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Report Nos.: 50-348/92-07 and 50-364/92-07

Licensee: Alabama Power Company

Docket Nos.: 50-348 and 50-364

License Nos.: NPF-2 and NPF-8

Facility Name: Farley

Inspection Conducted: February 24-28, 1992

Inspectors: A. Gooden 03-19-92
 A. Gooden Date Signed

G. Salyers 03/19/92
 G. Salyers Date Signed

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 Emergency Preparedness Section
 Radiological Protection and Emergency
 Preparedness Branch
 Division of Radiation Safety and Safeguards

SUMMARY

Scope:

This special, unannounced inspection was conducted to review the adequacy and implementation of the following components of the licensee's emergency preparedness program: 1) emergency detection and classification, 2) protective action decision-making, 3) notifications and communications, 4) shift staffing and augmentation, 5) training, 6) dose assessment, and 7) public information program.

Results:

Within the areas reviewed, no violations or deviations were identified. However, the inspector discussed in detail recurring problems with delays in contacting on-call personnel during unannounced communication drills (Paragraph 5). Positive aspects of the licensee's program included hard copy notification messages as a followup to telephonic notifications, the Analytical Data Management System (ADMS) for dose projection and event classification, and the prompt response to Alert Notification System (ANS) radio problems.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- J. Deavers, Senior Plant Instructor
- *S. Freeman, Senior Engineer - Safety Audit and Engineering Review
- D. Harris, Senior Chemistry/Environmental Technician
- *R. Hill, Assistant General Manager, Plant Support
- *C. Hillman, Supervisor, Security
- F. Holloway, Shift Supervisor
- *J. Kale, Superintendent, Chemistry and Environmental
- *R. Livingston, Environmental and Emergency Planning Supervisor (Acting)
- D. Masline, Chemistry Technician
- A. McDonald, Nuclear Information Assistant
- *D. Morey, General Manager
- *C. Nesbitt, Manager, Operations
- J. Osterholtz, Manager, Technical
- *L. Stinson, Assistant General Manager, Operations
- D. Tedin, Shift Supervisor
- *B. VanLandingham, Supervisor, Operations Training
- *W. Warren, Supervisor, Technical Training
- *L. Williams, Manager, Training

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

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*G. Maxwell

*Attended exit interview

C. Emergency Detection and Classification (82201)

Pursuant to 10 CFR 50.47(b)(4); 10 CFR Part 50, Appendix E, Sections IV.B and IV.C; Section IV.A of the licensee's Emergency Plan; and guidance in Appendix 1 of NUREG-0654, this program area was inspected to determine if the licensee used and understood a standard emergency action level (EAL) and classification scheme.

The inspector verified that the licensee's notification procedures included criteria for initiation of offsite notifications and for development of protective action recommendations (PARs). With one exception, the procedures required that offsite notifications be made promptly after declaration of an emergency. The one exception involved

NRC approval of a one-hour time limit for State/local notifications following a Notification of Unusual Event (NOUE) declaration.

The inspector discussed with a licensee representative the coordination of EALs with State and local officials. Licensee documentation showed that by letter dated December 16, 1991, the licensee had discussed this subject with State and local officials, and that these officials agreed with the Farley EALs.

The inspector performed a direct comparison of the Farley event classification procedures with those event classifications required by the Emergency Plan. The inspector determined that the event classifications in the procedures were consistent with those in the Plan and did not appear to contain impediments or errors which could lead to incorrect or untimely classification. As verification that the EALs were based on parameters obtainable from Control Room instrumentation, the inspector performed a comparison of Control Room instrumentation indications to the EALs and noted that the instrumentation range and units were consistent with the EALs in the event classification procedure.

The responsibility and authority for the classification of emergency events and initiation of emergency actions were described in Procedure FNP-O-EIP-3 "Duties of the Emergency Director". Interviews with two Shift Supervisors regarding their role as the Interim Emergency Director (IED) disclosed that the interviewees understood their role, responsibilities, and authorities in event classification, notification, and PARs. Walk-through evaluations involving event classification, dose projection, and PARs were conducted with the aforementioned individuals. Each interviewee was given several different sets of plant conditions and with one exception, the event classifications were both correct and timely. The one exception involved an incorrect classification which resulted from the artificiality of the interview process in the absence of Control Room or Simulator indicators for review and assessment. The inspector determined that based on the interviews, personnel were familiar with their responsibilities and the appropriate classification procedures.

