



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

Report No. 50-348/79-23

Licensee: Alabama Power Company  
600 North 18th Street  
Birmingham, Alabama 35291

Facility Name: Farley Unit 1

Docket No. 50-348

License No. NPF-2

Inspection at Farley Site near Ashford, Alabama

Inspectors: *K. H. Verderer for* 6/21/79  
A. K. Hardin (June 4-7, 1979) Date Signed

*G. A. Belisle* 6/21/79  
G. A. Belisle (June 6-8, 1979) Date Signed

Approved by: *K. H. Verderer for* 6/21/79  
E. H. Verdery, Acting Section Chief, RONS Date Signed  
Branch

SUMMARY

Inspection on June 4-7, 1979

Areas Inspected

This special, announced inspection involved 57 inspector-hours onsite in the areas of the licensee's actions taken in response to IE Bulletins 79-06, 79-06A, and 79-06A, Revision 1; and to inspect plant operations.

Results

Of the two areas inspected, no apparent items of noncompliance or deviations were identified.

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## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*W. G. Hairston, Plant Manager
- \*\*J. D. Woodard, Assistant Plant Manager
- \*K. W. McCracken, Technical Superintendent
- \*D. C. Poole, Operations Superintendent
- \*J. W. Kale, Operations Quality Assurance
- \*\*\*J. E. Garlington, Operations Supervisor
- \*\*\*R. D. Hill, Plant Quality Assurance Engineer

Other licensee employees contacted included technicians, and operators.

- \*Attended June 7 and June 8 exit interview.
- \*\*Attended June 7 exit interview only.
- \*\*\*Attended June 8 exit interview only.

### 2. Exit Interview

The inspection scope and findings were summarized on June 7 and June 8, 1979 with those persons indicated in Paragraph 1 above. There were no questions raised by the licensee regarding the findings. The licensee stated they were taking certain actions which they believed would enhance their safety program. These actions are noted in the report as open items associated with a specific inspection area.

### 3. Licensee Action on Previous Inspection Findings

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

### 5. Bulletin 79-06, 79-06A, and 79-06A, Revision 1

The review and verification of licensee actions related to the bulletins listed above was separated into three categories. These were: (1) onsite review of operator training; (2) onsite inspection of engineered safety features (ESF); and (3) onsite assessment of operating procedures.

Item 1, onsite review of operator training is reported in IE Report Number 50-348/79-22. Also, the assessment of operator awareness of the criteria for operation of reactor coolant pumps and how to determine the 50 degree subcooling of the RCS, as specified in Bulletin 79-06A, is reported in IE Report No. 50-348/79-22. All other inspection items related to the above bulletins are reported below.

A. Onsite Inspection of Engineered Safety Features

(1) Inspection of Engineered Safety Feature (ESF) Procedures and Alignments

The inspector reviewed ESF system valve, breaker and switch alignment operating procedures against current drawings to verify the adequacy of alignment procedures. In addition, a system walkdown of ESF operating procedures was performed to verify that accessible valves, breakers and switches were in the proper position. The following ESF system operating procedures (SOP's) were reviewed and walked down:

SOP 7.0 Residual Heat Removal System DWG. 175041

SOP 8.0 High Head Safety Injection System DWG. 175038

SOP 9.0 Containment Spray System DWG. 175038

SOP 22.0 Auxiliary Feed System DWG. 175007

SOP 23.0 Component Cooling Water System DWG. 175002

SOP 24.0 Service Water System DWG. 170119

(2) Review of ESF Surveillance Test and Maintenance Procedures

The inspector reviewed the following surveillance test procedures and maintenance procedures to verify that when they are completed the systems will be returned to an operable condition:

3.2 Boric Acid Transfer Pump and Borated Water	Operability test
4.1 Charging Pump 1A	Inservice Test
4.2 Charging Pump 1B	Inservice Test
22.1 Auxiliary Feed Pump 1A	Inservice Test
22.2 Auxiliary Feed Pump 1B	Inservice Test
23.1 Component Cooling Water 1A	Inservice Test
23.2 Component Cooling Water 1B	Inservice Test
23.4 Component Cooling Water 1A Annual	Inservice Test

