



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

DEC 12 1990

Report Nos.: 50-348/90-30 and 50-364/90-30

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 1 and 2

Inspection Conducted: October 22-25, and 31, 1990

Inspector: W. H. Rankin
for W. M. Sartor, Jr.

12/5/90
Date Signed

Accompanying Personnel: G. Arthur (Battelle)
G. Salyers

Approved by: W. H. Rankin
W. H. Rankin, Chief

12/5/90
Date Signed

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

SUMMARY

Scope:

This routine, announced inspection was the observation and evaluation of the licensee's annual emergency exercise. Selected areas of the licensee's emergency response facilities and organization were observed to evaluate the effectiveness of the licensee's implementation of the Emergency Plan and procedures in providing for the health and safety of the public and onsite personnel during a simulated emergency. This full participation exercise was conducted on October 24, 1990, between the hours of 6:30 a.m. and 1:15 p.m.

Results:

In the areas inspected, violations or deviations were not identified.

The licensee's response to the emergency conditions as observed was satisfactory to provide for the health and safety of the public. This was based on the correct and timely declaration of a General Emergency with appropriate protective action recommendations being made. An exercise weakness was identified because the Emergency Director did not perform all requirements of the General Emergency procedure (Paragraph 3). The effectiveness of the licensee's critique process was not fully demonstrated in that no specific

commitment to undertake corrective actions to exercise recommendations was made (Paragraph 11).

The scenario developed for the exercise was detailed and effective in testing the integrated capability of the emergency response organization to mitigate the postulated casualty. However, the pre-exercise activation drill of the EOF the day before the exercise and the EOF pre-staging on the day of the exercise prevented the real-time activation of the EOF and the evaluation thereof.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *W. Bayne, Plant Supervisor, Chemistry
- *E. Berryhall, Manager, Systems Performance Planning
- *S. Casey, Plant Supervisor, Systems Performance
- *T. Cherry, Plant Supervisor, Instrumentation and Control
- *R. Coleman, Manager, Plant Modifications
- *R. Hill, Assistant General Manager, Plant Operations
- *C. Hillman, Supervisor, Security
- *L. Jackson, Sector Supervisor, Systems Analyst Training
- *F. Jessup, Emergency Planning Coordinator
- *D. Morey, General Manager, Nuclear Plant
- *C. Nesbitt, Manager, Technical
- *J. Osterholtz, Operations Manager
- *D. Tedin, Supervisor, Technical Training
- *R. Wiggins, Supervisor, Operations Training
- *L. Williams, Manager, Plant Training
- *J. Woodward, Vice President, Nuclear

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

NRC Resident Inspectors

G. Maxwell
M. Morgan

*Attended exit interview

2. Exercise Scenario (82302)

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test an integrated emergency response capability as well as the basic elements existing within the licensee, State and local Emergency Plans and organization as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.F and specific criteria in NUREG-0654, Section II.N.

The scenario developed for this exercise was reviewed in advance of the scheduled exercise date and was determined to be adequate for the scope and objectives of this full participation exercise. Full participation included Alabama Power Company, the State of Alabama, the State of Georgia, Houston County, Early County, and the NRC Region II. The scenario events met the needs of the participating organizations to simulate all aspects of a real emergency.

The narrative summary of the 1990 exercise scenario was also compared to the narrative summaries for the 1986-1989 exercises to determine conformance with the evaluation criterion in NUREG-0654, Section II.N.1.b which states: "...Each organization should make provision to start an exercise between 6:00 p.m. and midnight, and another between midnight and 6:00 a.m. once every six years." It was also noted that Section VIII.A.1 of the licensee's Emergency Plan and Section 5.3.1 of FNP-0-EIP-15, "Emergency Drills," addresses this issue with the statement: One(1) exercise may be started between 6:00 p.m. and midnight and another between midnight and 6:00 a.m. once every six(6) years." The inspector noted that the 1986-1990 exercises all were initiated between 6:30 a.m. and 7:45 a.m. This issue was brought to the attention of licensee management for appropriate action during a telephone conversation on November 29, 1990 (see Paragraph 13).

No violations or deviations were identified.

3. Onsite Emergency Organization (82301)

The licensee's onsite emergency organization was observed to assure that the following requirements were implemented pursuant to 10 CFR 50.47(b)(2), Paragraph IV.A of Appendix E to 10 CFR 50, and specific guidance promulgated in Section II.B of NUREG-0654:

- (1) unambiguous definition of responsibilities for emergency response;
- (2) provision of adequate staffing to assure initial facility accident response in key functional areas at all times; and
- (3) specification of onsite and offsite support organization interactions.

