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

FEB 01 1990

Report Nos.: 50-348/89-32 and 50-364/89-32

Licensee: Alabama Power Company
600 North 18th Street
Birmingham, AL 35291-0400

Docket Nos.: 50-348 and 50-364 License Nos.: NPF-2 and NPF-8

Facility Name: Farley Nuclear Plant

Inspection Conducted: December 12-15, 20, and 29, 1989

Inspector: W. H. Rankin for J. L. Kreh 1/18/90
Date Signed

Accompanying Personnel: T. Guilfoil
F. Victor

Approved by: W. H. Rankin 1/18/90
W. H. Rankin, Chief Date Signed
Emergency Preparedness Section
Emergency Preparedness and Radiological
Protection Branch
Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This routine, announced inspection involved observation and evaluation of the annual emergency response exercise. Emergency organization activation and response were selectively observed in the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operations Facility (EOF). The inspection also included a review of the exercise objectives and scenario details, as well as observation of the licensee's post-exercise critique activities. The exercise, which included partial participation by State and local governments, was conducted on December 13, 1989, between the hours of 7:00 a.m. and 3:05 p.m.

Results:

In the areas inspected, no violations or deviations were identified. However, four Exercise Weaknesses were identified as follows: (1) failure to follow applicable procedures in making offsite notifications of the Alert, Site Area Emergency, and General Emergency declarations (Paragraph 6); (2) failure to follow applicable procedures with respect to briefing, controlling, and tracking 2 of 7 reentry teams (Paragraph 7); (3) failure to provide adequate means of communication between the reentry teams and the TSC (Paragraph 8); and

(4) failure to provide a timely and appropriate protective action recommendation (PAR) to cognizant offsite authorities following the General Emergency declaration (Paragraph 10). On December 29, 1989, licensee management committed to various corrective actions (summarized in Paragraph 13) intended to address the Exercise Weaknesses identified during this inspection.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*S. Fulmer, Supervisor - Safety Audit and Engineering Review
*J. Garlington, General Manager - Nuclear Support
*D. Grissette, Environmental and Emergency Planning Supervisor
*R. Hill, Assistant General Manager - Operations
*F. Jessup, Emergency Planning Coordinator
*R. Livingston, Chemistry Foreman
*B. McKinney, Jr., Manager - Nuclear Engineering and Licensing
*D. Morey, General Manager - Nuclear Plant
*C. Nesbitt, Technical Manager
*J. Osterholtz, Manager - Operations
*L. Stinson, Assistant General Manager - Support
*D. Tedin, Supervisor - Technical Training
*R. Wiggins, Supervisor - Operations Training
*L. Williams, Training Manager
*J. Woodard, Vice President - Nuclear

Other licensee employees contacted during this inspection included engineers, operators, security force members, technicians, and administrative personnel.

Nuclear Regulatory Commission

*F. Cantrell, Section Chief, Division of Reactor Projects
*G. Maxwell, Senior Resident Inspector
*W. Miller, Resident Inspector

*Attended exit interview

2. Exercise Scenario (82301, 82302)

The scenario for the emergency exercise was reviewed to determine whether provisions had been made to test the licensee's integrated emergency response capability as well as to test a major portion of the basic elements within the licensee's Emergency Plan, as required by 10 CFR 50.54(t), 10 CFR 50.47(b)(14), and Section IV.F of Appendix E to 10 CFR Part 50.

The inspector's advance review of the scenario disclosed no significant technical problems, although several questions regarding the licensee's exercise methodology were raised by the inspector and telephonically addressed by a licensee representative prior to the inspection. Some minor inconsistencies in the scenario became apparent during the exercise; however, these did not significantly affect exercise play.

The scenario developed for this exercise presented a series of events which fully exercised the licensee's emergency organization, and provided sufficient information to the State, counties, and Federal agencies consistent with the scope of their participation in the exercise. The licensee demonstrated adequate training of personnel through use of controllers, evaluators, and specialists participating in the exercise. The controllers provided adequate guidance throughout the exercise. Neither prompting nor undue interaction between controllers and players was observed.

No violations or deviations were identified.

3. Onsite Emergency Organization (82301)

The licensee's organization was observed during the simulated emergency to determine whether the requirements of Paragraph IV.A of Appendix E to 10 CFR Part 50 were met addressing the descriptions, responsibilities, and assignments of the onsite emergency response organization.