23.5 Component Cooling Water 1B Annual	Inservice Test
23.6 Component Cooling Water 1C Annual	Inservice Test
23.8 Component Cooling Water Valve	Inservice Test
22.8 Auxiliary Feedwater System Valve	Inservice Test
24.7 Service Water System Valve	Inservice Test
4.3 Charging Pump 1C	Inservice Test
4.4 Charging Pump 1A Annual	Inservice Test
4.5 Charging Pump 1B Annual	Inservice Test
4.6 Charging Pump 1C Annual	Inservice Test
10.2 ECCS High Head Runout Valves Alignment Verification	
11.1 RHR Pump 1A	Inservice Test
11.2 RHR Pump 1B	Inservice Test
11.6 RHR Valves	Inservice Test
16.1 Containment Spray Pump 1A	Inservice Test
16.2 Containment Spray Pump 1B	Inservice Test
16.6 Spray and Phase B	Actuation Test
16.7 Containment Spray System Valve	Inservice Test
5.1 CVCS/HHSI Pump Bearing Maintenance	
5.4 Maintenance of Charging/High Head Safety Injection Pump	
6.1 Repair of RHR Pump	
40.1 Hydro Test of Turbine Driven Auxiliary Feedwater Pump Discharge	

Within the areas inspected no discrepancies were identified.

(3) Standard Operating Procedure Check Lists

The inspector reviewed some ESF equipment Standard Operating Procedure System Checklist as an additional verification of system operability. Those reviewed were:

- 7.0 Residual Heat Removal System
- 8.0 Safety Injection System Accumulation
- 8.1 Safety Injection System High Head Injection
- 9.0 Containment Spray System
- 10.0 Post LOCA Containment Pressurization and Vent System
- 22.0 Auxiliary Feedwater System
- 23.0 Component Cooling Water System
- 24.0 Service Water System
- 36.0 Plant Electrical Distribution Lineup
- 36.1 S/U, Unit, Main Transformer Prep For Startup
- 36.2 4160V AC Electrical Distribution System
- 36.3 600, 480 and 280V AC Electrical Distribution System

No problems were identified.

(4) Engineered Safety Feature Surveillance Tests

The following surveillance tests related to the engineered safety features were reviewed to compare the as found data against the acceptance criteria. There were no significant discrepancies observed between data obtained in the tests and acceptance criteria. The questions raised by the inspector on the test data were satisfactorily resolved by the licensee at the exit interview. The surveillance tests reviewed were:

- STP 28.3 Diesel Generator Load Rejection Test
- STP 28.4 Diesel Generator Emergency Start and Full Load Test (for DG1C, 2E and 1-2A)
- STP 25.1 River Water Pumps 4 and 5 Inservice Test



- STP 24.6 Service Water Buried Pipe Inspection
- STP 24.4 Service Water Pump 1D, 1E, and 1C Annual Inservice Test
- STP 24.3 Service Water Pump 1A, 1B, and 1C Annual Inservice Test
- STP 23.8 Component Cooling Water Valve Inservice Test
- STP 25.4 River Water Pumps 8, 9, and 10 Annual Inservice Test
- STP 25.3 River Water Pumps 4 and 5 Annual Inservice Test
- STP 23.6 Component Cooling Water Pump 1C Annual Inservice Test
- STP 23.5 Component Cooling Water Pump 1B Annual Inservice Test
- STP 23.4 Component Cooling Water Pump 1A Annual Inservice Test
- STP 22.11 Auxiliary Feedwater Pump 1A (1B) LOSP Test
- STP 22.10 Turbine Driven Auxiliary Feedwater Pump Blackout Start Test
- STP 22.9 Auxiliary Feedwater Pump 1A and 1B Auto Start Test
- STP 22.2 Auxiliary Feedwater Pump 1B Inservice Test
- STP 22.1 Auxiliary Feedwater Pump 1A Inservice Test
- STP 22.7 Auxiliary Feedwater Pump Train A Functional Test
- STP 22.6 Auxiliary Feedwater Pump Train B Functional Test
- STP 16.7 Containment Spray System Valve Inservice Test
- STP 16.6 Spray and Phase B Actuation Test
- STP 16.4 Containment Spray Pump 1B Annual Inservice Test
- STP 16.3 Containment Spray Pump 1A Annual Inservice Test
- STP 16.2 Containment Spray Pump 1A Inservice Test
- STP 16.1 Containment Spray Pump 1B Inservice Test
- STP 13.0 Boron Injection Tank Heat Tracing Operability Test
- STP 12.0 Boron Injection Tank Operability Test