No violations or deviations were identified.

3. Protective Action Decision-Making (82202)

Pursuant to 10 CFR 50.47(b)(9) and (10); 10 CFR Part 50, Appendix E, Section IV.D.3; and Section IV.C of the licensee's Emergency Plan, this area was inspected to determine whether the licensee had 24-hour-per-day capability to assess and analyze emergency conditions and make recommendations to protect the public and onsite workers, and whether offsite officials had the authority and capability to initiate prompt protective action for the public.

The inspector reviewed pertinent portions of the licensee's Emergency Plan and procedures for responsibility and authority for protective action decision-making. These documents clearly assigned responsibility and

authority for accident assessment and protective action decision-making. Interviews with members of the licensee's emergency organization showed that these personnel understood their authorities and responsibilities with respect to accident assessment and protective action decision-making. Walk-through evaluations involving protective action decision-making were conducted with two key members of the licensee's staff. Each interviewee appeared to be cognizant of appropriate onsite protective measures and aware of the range of PARs appropriate to offsite protection. Interviewees demonstrated that PARs may be made based on plant status (core condition and containment) and dose projections even if no release is in progress.

Licensee procedures made provisions for contacting responsible offsite authorities on a 24-hour basis. Backup communications links with offsite authorities were available. The inspector independently confirmed that offsite decision-makers with authority for emergency response activities could be contacted by requesting and observing a communications check of the Emergency Notification Network (ENN) to State/local agencies in Alabama and Georgia from the Technical Support Center (TSC).

No violations or deviations were identified.

4. Notifications and Communications (82203)

Pursuant to 10 CFR 50.47(b)(5) and (6); 10 CFR Part 50, Appendix E, Section IV.D; and Section VI of the licensee's Emergency Plan, this area was inspected to determine whether the licensee was maintaining a capability for notifying and communicating with plant personnel, offsite supporting agencies and authorities, and the population within the 10-mile emergency planning zone (EPZ).

The inspector reviewed the licensee's notification procedures (FNP-0-EIP-8 and FNP-0-EIP-26). FNP-0-EIP-26 entitled "Offsite Notification" specified when to notify and activate the onsite emergency organization, corporate support organization, and offsite agencies. The procedures were consistent with the emergency classification and EAL scheme used by the licensee. The initial and followup emergency messages in EIP-26 were consistent with the guidance in NUREG-0654, Sections 11.E.3 and 11.E.4. EIP-8 provided a listing of names and telephone numbers of personnel and organizations who may need to be notified in the event of an emergency condition. Included as a supplement to EIP-8 was a plant notification roster. Documentation was provided to show that the licensee on a quarterly basis was updating the plant notification roster. The inspector verified that randomly selected phone numbers (normal and off-hours) for offsite agencies in Alabama and Georgia were current and up-to-date by making unannounced calls to select warning points. The referenced phone numbers would be used in the event the Emergency Notification Network (ENN) was inoperable or a particular agency failed to acknowledge via the ENN. The inspector conducted an operability test of the following communications equipment located in the TSC: Emergency Notification

System (ENS), ENN, and telecopier (for hard-copy transmittal of emergency messages). No problems were noted.

The licensee's management control program for the Alert and Notification System (ANS) was reviewed. According to licensee documentation and discussions with licensee representatives, the system consisted of sirens installed at three locations in Alabama, and tone-alert radios for residents inside the 10-mile EPZ but outside the siren coverage areas. Schools within the 10-mile EPZ were also provided tone-alert radios. Documentation which summarized the Calendar Year 1991 ANS testing disclosed that the ANS average operability for Calendar Year 1991 was above 90%. The inspector reviewed siren test records for the period April 18, 1991 to February 19, 1992. The records showed that ANS tests were being performed in accordance with procedural requirements and guidance in NUREG-0654. Silent tests were performed more frequently (weekly) than specified in NUREG-0654 (bi-weekly). During Calendar Year 1991, system maintenance was performed on the tone-alert radio and siren system.