The inspector determined that the initial onsite emergency organization was adequately defined and that primary and alternate assignments for the positions in the augmented emergency organization were clearly designated. The inspector observed that specific emergency assignments were made for the licensee's emergency response organization, and that adequate staff was available to respond to the simulated emergency. The initial response organization was augmented by designated licensee representatives; however, because of the scenario scope and conditions, long-term or continuous staffing of the emergency response organization was not required. Review of the Emergency Plan indicated that a sufficient number of trained personnel was available for continuous staffing of the augmented emergency organization, if needed.

The inspector also observed activation, staffing, and operation of the emergency organization in the Technical Support Center (TSC), the Operations Support Center (OSC), and the Emergency Operations Facility (EOF). The required staffing and assignment of responsibility at the facilities were consistent with the licensee's Emergency Plan and respective implementing procedures. It was noted that a number of the principal positions in the licensee's emergency organization were filled by persons who were alternates for, or recently assigned to, their positions and had not previously served in those positions during an exercise.

The inspector observed that the "on-call" Emergency Director (ED) officially assumed the responsibilities of the ED position prior to the classification or declaration of any emergency. However, there was no announcement made to the Control Room personnel regarding this important transition. It appeared to the inspector that some of the Control Room staff did not know for a time that the Operations Manager had assumed the ED responsibilities. This matter will be reviewed during evaluations of future exercises.

Inspector Follow-up Item (IFI) 50-348, 50-364/89-32-01: Assuring that the Control Room staff is informed when the on-call ED formally assumes ED responsibilities.

No violations or deviations were identified.

4. Emergency Response Support and Resources (82301)

This area was observed to determine whether arrangements for requesting and effectively using assistance resources were made, whether arrangements to accommodate State and local staff at the EOF were made, and whether other organizations capable of augmenting the planned response were identified as specified by 10 CFR 50.47(b)(3), Paragraph IV.A of Appendix E to 10 CFR Part 50, and guidance promulgated in Section II.C of NUREG-0654 (Revision 1).

Observation of licensee involvement and contact with Federal, State, county, and local support organizations was essentially confined to initial notification and respective follow-ups attending declarations of emergency classifications via communications links. Only one offsite agency representative (from the State of Georgia) was present at the EOF; the licensee's interface with him appeared to be satisfactory. Operation of the News Media Center was not observed by the NRC.

No violations or deviations were identified.

5. Emergency Classification System (82301)

This area was observed to verify that a standard emergency classification and action level scheme was in use by the licensee as required by 10 CFR 50.47(b)(4) and Paragraph IV.C of Appendix E to 10 CFR Part 50.

An Emergency Action Level (EAL) matrix was used to identify and properly classify an emergency and escalate it to more severe emergency classifications as the simulated accident sequence progressed. The licensee's use of the EALs in deducing each of the emergency classifications (Alert, Site Area Emergency, and General Emergency) was consistent with the Emergency Plan and the Emergency Implementing Procedures (EIPs).

No violations or deviations were identified.

6. Notification Methods and Procedures (82301)

This area was observed to determine whether procedures were established for notification of State and local response organizations and plant emergency personnel by the licensee, and whether the content of initial and follow-up messages to response organizations was established. This area was further observed to determine whether means to provide early notification to the population within the plume exposure pathway were established pursuant to 10 CFR 50.47(b)(5), Paragraph IV.D of Appendix E

to 10 CFR Part 50, and specific guidance promulgated in Section II.E of NUREG-0654 (Revision 1).

The inspector observed that notification methods and procedures were established and available for use in providing information regarding the simulated emergency conditions to Federal, State, and local response organizations, and to alert the licensee's augmented emergency response organization. Inspection also disclosed that the licensee consistently implemented notification of the State and counties within the 15-minute time regime following declaration of the applicable emergency classifications throughout the exercise. Periodic updating regarding plant status via telephone and transmission of hard copies was consistently implemented during the exercise.

However, the inspector observed that some of the notifications to offsite agencies were made in a manner inconsistent with the requirements of procedure FNP-0-EIP-26 (Revision 27), "Offsite Notification." Notifications to the State of Alabama and to the NRC of the Alert declaration were made without benefit of the appropriate notification form (i.e., the communicator was conveying information from memory rather than reading from the approved message form). Notification of the Alert was properly made to the State of Georgia, although the message form lacked the time of the Alert declaration. The inspector noted that the information thereby conveyed to cognizant officials of the two States was somewhat different. In addition, the Site Area Emergency and General Emergency notifications were made prior to completion and ED approval of the appropriate message form (Figure 3 of FNP-0-EIP-26). As a consequence, a protective action recommendation (PAR), which the licensee was required to provide, was not issued until almost 30 minutes following the General Emergency declaration (see also Paragraph 10). The response problems described in this paragraph fundamentally represent a repetition of problems that occurred during the 1988 exercise (IFI 50-348, 50-364/88-30-03, Paragraph 12.b). This problem is therefore considered an Exercise Weakness for which corrective actions are required.