- STP 11.2 RHR Pump 1B Inservice Test
- STP 11.1 RHR Pump 1A Inservice Test
- STP 10.3 ECCS Valve Inservice Test
- STP 10.2 ECCS High Head Runout Valves Alignment Verification
- STP 4.6 Charging Pump 1C Annual Inservice Inspection
- STP 4.4 Charging Pump 1A Annual Inservice Test
- STP 4.3 Charging Pump 1C Inservice Test
- STP 4.1 Charging Pump 1A Inservice Test

(5) Reactor Protection System Revision

The licensee has issued and is implementing Plant Change Notice No. B-79-382 entitled "Pressurizer Safety Injection". The purpose of the plant change notice is to provide for deletion of the pressurizer level from coincidence with low pressurizer pressure for safety injection and to install a 2-out-of-3 low pressurizer signal to actuate the safety injection system.

The safety evaluation contained in the PCN package concludes that the existing or original analysis is valid for safety injection (SI) as a function of pressurizer pressure signals only in that SI would be actuated at least as soon as with the coincident signal. The licensee stated they are about 90 percent complete with the installation and expect to complete it by June 9, 1979 prior to reactor startup from the current refueling outage.

(6) Return of Safety System to Service Following Extended Outages

The adequacy of administrative controls to assure that engineered safety features are returned to operability at the conclusion of an extended outage were reviewed by discussion with licensee representatives and review of Surveillance Test Procedures (STP's), Standard Operating Procedures (SOP's), and Administrative Procedures (AP's).

A. System Alignment Verification

On April 18, 1979, the licensee issued a temporary change to AP-16 which requires double verification of system alignment and operability for all safety related systems. The inspector observed that a double verification of valve alignment was being performed on returning systems to service following the present refueling outage. The

licensee stated they were trying to determine the extent they would continue to perform double verification of system alignments, but expected that the final revision of AP-16 would include at least double verification of Engineered Safety Features (348/78-23-01).

B. Onsite Assessment of Operating Procedures

- (1) The licensee does not require partial actuation of safety injection to assist in pressurizer level control during routine operation event induced pressurizer level transients. On the Farley plant the safety injection system, on initiation, goes through the boron injection task, injecting water containing 20,000 ppm boron, therefore no routine event would require partial actuation of the SI system. Operating procedures do allow the operation of an additional charging pump to control transients in pressurizer level using the normal operating flow path.
- (2) The licensee does not have procedures for feeding a dry steam generator. The licensee stated that procedures were available for controlling feed to a generator in which level had fallen below the feed ring but that these procedures were for water hammer control.
- (3) The licensee's present tagging practices do not contain specific requirements to preclude tags obscuring switch positions. The licensee has stated they are putting two new tagging devices into effect. For horizontal switch mountings, boxes will be fabricated which fit over the switch being tagged out. The box will be transparent and contain the lockout tag. For vertically mounted panels the licensee is procuring small tags of a size that when installed on vertical panel switches will reduce the potential for the tag to obscure any other indicator status. (348/79-23-02).
- (4) The operating conditions and precautions when securing a reactor coolant pump are contained in Emergency Operating Procedures 1 and 3. These instruct the operator to secure the reactor coolant pumps on actuation of phase B containment isolation, verification that high head safety injection pumps are operating and if reactor coolant pressure is below 1550 psig.



7. Auxiliary Feedwater System Valve Alignment

System checklist SOP 22.0 A was used to observe the position of auxiliary feedwater system valves. On April 28, 1979 the licensee had aligned the system for service and the system had been reverified as being correctly aligned for service on May 28, 1979. There were no valve positions observed to be incorrectly aligned. However there were a number of valves which did not have an identification tag or mark and, in order to ascertain that the correct valve was being locked open or locked closed, the valve had to be traced from a known position in the line. The licensee stated at the exit interview that they planned to have the valves tagged before returning to power operation from the current refueling outage (348/79-23-03).