The inspector discussed with a member of the licensee's staff the maintenance, distribution, and testing of tone-alert radios. According to the licensee's data base, approximately 2,150 radios had been distributed to EPZ residents and/or business owners. The tone-alert radio database was a computerized listing of the following information: 1) resident's name, 2) radio serial no., 3) date person last contacted, 4) zone location, and 5) general comments regarding radio, corrective actions to reported problems, etc.

Communications equipment in the Control Room and TSC was inspected. Provisions existed for prompt communications among emergency response organizations, to emergency response personnel, and to the public. The installed communications systems at the emergency response facilities were consistent with system descriptions in the Emergency Plan and EIPs. The inspector conducted operability checks on selected communications equipment in the TSC. No problems were observed. The inspector reviewed licensee records for the period May 2, 1991 to February 6, 1992 and noted that communications tests were conducted at the frequencies specified in NUREG-0654, Section II.N.2.a. Licensee records also revealed that corrective action was taken on problems identified during communication tests. Phone numbers for randomly selected personnel assigned to the on-call schedule were compared with phone numbers in the local telephone directory and no problems were noted.

As part of the emergency communication equipment, the inspector reviewed the maintenance and periodic testing of the plant emergency warning system for high noise areas. The referenced system consists of flashing blue lights and an evacuation alarm sounded over the plant public address system. Test documentation disclosed that operability tests were performed during Calendar Year 1991, and in response to unsatisfactory results, the licensee issued maintenance work requests (MWRs) for repairs and retesting to verify system operability.

No violations or deviations were identified.

5. Shift Staffing and Augmentation (82205)

Pursuant to 10 CFR 50.47(b)(2) and 10 CFR Part 50, Appendix E, Sections IV.A and IV.C, this area was inspected to determine whether shift staffing for emergencies was adequate both in numbers and in functional capability, and whether administrative and physical means were available and maintained to augment the emergency organization in a timely manner. Shift staffing levels and functional capabilities of all shifts were reviewed and found to be consistent with the guidance of Table B-1 of NUREG-0654. The licensee had established an "on-call" system so that essential off-shift personnel would be available to staff the TSC. The on-call schedule used three crews which rotated on a weekly basis. The inspector discussed staff augmentation times with a licensee representative and reviewed documentation for staff augmentation drills. The availability of on-call personnel to staff the TSC during off-hour events was tested by means of quarterly unannounced drills in accordance with Section 5.2.6 of Procedure FNP-0-EIP-15, "Emergency Drills". Drills are limited to pager or telephone contact and documentation of person contacted availability and estimated time of site arrival. The inspector reviewed documentation for three drills initiated during Calendar Year 1991: April 30, 1991, August 21, 1991, and November 19, 1991. During each of the before-mentioned drills, problems were encountered during the initial notification attempts and resulted in either delays in contacting personnel (e.g., Technical Manager more than 2 hours during the November drill), or the inability to contact personnel (Systems Engineer during the August drill). In an effort to prevent recurring problems and improve the notification times, the licensee implemented corrective actions subsequent to each drill. However, the delay noted during the November drill resulted from human error; that is, the on-call responder was away from residence without the beeper. As a result, the inspector expressed concern regarding the implementation of this program area based on the drill results for the second, third, and fourth quarter which disclosed recurring problems with delays in notification to on-call personnel.

As a program enhancement in the area of notification to the emergency response organization, the licensee had recently implemented (February 1992) an automated call-out service. Preliminary results for testing indicated improvements in the notification times to on-call staff. However, at the time of the inspection, sufficient operating data (quarterly drills, human factors problems, etc.) was not available to assess the effectiveness. Issues involving the acceptability of the Farley augmentation times (both TSC and Emergency Operations Facility) were being reviewed by both licensee and NRC staff at the time of the inspection.

The inspector questioned a member of the licensee's staff regarding staffing and activation drills involving the Alternate Emergency Operations Facility (EOF). The inspector was informed that a recent drill involving the referenced facility had not been done. Documentation showed

that the last drill was conducted on July 1, 1986. A review of the drill details disclosed that the facility was pre-staged prior to staff arrival. Equipment was identified, transported, and assembled in advance of the EOF staff arrival. Further, personnel from the corporate office in Birmingham, Alabama staffing the EOF were informed in advance of the drill regarding the date and time.