Exercise Weakness 50-348, 50-364/89-32-02: Failure to make offsite notifications of emergency declarations in a manner consistent with procedure FNP-0-EIP-26.

Activation of the prompt notification system (PNS), which consisted of sirens and tone-alert radios, was included as an exercise objective. According to a licensee representative, all components of the PNS functioned properly during the exercise.

No violations or deviations were identified.

7. Emergency Facilities and Equipment (82301)

This area was observed to determine whether adequate emergency facilities and equipment to support an emergency response were provided and maintained pursuant to 10 CFR 50.47(b)(8), Paragraph IV.E of Appendix E to

10 CFR Part 50, and specific guidance promulgated in Section II.H of NUREG-0654 (Revision 1).

The inspector observed activation, staffing and operation of the emergency response facilities, and observed the use of equipment therein. Emergency response facilities used by the license during the exercise included the Control Room, TSC, OSC, and EOF.

a. Control Room

The Unit 1 Control Room was provided for the exercise Shift Supervisor and his staff. Required communications equipment, Control Room procedures, and other applicable documents were readily available. The inspector observed that, following review and analysis of the sequence of accident events, Control Room operations personnel promptly initiated required responses to the simulated emergency. Emergency procedures were readily available, routinely followed, and factored into accident assessment and mitigation efforts.

The Shift Supervisor and Control Room operators were cognizant of their duties, responsibilities, and authorities. These personnel demonstrated an understanding of the emergency classification system and the proficient use of specific procedures to determine and declare the proper emergency classification. However, notification of offsite agencies was a problematic area; this item is discussed in Paragraph 6, above.

b. Technical Support Center (TSC)

The TSC was activated and staffed following declaration of the Alert classification. The staff appeared to be cognizant of their emergency duties, authorities, and responsibilities. Required operation of the facility proceeded in an orderly manner, and the TSC was provided with adequate equipment for support of the assigned staff.

During operation of the TSC, radiological habitability was routinely monitored and documented, with personnel dosimetry distributed as required. Status boards and related visual aids were located to facilitate viewing by the TSC staff.

The transfer of authority and specific responsibilities from the Emergency Director to the EOF Recovery Manager following activation of the EOF was consistent with the Emergency Plan and EIPs, except for what appeared to be an unduly long period for turnover of dose assessment responsibility from the TSC to the EOF (approximately 4 hours after EOF staff began to arrive at the facility). This matter was discussed with licensee management. Frequent and effective communications were maintained between the respective facility managers and principal staffs.

c. Operations Support Center (OSC)

The OSC team assembly and briefing area was located at the rear of and adjacent to the TSC. The facility was activated and staffed following declaration of the Alert. An inspector observed that five reentry teams were assembled, briefed, and dispatched from the assigned assembly area. A Health Physics (HP) Technician accompanied each of those teams. However, two other reentry teams took actions which were not in accordance with applicable procedures. The inspector noted that FNP-0-EIP-14 (Revision 5), "Re-entry Procedures", provided guidelines for reentry into plant or site areas which had been evacuated as a result of an emergency. These guidelines were not followed for the two teams (one Chemistry technicians, the other electricians) sent to restore operation of the water treatment plant, which, like the rest of the plant, had been ordered evacuated following the Site Area Emergency declaration. No records were available to indicate that these reentries were preplanned, briefed, or debriefed, as specified by the subject procedure. The only documented evidence available to confirm the required ED approval of one of these two missions was an entry in the HP Manager's log that stated "1027 Permission ED for chem to go to water treatment". Other than two further brief entries in the HP Manager's log regarding the Chemistry team (one concerning departure of the team from the OSC, the other documenting a report of normal background radiation levels at the water treatment plant), there were no indications that the two subject teams were tracked. The second team (two electricians) did not include HP coverage as required by FNP-0-EIP-14, despite the fact that a radiological release was occurring at the time of the reentry. The problems delineated in this paragraph indicate a substantial repetition of a problem that occurred during the 1988 exercise (IFI 50-348, 50-364/88-30-05, Paragraph 12.d). This problem is therefore considered an Exercise Weakness for which corrective actions are required.