The inspector observed that the licensee's on-shift organization responded to the simulated abnormal conditions that initiated the exercise. The Unit 2 shift supervisor assumed Emergency Director responsibilities and appeared to be ready to make an emergency classification based on a 60 gallons per minute (gpm) leak rate when the lead Control Room controller intervened and directed the 60 gpm leak rate not be used to classify an emergency condition. The controller indicated to the inspector that the intervention was required to maintain the scenario timeline by preventing the declaration of an Alert based on the reactor coolant system (RCS) leakage. As a result, the first emergency classification was made at the Alert level approximately an hour later. By this time the designated on-call Emergency Director had responded to the Control Room and key staff had responded to the Technical Support Center (TSC) in response to the events requiring a one hour notification to the NRC.

The inspector determined that the initial onsite organization in the TSC and Operational Support Center (OSC) was well defined and adequate staff was available to fill key functional positions within the emergency organization. The Emergency Plan Implementing Procedure (EPIP) FNP-0-EIP-0, "Emergency Organization and Control Room Access," delineates the lines of authority for coping with operational accidents. Responsibilities for the Emergency Director were specified in the EPIP for

the respective emergency classification as well as FNP-0-EIP-3, "Duties of the Emergency Director." During the exercise, inspectors noted on several occasions that some specified procedural steps were not performed. For example, Paragraph 4.1.1 of FNP-0-EIP-19, "General Emergency," stated that the Emergency Director shall "... announce the condition and give needed evacuation instructions over the plant public address system." Paragraph 4.1.6 of the same procedure required that the Emergency Director shall "Ensure personnel accountability" and Paragraph 4.1.7 of this procedure required the Emergency Director to "Notify Security upon declaration of this classification." Inspection observations which supported the failure to adequately perform the above procedural steps included: (1) the plant public address system was not used to announce the General Emergency Classification until approximately one hour and thirty minutes after the declaration; (2) prior to exercise termination, the Emergency Director was not informed that two people previously reported as unaccounted for had been determined to be exempt and therefore accounted for; and (3) thirty-three minutes after the General Emergency declaration, the Security Shift Foreman was still unaware of the declaration. Another inspector noted that Control Room personnel were unaware of the General Emergency declaration when he relocated to the TSC some 25 minutes after the declaration.

The above observations were initially identified during the exit interview as an exercise weakness for failing to adequately provide for the health and safety of onsite personnel by keeping them informed and fully accounting for all personnel. Dissenting comments were provided by the licensee at the October 31, 1990 meeting in the Region II office to the effect that the Emergency Director had adequately provided for the health and safety of onsite personnel by having them proceed to their primary assembly areas at the Site Area Emergency. In view of the information provided, the exercise weakness was revised to address the failure to adhere to procedural steps for the General Emergency classification.

Exercise Weakness 50-348, 364/90-30-01: Failure of the Emergency Director to perform steps 4.1.1, 4.1.6, and 4.1.7 of the EPIP for General Emergency.

No violations or deviations were identified.

4. Emergency Response Support and Resources (82301)

This area was observed to determine that arrangements for requesting and effectively using assistance resources have been made, that arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility had been made, and that other organizations capable of augmenting the planned response have been identified as required by 10 CFR 50.47(b)(3), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.C.

NRC Region II, State, and local staff were accommodated at the Emergency Operations Facility (EOF) located in the downstairs portion of the Farley

Nuclear Plant Training Center. Section 11.C of the Emergency Plan described interfaces and assistance resources that were capable of augmenting the planned response.

No violations or deviations were identified.

5. Emergency Classification System (82301)

This area was observed to assure that a standard emergency classification and action level scheme was in use by the nuclear facility licensee pursuant to 10 CFR 50.47(b)(4), Paragraph IV.C of Appendix E to 10 CFR 50, specific guidance promulgated in Section 11.D of NUREG-0654, and guidance recommended in NRC Information Notice 83-28.

The licensee's emergency classification system was described in Section IV.A of the Emergency Plan. The criteria for classification and response required for each category of the emergency classification scheme was defined and was used effectively during the exercise to classify the simulated emergency that progressed to a General Emergency classification.

No violations or deviations were identified.