Consequently, the inspector informed the licensee that by pre-staging equipment and personnel, the drill did not appear to demonstrate the timely activation and staffing of the alternate EOF. The inspector further stated that the lack of a real-time activation drill did not meet the intent of the guidance in NUREG-0654, Section H.4: "each organization shall provide for timely activation and staffing of the facilities and centers described in the Plan." The inspector discussed in detail with a member of the licensee's staff a drill performed real-time to demonstrate the timely activation and staffing of the alternate EOF. During the exit interview (see Paragraph 10), the inspector was informed by the Plant General Manager that a commitment was assigned to the Emergency Planning Punch List (EPPL Item 92-115) to perform an alternate EOF drill during the Calendar Year 1992, but the drill would not be conducted real-time as defined by the inspector.

No violations or deviations were identified.

6. Knowledge and Performance of Duties (82206)

Pursuant to 10 CFR 50.47(b)(15) and 10 CFR Part 50, Appendix E, Section IV.F, and Section VIII.B of the Emergency Plan, this area was inspected to determine whether the licensee's key emergency response personnel were properly trained and understood their emergency responsibilities. The inspector reviewed the description (in the Emergency Plan) of the training program, training procedures, and selected lesson plans, and interviewed members of the instructional staff. The inspector reviewed lesson plans for licensed operator training (Emergency Director) and the training outline for key corporate emergency response personnel (Recovery Manager and Emergency Coordinator). Based on these reviews and interviews with training personnel, the inspector determined that the licensee maintained a formal emergency training program. The lesson plan for Emergency Director training under operator licensing included OPS-53002 which covered the Emergency Plan and Emergency Implementing Procedures (EIPs) with the exception of EIP-9, which was covered in OPS-53002J.

Emergency response training records were reviewed for 1991. The inspector noted that the licensee did not maintain a computerized tracking system for emergency response training or operator licensing training. Record retention and tracking was accomplished via microfiche. The inspector's review of training records disclosed that four individuals designated as Emergency Directors during 1991 did not attend the annual training. Personnel were requalified as Emergency Directors by successfully challenging an exam in lieu of classroom attendance. The licensee's training procedure, FNP-O-AP-45 "Farley Nuclear Plant Training Plan," made

provisions for such retraining certification. Appendix B, Paragraph H.3 of the referenced procedure states: "Should an individual not be able to attend at the regularly scheduled time, he will attend a special lecture on this material or be provided training materials and objectives and be examined on this material." According to training documentation, the required training was given on several dates during a period of five to six consecutive weeks to allow for extenuating circumstances (illnesses, plant evolutions, etc.). Yet, three individuals assigned to key plant management positions and as Emergency Directors in the emergency organization were not able to accommodate one of the scheduled training periods. The inspector expressed concern regarding the lack of management attention to emergency response training. The General Manager responded to the inspector's comments by stating "due to scheduling conflicts, he was unable to attend the classroom training but participated in several table top drills in addition to the annual exercise." The inspector questioned licensee representatives regarding other positions to the emergency organization that were exempted from classroom attendance by successfully challenging an exam. In addition, the inspector discussed the absence of a mechanism that would prevent a member of the emergency response organization (e.g., Emergency Director) from not attending the lectures and "challenging" the exam year after year. Licensee management committed to performing a review of the training practices for granting exemptions and implementing actions that would prevent challenging the exam each year. The inspector informed the licensee that this matter would be tracked as an Inspector Followup Item (IFI).

IFI 50-348, 364/92-07-01: Implementation of provisions which would prevent consecutive challenge of exam in lieu of attending training.

The inspector conducted walk-through evaluations with key members of the plant staff who are involved in emergency detection and classification, notification and communications, and dose projection. Within the areas evaluated, no significant problems were noted. The event classifications were both timely and correct. Regarding dose projection, interviewees were prompt and proficient in calculating source term values and site boundary dose using both the manual and automated methodology.