Exercise Weakness 50-348, 50-364/89-32-03: Failure to brief, control, and track two of seven reentry teams as specified by procedure FNP-0-EIP-14.

A related discrepancy was the fact that the ED did not complete the reentry checklist, as required by step 4.1.7 of procedure FNP-0-EIP-14, for any of the reentry teams, although, as implied earlier in this paragraph, five of the seven teams were handled in accordance with the requirements of the checklist. The particular discrepancy cited is failure to document actions in accordance with procedure. This matter will be reviewed during evaluations of future exercises.

IFI 50-348, 50-364/89-32-04: Ensuring the completion by the Emergency Director of the reentry checklist in procedure FNP-0-EIP-14.

d. Emergency Operations Facility (EOF)

Consistent with the exercise scope and objectives, the EOF was staffed and activated following declaration of the Site Area Emergency. A drill involving mobilization of the essential facility staff, including the Recovery Manager, was conducted on December 12, 1989 to assess effectiveness of logistics and to determine staff augmentation time involved in transit between the licensee's corporate headquarters (Birmingham, Alabama) and the plant site. The subject drill, which provided the means of prestaging this aspect of the exercise, was initiated at 9:00 a.m. by a call from the plant to the corporate office requesting activation of the EOF. The nine required corporate personnel arrived at the EOF at 12:25 p.m., at which time the drill was terminated. The licensee's stated goal of having corporate staff arrive at the EOF within 4 hours (Emergency Plan, Revision 17, page 87) was thus achieved in this drill.

Except for the matters discussed in Paragraphs 7.b and 10, the licensee's EOF operations demonstrated the capability to implement an adequate response to the casualty.

No violations or deviations were identified.

8. Emergency Communications (82301)

This area was observed to determine whether provisions existed for prompt communications among principal response organizations and emergency personnel pursuant to 10 CFR 50.47(b)(6), Paragraph IV.E of Appendix E to 10 CFR Part 50, and specific guidance in Section II.F of NUREG-0654 (Revision 1).

The inspector observed communications within and between the licensee's emergency facilities, and between the offsite environmental monitoring teams and the EOF. The inspector also observed information flow among the various groups within the licensee's emergency organization. In general, communication of information occurred in an adequate manner.

However, one significant problem in communications was observed. Reentry team 5, which was sent to stop the containment penetration leak, had difficulty communicating with the TSC. The team was located in a simulated radiation field of 1 R/hr (4 R/hr open-window reading) for 7 minutes while the HP technician tried repeatedly to communicate with the TSC (approximately 10 attempts using the plant telephone system and 4 using the plant paging system). A total of 16 minutes transpired before the HP technician was able to communicate with the TSC. (It should be noted that the licensee has determined that radio communications between plant reentry teams and the TSC are not reliable; therefore, such teams were not equipped with radios.) During the referenced 16-minute period, the team decided to reenter a 20 R/hr radiation field in order to connect a gas bottle to electrical penetration B026-3 LLRT test valve even though the team had shortly before found the valve open and had closed it. This

task was performed without the knowledge or approval of the TSC. Furthermore, this second entry into the 20 R/hr field was unnecessary and would not have been authorized by TSC managers if contact with the TSC had been established in a timely manner. Had the radiation fields described above been real instead of simulated, significant and unnecessary radiation doses would have been incurred by three licensee personnel. This finding is categorized as an Exercise Weakness for which corrective actions are required to prevent recurrence.

Exercise Weakness 50-348, 50-364/89-32-05: Failure to provide adequate means for plant reentry teams to communicate with the TSC.

No violations or deviations were identified.

9. Accident Assessment (82301)

This area was observed to determine whether methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of radiological emergency conditions were in use as required by 10 CFR 50.47(b)(9), Paragraph IV.B of Appendix E to 10 CFR Part 50, and specific criteria in Section II.I of NUREG-0654 (Revision 1).

The accident assessment program included an engineering assessment of plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the accident. In general, these assessments were adequately performed and the results properly employed in the development of mitigating actions (see Paragraph 10 for a discussion of related problems).

The activities of onsite and offsite radiological monitoring teams were not observed by the inspector.

No violations or deviations were identified.

10. Protective Response (82301)

This area was observed to determine whether guidelines for protective actions during the (simulated) emergency, consistent with Federal guidance, were developed and in place, and whether protective actions for emergency workers, including evacuation of nonessential personnel, were implemented promptly as required by 10 CFR 50.47(b)(10) and specific criteria in Section II.J of NUREG-0654 (Revision 1).