6. Notification Methods and Procedures (82301)

This area was observed to determine that procedures had been established for notification by the licensee of State and local response organizations and emergency personnel, and that the content of initial and follow-up messages to response organizations had been established; and means to provide early notification to the populace within the plume exposure pathway had been established as required by 10 CFR 50.47(b)(5), 10 CFR 50, Appendix E, Paragraph IV.D, and specific criteria in NUREG-0654, Section 11.E.

Section VI of the licensee's Emergency Plan describes the notification procedures and FNP-0-EIP-26, "Offsite Notifications," contained the initial message form that was used by the Emergency Director to notify the States of Georgia and Alabama. Provisions also existed for follow-up messages. The notification methods and procedures were used effectively during the exercise to provide prompt information to State and local response organizations.

No violations or deviations were identified.

7. Emergency Communications (82301)

This area was observed to verify that provisions existed for prompt communications among principal response organizations and emergency personnel as required by 10 CFR 50.47(b)(6), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654, Section 11.F.

The inspector observed communications within and between the licensee's emergency facilities, and 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, communications of information occurred in an adequate manner with the exception of those instances identified in Paragraph 3.

No violations or deviations were identified.

8. Public Education and Information (82301)

This area was observed to determine that information concerning the simulated emergency was made available for dissemination to the public as required by 10 CFR 50.47(b)(7), 10 CFR 50, Appendix E, Paragraph IV.D, and specific criteria in NUREG-0654, Section II.G.

Information was provided to the media and the public in advance of the exercise. The information included details on how the public would be notified and what initial actions they should take in an emergency. A rumor control program was also in place. A News Media Center (NMC) was established at the Northview High School in Dothan, Alabama. This area was not observed by the inspection team.

No violations or deviations were identified.

9. Emergency Facilities and Equipment (82301)

This area was observed to determine that adequate emergency facilities and equipment to support an emergency response were provided and maintained as required by 10 CFR 50.47(b)(8), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654, Section II.H.

The inspector observed the activation and staffing of some of the emergency response facilities and evaluated equipment used by the emergency responders during the exercise.

- a. Control Room - An inspector observed that Control Room personnel acted promptly to initiate emergency response to the simulated emergency. Emergency procedures were readily available.
- b. Technical Support Center - The TSC was located immediately north of the Unit 2 Control Room area. The TSC had been partially activated as a result of the 1 hour 50.72 notification. The remainder of TSC activation occurred promptly following the Alert classification. The licensee's critique identified a recommendation to resolve the equipment problems of the continued failure of the Analytical Data Management System (ADMS) and the radiological monitoring team (RMT) radio reliability.

- c. Operational Support Center - The Control Room, Central Security Control, Service Building Auditorium, and Maintenance Shop served as OSCs. The licensee did not identify any activation or equipment problems in the OSC.
- d. Emergency Operations Facility - The activation and staffing of the EOF was not observed by the inspector. The EOF was activated in a separate pre-exercise activation drill the day before the full-scale exercise. On the day of the annual exercise, the EOF was pre-staged at the Training Center prior to fully activating the EOF approximately 45 minutes prior to exercise termination. The licensee did not identify any activation or equipment problems at the EOF during their critique.

No violations or deviations were identified.

10. Protective Response (82301)

This area was observed to determine whether guidelines for protective actions during the 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.

An inspector verified the licensee had and used emergency procedures for formulating protective action recommendations for offsite populations within the 10 mile EPZ. With the General Emergency declaration, the licensee recommended offsite protective actions to evacuate Zone A (2 mile radius) and Zones J-5, K-5, and I-5 (5 miles downwind).

No violations or deviations were identified.

11. Exercise Critique (82301)

The licensee's critique on the emergency exercise was observed to determine that deficiencies identified as a result of the exercise and weaknesses noted in the licensee's emergency response organization were formally presented to licensee management for corrective actions as required by 10 CFR 50.47(b)(14), 10 CFR 50, Appendix E, Paragraph IV.E, and specific criteria in NUREG-0654, Section II.N.

The licensee's drill controllers conducted emergency response facility critiques with the players following the exercise termination. The following morning the lead drill controller provided a formal critique to licensee management. The critique identified no exercise finding but did make some recommendations (see attachment APCO 1990, Emergency Exercise Findings and Recommendations). These were to stress adherence to established instructions on re-entry guidelines, ensure that all significant plant-wide announcements were made in a timely manner, and to resolve equipment problems.

The real-time staffing and activation of the EOF could not be evaluated by the NRC staff because of the pre-exercise activation drill and the pre-staging on the day of the exercise. The EOF activation issue is being evaluated separate from this exercise.