No violations or deviations were identified.

7. Dose Calculation and Assessment (82207)

Pursuant to 10 CFR 50.47(b)(9), this area was inspected to determine whether the licensee maintained adequate methods for assessing the consequences of an actual or potential radiological release.

The licensee's dose assessment methodologies (automated and manual) were described in the following procedures:

- ° FNP-0-EIP-9.1, "ADMS (Analytical Data Management System) - Automated Dose Assessment Method"

- FNP-0-EIP-9.3, "Personal Computer - Automated Dose Assessment Method"
- FNP-0-EIP-9.4, "Manual Dose Assessment Method"
- FNP-0-EIP-9.5, "Matrix Dose Assessment Method"

The licensee's primary method of dose assessment is the "Analytical Data Management System (ADMS)". Although an actual demonstration was not performed, according to procedures, the ADMS can be activated automatically when select radiation monitors setpoints are exceeded. Once activated, the ADMS initiates emergency dose calculations and hardcopy reports for transmittal to various onsite and offsite locations. This methodology was noted by the inspector as a program strength in the assessment of potential radiological releases. The above procedures had provisions for calculating doses from ground and elevated releases (e.g., plant stack, containment, steam generator). The procedures allowed for refinement of dose projections through results from field team surveys. The inspector reviewed documentation to show that the licensee had performed a comparative study of dose methodologies involving ADMS, States (Alabama and Georgia), and NRC (RASCAL and IRDAM). The results from seven different scenarios disclosed that in each case, the licensee's model resulted in higher doses than NRC models. At most distances, the difference was a factor of two times higher. The one exception was the site boundary dose calculations which resulted in a factor of four times higher using stability classes C through G. No significant differences were identified between the methodologies used by the licensee and the State of Alabama. The dose projection comparisons were well documented, and where significant differences were noted, TSC and EOF staff involved with dose projections were properly informed.

The inspector observed dose assessment walk-throughs by three individuals assigned responsibility for dose projection during an emergency. Two individuals performed a manual dose calculation using EIP-9.4, and one individual performed the personal computer methodology described in EIP-9.3. No problems were noted. Interviewees completed calculations within 15 minutes after the simulated plant and meteorological conditions were provided. The inspector noted and discussed with the licensee as an improvement item a revision to Figures A through G of procedure FNP-0-EIP-9.4 involving stability classes and source term calculations to enhance the legibility of figures.

No violations or deviations were identified.

8. Public Information Program (82209)

Pursuant to 10 CFR 50.47(b)(7) and 10 CFR Part 50, Appendix E, Section IV.D.2, this area was inspected to determine whether basic emergency planning information was disseminated to the public in the 10-mile EPZ on an annual basis.

The licensee had developed an emergency response information brochure for use by the public residing in the 10-mile EPZ. The brochure took the form of an attractive calendar with emphasis on recycling. The brochure contained very colorful pictures from area students demonstrating ways to preserve the earth. As a calendar, the brochure was updated and distributed annually. The inspector reviewed documentation to show that the calendar years 1991 and 1992 brochures were coordinated with the appropriate offsite authorities. The inspector reviewed the current calendar (1992) and verified that it included the information specified by NUREG-0654, Section II.G. As an improvement over the previous brochure (1991), the emergency evacuation map was colorized in the 1992 brochure thereby resulting in enhanced readability of route information. In addition to the calendars, all residents within the 10-mile EPZ were provided phone book covers which contained phone numbers for Alabama Power (Plant Farley, Visitors Center, etc.). According to a member of the licensee's staff, plans are to implement a door-to-door update of information from residents within the 10-mile EPZ (e.g., address, number of residents, provide new batteries for tone-alert radios, etc.).

According to a licensee representative, the means used by the licensee to inform the transient population of appropriate emergency response measures and action consisted of posted notices at various locations (recreational areas, boat launching pads, camping facilities) within the 10-mile EPZ. Randomly selected locations in both Alabama and Georgia were verified by the inspector as displaying the appropriate warning information. When questioned regarding the number of signs and a descriptive listing or map showing the location of signs, the inspector was informed that such information was not documented procedurally, or by a surveillance sheet or inventory listing. However, the interviewee was very familiar with each location as indicated by the ability to promptly locate signs in both States. Signs were inspected periodically to ensure replacement was not necessary. The inspector discussed with the licensee for consideration as an improvement item, include in the public information procedure information regarding the transient notification signs (location of signs, and periodic inspection), to ensure program continuity in this area in the event the individual currently assigned this responsibility should be reassigned.

