



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

Report Nos. 50-348/80-31 and 50-364/80-42

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

Facility Name: Farley

Docket Nos. 50-348 and 50-364

License Nos. NPF-2 and CPPR-86

Inspection at Farley Site near Ashford, Alabama

Inspector: W. H. Miller, Jr.

11/17/80  
 Date Signed

Approved by: T. E. Conlon  
 T. E. Conlon, Section Chief, RC&ES Branch

11-12-80  
 Date Signed

SUMMARY

Inspection on October 14-17, 1980

Areas Inspected

This routine, unannounced inspection involved 27 inspector-hours onsite in the areas of fire protection/prevention.

Results

Of the areas inspected, no items of noncompliance were found, but one apparent deviation was found (Deviation - Inadequate fire protections QA program - Paragraph 5.b).

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## DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*W. G. Hairston, III, Plant Manager
- \*J. D. Woodard, Assistant Plant Manager
- \*J. A. Mooney, Project Manager/Construction
- \*R. Hollands, QA Supervisor/Construction
- \*N. F. Kaup, Project Engineer/Construction
- J. G. Hegi, Project QC Engineer/Construction
- \*D. E. Mansfield, Startup Superintendent/Production
- \*E. L. Stephenson, Startup Supervisor/Production
- \*K. W. McCrackin, Technical Superintendent/Production
- \*J. W. Kale, Jr., QA Engineer/Production
- \*C. R. Kvalhein, QA Engineer/Construction
- \*J. B. Hartline, QA Engineer/Construction
- \*J. C. Bozeman, Construction Engineering Supervisor
- \*J. C. Mullican, SR Construction Engineer
- F. G. Watford, Fire Marshal
- N. Hatton, Startup/Production

#### Other Organizations

- \*L. F. Warrick, Project Manager/Daniels
- L. A. Thompson, Mechanical QC/Daniels
- D. A. McGriff, Civil QC/Daniels

#### NRC Resident Inspectors

- \*J. Mulkey

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on October 17, 1980 with those persons indicated in Paragraph 1 above.

### 3. Licensee Action on Previous Inspection Findings

- a. (Open) Unresolved Item (364/80-25-05): Substandard automatic sprinkler systems. The licensee advised that an evaluation had recently been made of the sprinkler systems installed in Unit 2 and that a report is to be forwarded to NRR for comments. This report will include a number of recommended modifications to the sprinkler system installations. Therefore, this item will remain open pending the results of NRR's review.

- b. (open) Unresolved Item (348/80-20-02 and 364/80-25-02): Fire hose not provided for containment fire hose stations. This item is currently under review by NRR and will remain open pending further evaluation.
- c. (Closed) Unresolved Item (364/80-25-03): Collection tank for reactor coolant pump (RCP) oil collection system is not provided with a vent. Tanks for Unit 2 RCP oil collection systems have been provided with an open 2-inch vent. This item is closed.
- d. (Closed) Unresolved Item (364/80-25-06): Automatic sprinkler systems and interior fire hose systems for Unit 2 cable tunnels do not meet NRC single failure criteria. A separate supply main from the fire protection header has been provided for each cable tunnel sprinkler system and standpipe fire hose system. This arrangement appears to meet the licensee's single failure commitments. Therefore, this item is closed.

The interior fire hose installed in the cable tunnels were equipped with combination straight stream - spray type nozzles. This type nozzle does not appear to meet the commitments in Sections 4.4.5.3.2 and 4.4.5.3.5 of the licensee's Fire Protection Review which states that "fog" (spray) type nozzles are to be provided for each interior interior fire hose station. This item is to be evaluated by the licensee and is identified as Unresolved Item (364/80-42-03), spray only type fire nozzles not provided for fire hose stations in in cable tunnels, and will be reviewed during a subsequent NRC inspection.

- e. (Open) Inspector Followup Item (348/80-03-04 and 364/80-03-04): Inadequate fire barriers between fire pumps DFP-1 and EFP. The batteries and charger for Pump DFP-1 and the start-stop switch for Pump EFP have been relocated into the enclosure for the specific pump unit. However, the control and starting circuits to the equipment remains in the room enclosure for the adjacent pump units.

The arrangement of these circuits does not appear to meet the previous commitments to the NRC; therefore, this item remains open.

- f. (Closed) Inspector Followup Item (348/80-20-07 and 364/80-25-07): Automatic air release device not provided on diesel fire pump no. 1. This air release device has been installed. A control valve is provided between the air release device and the pump case; however, this arrangement should function properly if the control valve is maintained in the open position. This item is closed.

#### 4. Unresolved Items

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve noncompliance or

deviations. New unresolved items identified during this inspection are discussed in paragraphs 3.d and 5.a.

5. Fire Protection/Prevention

a. Fire Protection Modifications - Unit 2

An inspection was made of the fire protection modification and installations of Unit 2 which are described in the licensee's document entitled "Farley Nuclear Plant - Fire Protection Program Reevaluation" (FPPR) dated September 15, 1977, including Admendments 1 through 4 and NRC's "Fire Protection Safety Evaluation Report" (FPSEER) for this facility dated February 12, 1979. The following items were evaluated:

(1) Automatic Sprinkler Systems

A walkdown inspection was made of the automatic sprinkler systems being installed in the safety-related areas of Unit 2 which are listed in paragraph II.B of the FPSEER. The design and installation of these systems do not fully meet the criteria of NFPA-13, Sprinkler Systems. This item has been identified by the licensee and some modifications are currently being made to the systems. As outlined in above Paragraph 3.a, a Report is being prepared by the licensee which will identify the discrepancies and recommend corrective action. This report is to be forwarded for NRR review.