The inspector verified that the licensee had and used emergency procedures for formulating protective action recommendations (PARs) for the offsite populace within the 10-mile emergency planning zone. The inspector observed that protective actions were initiated for onsite emergency workers following the Site Area Emergency declaration by conducting an accountability of those personnel inside the Protected Area. The (simulated) evacuation of nonessential plant personnel was ordered in a timely manner.

The procedure for formulating PARs was implemented (as stated above), but not in an adequate manner. As discussed in Paragraph 6, a PAR was not issued to cognizant offsite officials until almost 30 minutes after the General Emergency declaration. The licensee's procedures required offsite notification of a General Emergency, along with a PAR, within 15 minutes of the declaration. In the face of the referenced delay, the State of Georgia (which was in the downwind direction) ordered protective actions for the public without benefit of the licensee's PAR. The PAR, when finally issued, was flawed because it was not formulated in accordance with procedure FNP-0-EIP-19. The PAR was "Evacuate Zones A, I5 to 5 miles". The referenced procedures, as well as licensee agreements with the States of Alabama and Georgia, specified an "all or nothing" approach to protective actions for a given zone. The licensee's exclusion in the PAR of that portion of Zone I5 outside the 5-mile radius was not consistent with the referenced procedure or with any mode of operation established between the licensee and the States. This finding is categorized as an Exercise Weakness for which corrective actions are required to prevent recurrence.

Exercise Weakness 50-348, 50-364/89-32-06: Failure to provide a timely and appropriate PAR to cognizant offsite authorities following the General Emergency declaration.

11. Exercise Critique (82301)

The licensee's critique of the emergency exercise was observed to determine whether shortcomings in the performance of the exercise were brought to the attention of management and documented for corrective action pursuant to 10 CFR 50.47(b)(14), Paragraph IV.F of Appendix E to 10 CFR Part 50, and specific guidance promulgated in Section II.N of NUREG-0654 (Revision 1).

The inspector observed the licensee's player/monitor critique conducted immediately following the exercise. The subject critique involved a detailed discussion and analysis of required improvements and deficiencies identified during the exercise. All substantive findings were documented for review and correction. The respective corrective actions implemented to address these findings will be reviewed during future inspections. The significant deficiencies identified included only one of the four Exercise Weaknesses discussed in this report. A formal presentation of the critique results was made to licensee management on December 15, 1989.

12. Action on Previous Inspection Findings (92701)

a. (Closed) IFI 50-348, 50-364/88-30-01: Implementing effective management and control of the TSC and EOF to ensure prompt and effective activation and routine operation.

Evaluation of the 1989 exercise indicated that suitable corrective action had been implemented in response to this finding.

b. (Closed) IFI 50-348, 50-364/88-30-03: Ensuring that offsite notifications are implemented in a manner consistent with procedure FNP-0-EIP-26.

For tracking purposes, this item is closed because a similar problem was identified during the current inspection as an Exercise Weakness (see Paragraph 6 for details).

c. (Closed) IFI 50-348, 50-364/88-30-04: Ensuring that the Emergency Director informs the plant staff of emergency declarations and provides the staff with periodic updates of plant status during emergency events.

The only general PA announcement made during the 1989 exercise was at 9:19 a.m. when, following the sounding of the plant emergency alarm, plant personnel were informed that a Site Area Emergency had been declared and that they should proceed to their designated assembly areas. Review of the EIPs indicated that any other announcements (e.g., upon Alert or General Emergency declaration) would be strictly at the option of the ED. Licensee management representatives explained that they had chosen to keep such announcements optional for the ED rather than require them. There is no regulatory requirement that such announcements be made.

d. (Closed) IFI 50-348, 50-364/88-30-05: Ensuring that all reentry teams are briefed, controlled, and tracked to preclude uncontrolled reentries.

For tracking purposes, this item is closed because a similar problem was identified during the current inspection as an Exercise Weakness (see Paragraph 7 for details.)

e. (Closed) IFI 50-348, 50-364/89-01-03: Development of a system for periodically testing the capability to augment the onsite emergency response organization (ERO) during off-hours.

The licensee changed procedure FNP-0-EIP-15 (Revision 14), "Emergency Drills," to provide for a quarterly test of the ability to contact "on-call" personel. The inspector reviewed documentation of drills conducted September 27, October 18, October 31, and November 17, 1989 (all were initiated between 7:00 p.m. and 8:00 p.m.). A licensee representative indicated that corrective actions implemented to address the problems thus far disclosed have demonstrably improved the capability to augment the onsite ERO during off-hours.