A review of the licensee's distribution methodology indicated that the 1992 edition of the emergency planning calendar was sent to residences within the 10-mile EPZ. The brochure provided the telephone number of the Farley Visitors Center for obtaining additional information regarding the plant. An interview was held with the point of contact to determine the type of information to be provided and the individual's qualification to provide such information; no problems were identified in this connection. Also included in the brochure were telephone numbers of local emergency management agency offices in Alabama and Georgia for use by residents desiring more emergency planning information. The inspector placed an unannounced phone call during off hours (7:30-8:00 p.m.) to three different phone numbers listed in the brochure but was unable to secure answers to hypothetical questions regarding radiation and Plant Farley.

This matter was discussed with the licensee for consideration as an improvement item, make provisions for receiving and responding to questions from the general public on a 24-hour basis regarding radiation and Plant Farley.

In addition to the emergency planning calendar, licensee representatives indicated that the public information program included: a quarterly publication entitled "Over the Fence," the Farley Visitors Center, and an annual program for informing news media personnel. Based on the reviews and interview with responsible personnel, the inspector determined that this program area was being effectively implemented and maintained.

No violations or deviations were identified.

9. NRC Information Notice (92703)

The inspector reviewed the licensee's response to the following Information Notices (IN):

- ° IN 89-89 "Event Notification Worksheets". The referenced Notice was reviewed by the licensee for applicability to the existing notification form contained in procedure FNP-0-EIP-26 "Offsite Notification." No further action was taken. The licensee reviewer determined that incorporation of guidance in the IN would be inappropriate at this time.
- ° IN 90-44, "Dose Rate Instruments Underresponding To The True Radiation Fields". The inspector reviewed documentation which disclosed the licensee had reviewed the referenced IN and incorporated the details and IN as a reference in FNP-0-RCP-26 "Radiological Surveys and Monitoring."
- ° IN 91-33, "Reactor Safety Information For States During Exercises and Emergencies". According to the documentation and a discussion with a member of the licensee's staff, the IN was assigned for review and evaluation. However, at the time of the inspection, the review was incomplete.
- ° IN 91-72, "Issuance of a Revision to the EPA Manual of Protective Action Guides and Protective Actions For Nuclear Incidents". The referenced IN had been assigned to the licensing staff for review and evaluation. However, at the time of the inspection, the review was incomplete.

10. Action on Previous Inspection Findings (92701)

- a. (Closed) IFI 50-348, 364/91-11-02: Conducting operability tests of the emergency ventilation systems for the TSC and EOF.

The subject tests were performed and are included in the plant-wide surveillance test system tracking program.

- b. (Closed) Exercise Weakness 50-348, 364/91-23-02: Failure to perform an accountability of personnel within 30 minutes.

Revisions to FNP-0-EIP-10, practice drills, and training relegated to the procedural revision resulted in a successful demonstration of an accountability drill on February 25, 1992, which was observed by two Regional based emergency preparedness inspectors and a member of the Farley NRC Resident's staff.

11. Exit Interview

The inspection scope and results were summarized on February 28, 1992, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below and the following inspector concerns: lack of a real-time activation drill involving the alternate EOF (Paragraph 5); recurring problems with delays in notification to the on-call personnel during quarterly pager drills (Paragraph 5); and the practice of exempting personnel from training (Paragraph 6). Dissenting comments were received from the licensee regarding the performance of drills as real-time in comparison to pre-staging. Proprietary information is not contained in this report.

| <u>Item Number</u> | <u>Description/Reference</u> |
|----------------------|---|
| 50-348, 369/92-07-01 | IFI - Implementation of provisions which would prevent consecutive challenge of exam in lieu of attending training (Paragraph 6). |

Licensee management was informed that two open items from previous inspections were reviewed and both items are considered closed (Paragraph 10).