Automatic sprinkler protection had not been provided in chemical and laundry drain tank room 2168 and all of corridor 2222 as required by Section 4.3.5 of the FPPR (page 4-155f). Also sprinkler protection has not been provided in several other areas such as charging pump room 174 and hatch area 2405 which appears to have safety related cable and are listed in the FPPR as having sprinkler protection. The sprinkler system in the waste gas filter room 2107 and the area interior fire hose in corridor 2103 are both supplied by the same water line which does not meet the single failure criteria of Section 4.4.1.4 of the FPPR. These items are considered additional examples of Unresolved Item (364/80-25-05), Sub-standard automatic sprinkler systems.

(2) Fire Detection Systems

The fire detection system installation is practically complete. The inspector noted that the detectors in rooms 2220 and 2232 were not properly located. These detectors were installed in the dead air space adjacent to the walls whereas the construction drawings indicate these detectors to be located in the middle portion of the rooms. A nonconformance report was apparently not issued on this item. The detection system

installation was a joint venture. The site contractor installed all wiring and terminal equipment and a vendor provided and installed the detectors and made the final terminal connection. The site QC group apparently had not conducted a detail inspection of the vendors performance. The current startup and test procedures only tests the alarm panel and not the fire detectors. However, the licensee's systems completion verification group (SCVG) is conducting a walkdown inspection of the systems but inspection procedures do not contain check lists and acceptance and rejection criteria. Refer to Paragraph 5.b for further details.

(3) Halon Systems

The installation of the halon systems in rooms 2202 and 2235 appears complete. However, the installations had apparently not been subjected to a detail QC/QA inspection. The fire dampers in the ducts which pass through these areas are required by the construction drawings to be arranged for automatic closing upon activation of the halon systems. However, the inspector noted that these features had not been provided on the dampers in room 2235. As of this inspection the systems had not been subjected to an operational test but a test procedure had been prepared by the startup and test group. Refer to Paragraph 5.b for details on the QA program.

(4) Dry Chemical System

The installation of the dry chemical system in oil storage room 250 appeared complete. However, QA/QC inspection documentation was apparently not available. The inspector noted that the system is activated by heat detectors in lieu of smoke detectors as stated by FPPR Section 4.3.5 (page 4-337). The licensee is reviewing the design requirements for this system.

Refer to Paragraph 5.b for additional information on the QA/QC program.

(5) Carbon Dioxide Systems

The installation of the carbon dioxide system is practically complete. However, the piping system to the switchgear in Room 2343 is supported by wood blocks in lieu of permanent type hanger supports. This item was previously identified by the inspector during the August 4-7, 1980 inspection and the licensee stated that this deficiency is to be corrected. A comprehensive QC type inspection had apparently not been conducted on these systems. However, the startup and test group conducted functional tests on the systems.

(6) Fire Dampers

A random sample of the fire damper installation by the inspector indicated construction installation deficiencies on a number of dampers. The principle discrepancy was the failure to properly attach the damper assembly to the ventilation ducts and walls. Documentation was not readily available to determine if the fire damper installations had received a QC type inspection. For additional comments refer to Paragraph 5.b.

(7) Fire Doors

The installation of the fire doors was not complete. None of the stairway fire doors were provided with all of the required hardware and wire glass was not provided for each window opening. Also, ordinary type doors were installed in a number of areas where fire rated doors are required by the FPPR. Typical examples were noted in the following room areas: Rooms 2197, 2233, 2336, 2338, and 2346. A QC type inspection had apparently not been conducted on the fire door installations. Refer also to Paragraph 5.b below.

(8) Fire Resistent Coating Of Steel

The structural steel in the cable spreading room is required by the FPPR to be coated with a "fire proofing" material. The inspector noted that the steel had been coated but portions of the coating had been removed to permit installament of addition hangers supports, etc. The licensee advised that additional "fire proofing" is to be applied to the uncoated surfaces. However, it appears that this installation was not subjected to QC type surveillance and final installation inspection. Refer to Paragraph 5.b below.

The above examples of incomplete fire protection system installations and features will be reinspected during a subsequent NRC inspection when all installations have been completed and adequate QA/QC documentation has been provided for these systems and features. This item is identified as Unresolved Item (364/80-42-02), installation and test of fire protection systems are not complete.

b. Fire Protection QA Program

Section 4.4.3 of the FPPR describes the Quality Assurance (QA) Program for fire protection which was to be applied at Farley Units 1 and 2. In general this program was to be under the management control of the QA organization and was to be applied to the following areas:

- ( 1) Design control and procurement control
- ( 2) Instructions, procedures and drawings

- ( 3) Control of purchase materials equipment and services
- ( 4) Inspection
- ( 5) Test and test control
- ( 6) Inspection, Test and Operating Status
- ( 7) Non-conforming items
- ( 8) Corrective action
- ( 9) Records
- (10) Audits

Documentation was not provided or was not easily retrievable to demonstrate that all of the fire protection features and systems required by the FPPR and the FPSEER had been accomplished under the management and control of a QA Organization. This item is identified as Deviation Item (364/80-42-01), Inadequate Fire Protection QA Program.

Except as noted above, no additional items of noncompliance or deviations were identified in the areas examined.