak in the 2-A steam generator. The primary to secondary leakage was determined to be .11 gallons per minute.

The unit was removed from service at 1930 hours on June 22, 1981.

Investigation revealed a tube leak in a peripheral tube on the hot side of 2-A steam generator.

Damage to the tube was believed to have been caused during cleanup of the steam generator tube lanes following the installation of inspection ports.

The leaking tube was plugged with mechanical plugs. The generator was pressure tested and the unit was returned to service.

14. 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 events 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.

81-08 Fuel Pool Area Radiation Monitor Surveillance Not performed on schedule.

81-11 Containment Auxiliary Personnel Air Lock Inoperable

- 81-13 Reactor Control Rod Inoperable
- 81-15 Feed Water Flow Transmitter Valve Inoperable
- 81-16 Reactor Coolant Temperature indicator Inoperable
- 81-18 Nuclear Instrument-Intermediate Range Inoperable
- 81-19 Containment Air Radiation Monitors Inoperable
- 81-22 Reactor Coolant Temperature Loop Inoperable
- 81-25 Pressurizer Pressure Indicator Inoperable
- 81-33 Boric Acid Transfer Pumps Valved Out of Service
- 81-34 Refueling Water Storage Tank Level Indicator Inoperable
- 81-35 Component Cooling Water Valve Position Indicator Inoperable
- 81-39 Turbine Driven Auxiliary Feed Pump Trip on Overspeed

Unit 2 LER

- 81-01 Containment Personnel Air-Lock Inoperable
- 81-03 Fuel Pool Area Radiation Monitor Inoperable
- 81-04 Audible Count Rate in Containment Inoperable
- 81-05 Digital Rod Position Indication Inoperable
- 81-07 Containment Atmosphere Radiation Monitors Inoperable
- 81-09 Pressurizer Pressure Transmitter Inoperable
- 81-10 Containment Atmosphere Radiation Monitor Inoperable
- 81-15 Waste Gas Recombiner Oxygen Concentration High
- 81-16 Reactor Coolant Temperature Low
- 81-17 Control Room Ventilation Chlorine Detector Inoperable
- 81-18 Steam Flow Instrumentation Loop Inoperable
- 81-19 Vent Stack Effluent Radiation Monitor Inoperable
- 81-20 Reactor Coolant System Leakage Test Not Done on Time

81-21 Overtemperature-Delta Temperator Instrumentation Loop
 Inoperable