During the NRC exit interview, the inspector identified the licensee's critique presentation as an area for followup. During the critique, the licensee did not fully assess the impact of the exercise observations and their potential effect upon adequate implementation of the Emergency Plan. Furthermore, for the recommendations identified by the licensee during the critique, there was no specific commitment for licensee followup action.

Review of the licensee's actions taken in response to the recommendations identified in the critique of the October 1990 Emergency Exercise will be performed during a future inspection.

12. Action on Previous Inspection Findings (92701)

- a. (Closed) IFI 50-348, 364/89-32-01: Assuring that the Control Room staff is informed when the on-call Emergency Director formally assumes responsibilities. The Emergency Director announced his assumption of responsibilities in the Control Room.
- b. (Closed) IFI 50-348, 364/89-32-04: Ensuring the completion of the reentry checklist in procedure FNP-0-EIP-14. The reentry checklists were completed in accordance with procedural requirements during this exercise.

13. Exit Interview

The inspection scope and results were summarized on October 25, 1990, with those persons indicated in Paragraph 1. The inspector described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee. New information not previously discussed with the licensee was provided to licensee management on November 29, 1990, and was included in Paragraph 2 of this report.

<u>Item Number</u>	<u>Description/ Reference</u>
50-348, 364/90-30-01	Exercise Weakness - Failure of the ED to perform all steps of EIP for General Emergency (Paragraph 3).

A meeting was held at the licensee's request on October 31, 1990, in the NRC Region II office to further discuss the exercise findings. Attendees included J. Woodard and others of the licensee's staff and D. Verrelli, D. Collins, and others of the NRC's staff. Discussions addressed the inspection findings. The exercise weakness was clarified to state the specific areas identified. The licensee also stated that, during an

emergency situation there may be times when strict procedural adherence may not be appropriate.

Attachments:

1. Exercise Objectives
2. Exercise Scenario
3. Exercise Findings and
Recommendations

1990 FARLEY NUCLEAR PLANT EMERGENCY EXERCISE OBJECTIVES
October 24, 1990

I. Participating Organizations

Full Participation: Alabama Power Company, State of Alabama, Houston County, State of Georgia, Early County, and Nuclear Regulatory Commission.

II. Purpose

- A. To meet the requirements of 10CFR50, Appendix E, 44CFR350.9 and NUREG-0654/FEMA-REP-1, Rev. 1.
- B. To conduct a full-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. Dispatch and control of re-entry teams
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. Off-site Ingestion Pathway State Objectives

- See Attachment 1: Ingestion pathway activities will be exercised immediately following the plume exposure exercise and will utilize a separate scenario. The availability of Federal resources will be simulated. APCo will not be a participant in the ingestion pathway exercise activity.

VI. 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.

VII. Exercise Limits

The plume exposure exercise will begin prior to 8 A.M. CST and conclude by 2:30 P.M. CST. The ingestion pathway exercise will begin immediately following the plume exposure exercise and will conclude by 5:00 P.M.

*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.

1990 EXERCISE SCENARIO - TECHNICAL EVENTS

1.0 INITIAL PLANT CONDITIONS

- 1.1 Unit 1 is at 100% power, equilibrium conditions, middle of core life, Cycle #11, 760 ppm boron.
- 1.2 Unit 2 is in MODE 6, Rx vessel head removed, refueling is in progress
- 1.3 Unit 1 LCO's in effect:
 - 1-2A DG inoperable, out of service to investigate slow start, T.S. 3.8.1.1.b entered 0400 October 24
 - RCS activity is > 1.0 microCurie per gram DEI, T.S. 3.4.9.a entered at 0320 October 24
 - CTMT Cooling Fans 1A and 1B are OOC, T.S. 3.6.2.3.a entered 1800 October 22
- 1.4 Unit 2 LCO's in effect:
 - Various snubbers and breached fire barriers
- 1.5 Meteorological Conditions:
 - Wind speed: 3.8 mph @ 150 ft. 3.0 mph @ 35 ft.
 - Wind direction from: 318° @ 150 ft. 315° @ 35 ft.
 - ΔT: -.75°F/165 ft.