13. Exit Interview

The inspection scope and results were summarized on December 15, 1989, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. Although proprietary information was reviewed during this

inspection, none is contained in this report. Dissenting comments were not received from the licensee.

Item Number	Description and Reference
50-348, 364/89-32-01	IFI - Assuring that the Control Room staff is informed when the on-call ED formally assumes ED responsibilities (Paragraph 3).
50-348, 364/89-32-02	Exercise Weakness - Failure to make offsite notifications of emergency declarations in a manner consistent with procedure FNP-0-EIP-26 (Paragraph 6).
50-348, 364/89-32-03	Exercise Weakness - Failure to brief, control, and track 2 of 7 reentry teams as specified by procedure FNP-0-EIP-14 (Paragraph 7.c).
50-348, 364/89-32-04	IFI - Ensuring the completion by the ED of the reentry checklist in procedure FNP-0-EIP-14 (Paragraph 7.c).
50-348, 364/89-32-05	Exercise Weakness - Failure to provide adequate means for plant reentry teams to communicate with the TSC (Paragraph 8).
50-348, 364/89-32-06	Exercise Weakness: Failure to provide a timely and appropriate PAR to cognizant offsite authorities following the General Emergency declaration (Paragraph 10).

Licensee management was informed that five previous findings were reviewed and closed, as discussed in Paragraph 12.

On December 20, 1989, the inspector telephonically informed cognizant licensee representatives that two additional findings (one Exercise Weakness and one IFI) discussed during the Exit Interview were being withdrawn based on further review by Region II management.

During a telephone conversation on December 29, 1989, between J. Woodard, Vice President-Nuclear, and D. Verrelli and D. Collins of the NRC, Mr. Woodard outlined corrective actions taken and planned as a result of the findings during the exercise. Actions included those already taken, those planned for the short term (to be completed within 14 days of December 29), and long-term actions (to be completed within 90 days of December 29). The commitments made by the licensee are outlined below.

With regard to the problems related to the reentry teams:

- All individuals who might lead such teams will be provided with multiple phone numbers for contacting the TSC, and will be briefed on the applicability of the procedure to situations where teams respond to any evacuated area, including areas outside buildings (short term).

- All individuals who might be the Emergency Director or a technical manager will be briefed on the Exercise Weaknesses and planned corrective actions (short term).

- Procedures will be revised to clarify that, after an area is evacuated, radiological controls will be specified for teams dispatched to outside areas, except in limited circumstances when exposure to a plume is unlikely (long term).

With regard to protective action decision-making and communications to the States:

- All Shift Supervisors and Emergency Directors who have been on shift have been briefed on the Exercise Weaknesses and planned corrective actions. All such personnel who have not been on shift will receive briefings, including reminders that a protective action recommendation must be provided to the States with the General Emergency declaration and that protective actions for partial zones are not appropriate (short term).

- Procedures will be revised to clarify the above (long term).

- The licensee will discuss with the States the use of the initial notification form, as well as upgrades in emergency classifications (long term).

In addition to the above, the staff will be trained in changes to procedures as the changes are made. Also, the effectiveness of the revised procedures and training will be evaluated by walk-throughs, tests, or drills. It is the licensee's intention to work with the States to move the 1990 emergency exercise to a date earlier in the year.

Attachment:
Exercise Objectives and Scenario Summary

1989 FARLEY NUCLEAR PLANT EMERGENCY EXERCISE OBJECTIVES
December 13, 1989

I. Participating Organizations

Full Participation: Alabama Power Company, the State of Alabama, Houston County, State of Georgia, and Early County.

II. Purpose

A. To meet the requirements of 10CFR50, Appendix E, and NUREG-0654/FEMA-REP-1, Rev. 1.

B. To conduct a small-scale exercise that will include the mobilization of Alabama Power Company, state and local personnel and resources adequate to verify the capability of participating organizations to respond to an accident scenario requiring response.

III. Alabama Power Company Objectives

A. On-site

1. Demonstrate that control room staff can assess the event, classify the event, take corrective measures to control the event and activate emergency response procedures.

2. Demonstrate that plant staff can activate and staff the Technical Support Center (TSC) and perform accident response activities including:

   a. Dose Assessment
   b. Off-site notification and protective action recommendations
   c. Reclassification of emergency status
   d. Personnel Accountability for all personnel on-site
   e. Radiation Monitoring Team (RMT) Dispatch and Control
   f. Site access control and admittance of essential personnel
   g. Post-Accident Sampling Activities

3. Demonstrate the capability to turn over EOF functions to the EOF staff when the EOF is activated and staffed.

4. Demonstrate the capability to augment EOF staff with non-essential plant personnel.

5. Demonstrate the adequacy of the plant's communication system including: Communication links to Corporate Emergency Operations Center (EOC); News Media Center (NMC); interplant communications; and communication links to state and local authorities.

6. Demonstrate the capability to perform radiological monitoring.

B. Off-Site

1. Demonstrate that corporate staff can be activated in a timely fashion and dispatched to FNP.*

2. Demonstrate that Corporate Headquarters Emergency Operations Center (EOC) staff can provide initial support for:

   a. EOF activation*
   b. Logistics
   c. Support organization notification
   d. Briefing of company management
   e. News release preparation

3. Demonstrate that EOF staff can:

   a. Assume the dose assessment function and the RMT direction and control function from the TSC staff.
   b. Assume the logistics, manpower and engineering function from the EOC.
   c. Prepare and coordinate news releases and activate* the NMC.

4. Demonstrate that the Public Information Organization can respond to media and public inquiries, establish a rumor control center, and issue and coordinate news releases.

IV. State and Local Objectives

- See Attachment 1 (Any state or local objective that cannot be demonstrated due to conditions inconsistent with the scenario will be demonstrated in a separate drill.)

V. Joint Objectives (Alabama Power Company, State of Alabama, State of Georgia, Houston County and Early County)

1. Demonstrate that all parties can coordinate news releases and conduct a joint news conference.

2. Demonstrate that adequate technical information can be exchanged among involved agencies.

VI. Exercise Limits

The exercise will begin prior to 8 A.M. CST and conclude by 4:00 P.M. CST.

*To be tested in a separate drill the day before the exercise. This will allow pre-staging of these activities on the day of the exercise.

ATTACHMENT 1

STATE AND LOCAL OBJECTIVES

	State of AL.	Houston County	State of GA.	Early County
1. Demonstrate the ability to monitor, understand and use emergency classification levels (ECL) through the appropriate implementation of emergency functions and activities corresponding to ECLs as required by the scenario. The four ECLs are: Notification of Unusual Event, Alert, Site Area Emergency and General Emergency.	X	X	X	X
2. Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.	X	X	X	X
3. Demonstrate the ability to direct, coordinate, and control emergency activities.	X	X	X	X
4. Demonstrate the ability to communicate with all appropriate locations, organizations and field personnel.	X	X	X	X
5. Demonstrate the adequacy of facilities, equipment, displays and other materials to support emergency operations.	X	X	X	X
6. Demonstrate the ability to continuously monitor and control emergency worker exposure.				
7. Demonstrate the appropriate equipment and and procedures for determining field radiation measurements.	X	X		
8. Demonstrate the appropriate equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} microcurie per cc in the presence of noble gases.				
9. Demonstrate the ability to obtain samples of particulate activity in the airborne plume and promptly perform laboratory analyses.				

	State of AL.	Houston County	State of GA.	Early County
10. Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure, based on plant and field data.	X		X	
11. Demonstrate the ability to make appropriate protective action decisions, based on projected or actual dosage, EPA PAGs, availability of adequate shelter, evacuation time estimates and other relevant factors.	X	X	X	
12. Demonstrate the ability to initially alert the public within the 10-mile EPZ and begin dissemination of an instructional message within 15 minutes of a decision by appropriate state and/or local official(s).	X	X	X	X
13. Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public in a timely fashion after the initial alert and notification has occurred.	X	X	X	X
14. Demonstrate the ability to brief the media in an accurate, coordinated and timely manner.	X	X	X	X
15. Demonstrate the ability to establish and operate rumor control in a coordinated and timely fashion.	X			
16. Demonstrate the ability to make the decision to recommend the use of KI to emergency workers based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.				
17. Demonstrate the ability to make the decision to recommend the use of KI for the general public, based on predetermined criteria, as well as to distribute and administer it once the decision is made, if necessitated by radioiodine releases.				
18. Demonstrate the ability and resources necessary to implement appropriate protective actions for the impacted permanent and transient plume EPZ population (including transit-dependent persons, special needs populations, and handicapped persons).	X	X	X	X

	State of AL.	Houston County	State of GA.	Early County
. Demonstrate the ability and resources necessary to implement appropriate protective actions for school children within the plume EPZ.				
20. Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.		X		X
21. Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees (except radiological monitoring and decontamination).		X		X
22. Demonstrate the adequacy of facilities, equipment and personnel for congregate care of evacuees.		X		X
23. Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured or exposed individuals. (To be performed in an independent drill)				X
24. Demonstrate the adequacy of medical facilities, equipment, procedures and personnel for handling contaminated, injured or exposed individuals. (To be performed in an independent drill)				X
25. Demonstrate the adequacy of facilities, equipment, supplies, procedures and personnel for decontamination of emergency workers, equipment and vehicles and for waste disposal.				
26. Demonstrate the ability to identify the need for and call upon federal and other outside support agencies' assistance.	X		X	
27. Demonstrate the appropriate use of equipment and procedures for collection and transport of samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).				

	State of AL.	Houston County	State of GA.	Early County
Demonstrate the appropriate lab operations and procedures for measuring and analyzing samples of vegetation, food crops, milk, meat, poultry, water and animal feeds (indigenous to the area and stored).				
29. Demonstrate the ability to project dosage to the public for ingestion pathway exposure and determine appropriate protective measures based on field data, FDA PAGs and other relevant factors.				
30. Demonstrate the ability to implement both preventive and emergency protective actions for ingestion pathway hazards.				
31. Demonstrate the ability to estimate total population exposure.				
32. Demonstrate the ability to determine appropriate measures for controlled reentry and recovery based on estimated total population exposure, available EPA PAGs and other relevant factors.				
33. Demonstrate the ability to implement appropriate measures for controlled reentry and recovery.				
34. Demonstrate the ability to maintain staffing on a continuous 24-hour basis by an actual shift change.				
35. Demonstrate the ability to coordinate the evacuation of onsite personnel.				
36. Demonstrate the ability to carry out emergency response functions (i.e., activate EOCs, mobilize staff that report to the EOCs, establish communications linkages and complete telephone call down) during an unannounced off-hours drill or exercise.				

4.0 NARRATIVE SUMMARY

The scenario will begin at 0710 central time with a gross failed fuel detector alarm. The alarm will exceed 1 x 10^5 cpm above background (indicate cpm equivalent to approx. 2% clad damage) and cause the operators to commence a controlled ramp down in power per AOP-32.0. At 0745, 1B MDAFP will trip on overload due to a short in the motor windings.

At 0755, chemistry will report the results of the RCS sample taken due to the GFFD alarm. Based on dose equivalent I-131 activity of 130 µCi/ml plant shutdown and cooldown to below 500°F will be initiated.

At 0800, the 1A S/U transformer is lost due to a voltage spike on the grid causing failure of breaker 800 in the high voltage switchyard (will not reclose). An "A" train LOSP occurs resulting in a reactor trip. Rod H14 will stick in the core at 150 steps. 1-2A Diesel Generator will auto start, and B1F LOSP sequencer will run. The TDAFP will trip on overspeed (can be restored) and 1A MDAFP will fail to start due to closing spring not being charged (will restore after manually charging). Based on loss of ALL AFW an ALERT will be declared.

At 0900 indications of a control rod housing rupture (ejected rod) on rod H14 will be received resulting in additional fuel damage (increase to approx 5% clad damage), 20 gpm RCS leak. At this point, a SITE AREA EMERGENCY will be declared.

At 1015, a large break LOCA will occur. Automatic actuation of Phase "B" will not occur at 27 psig forcing the operators to initiate Phase "B" manually. Containment pressure will rise to approximately 40 psig. A containment leak of 200 CFM will occur due to failure of an electrical penetration inner (containment side) O-ring and the associated LLRT test connection valve being left open. This will result in a radioactive release to the environment and the declaration of a GENERAL EMERGENCY due to the loss of all three fission product barriers. By 1300, the penetration leak will be either isolated by a reentry team or will reduce to zero leakage based on CTMT pressure reduction.

The TSC will be fully staffed and radiation monitoring teams will be dispatched to perform environmental monitoring. The plant will cooldown during safety injection.

The EOF will be activated and will continue the efforts to track the plume and provide environmental monitoring and dose assessment. The EOF staff will be further challenged with licensing, public information, engineering and logistics support activities.

4.0 NARRATIVE SUMMARY (CONT.)

The News Media Center will be activated and staffed by representatives from APCo, the State of Alabama, Houston County, the State of Georgia and Early County. Media and public interest will be simulated and news releases will be prepared and released.

The exercise will terminate once the radiation monitoring teams have tracked the plume, the EOF has been staffed and is performing EOF activities, and the News Media Center staff has conducted a press conference. Termination will be coordinated with the State of Alabama and the State of Georgia if occurring prior to 3:00 P.M. Central.