1990 EXERCISE SCENARIO - TECHNICAL EVENTS (CONT.)

2.0 EQUIPMENT AND SYSTEM STATUS

2.1 Unit 1

- 2.1.1 A shutdown is planned for 0030, October 26, due to the RCS activity increase (sample at 0500 indicated 70 $\mu\text{Ci/gm DEI}$)
- 2.1.2 Quarterly surveillance is in progress on 1A CTMT spray pump. Estimated completion time is 0800.
- 2.1.3 1B CCW pump had excessive seal leakage, has been tagged out to repair seal. Estimated repair time is 18 hrs.
- 2.1.4 "A" Train is the on-service train.
- 2.1.5 CTMT Cooling Fans 1A and 1B are OOC due to high vibrations. Will be worked during the planned shutdown.
- 2.1.6 Minor Grid Voltage Oscillations have been experienced over the past two weeks, due to problems in the New England area.
- 2.1.7 TDAFP drip leg LCV-3608 has a body to bonnet leak, scheduled to be worked at 1200.
- 2.1.8 Fire suppression system 1A-27 is tagged out to reset clapper (CCW Hx room). Estimated repair time 1 hour.

2.2 Unit 2

- 2.2.1 2B charging pump is running on "A" train.
- 2.2.2 Waste Gas Compressor 2A out of service, estimated repair time: 1 day.
- 2.2.3 #3 Gas Decay Tank is planned for release at 1000 today.
- 2.2.4 2A RHR pump is out of service to be vented, estimated completion time: 2 hours.

1990 EXERCISE SCENARIO - TECHNICAL EVENTS (CONT.)

3.0 MAINTENANCE ITEMS

- 3.1 1-2A DG is out of service to investigate slow start. The Day tank is drained to remove and inspect the foot-valve, fuel filters have been changed.
- 3.2 CTMT Couling Fans 1A and 1B are OOC due to excessive vibration. New fan motors are being prepared for installation following the planned shutdown.
- 3.3 1B CCW pump is tagged out. Pump seal replacement is in progress.
- 3.4 Fire suppression system 1A-27 (CCW Hx Room) clapper is tagged out and being reset.
- 3.5 Unit 1 TDAFP drip leg LCV-3608 body-to-bonnet steam leak is scheduled to be worked at 1200.
- 3.6 2A Waste Gas Compressor is being replaced. Old compressor has been removed and the replacement compressor not yet installed.

4.0 NARRATIVE SUMMARY

The scenario will begin at 0630 central time with a pressurizer code safety valve (V8010A) lifting. As a result of the code safety valve lifting and subsequent failure to fully reseal, RCS identified leakage of 15 GPM will result. Based on the failure of a pressurizer code safety valve to close, a NOUE may be declared and a controlled ramp down in power to minimum load will be initiated per AOP-1.0. At 0700, the 1A CTMT spray pump breaker will trip on overload due to a short in the motor windings. Attempts to drain or cooldown the PRT will not be possible due to failure of the PRT drain valve (HV-8031).

At 0730, RCS leakage from the failed pressurizer code safety valve (V8010A) will increase to 60 GPM and cause the PRT rupture disk to blow. Based on RCS leakage in excess of 50 GPM, an ALERT will be declared. Plant ramp down in power to minimum load will continue. At 0800, a Gross Failed Fuel Detector Alarm will occur to provide the operators an indication of further degradation in fuel assembly integrity (approximately 1% clad damage).

At 0900, the 1A steam generator will develop a tube rupture and a steam line break inside containment. RCS activity will increase to reflect approximately 5% clad damage. ECCS actuation occurs at 4 psig in containment; however, 1C CTMT Fan Cooler breaker trips and the PRT nitrogen supply line isolation (HV-8047) fails to close during Phase A isolation. All automatic safety systems actuate as CTMT pressure rises, containment pressure peaks at approximately 30 psig. Based on a loss of coolant and high containment pressure, a SITE AREA EMERGENCY may be declared (due to multiple failures, controller intervention will be allowed to assure a SITE AREA EMERGENCY is declared to meet exercise objectives).

At 0920, the 1B CTMT spray pump breaker will trip due to a relay failure. Following a re-entry for emergency repairs, the 1B CTMT spray pump may be returned to service (around 1330). Due to the pump failure, containment pressure will remain elevated.

At 1030, the PRT nitrogen supply line isolation (HV-8033) in the 121' piping penetration room fails due to the diaphragm blowing. This will result in a containment leak of 400 CFM through the PRT nitrogen supply line and subsequent radioactive release to the environment. A GENERAL EMERGENCY will be declared based on loss of all three fission product barriers. At 1330, the release from containment may be isolated by an emergency repair party.

The TSC will be fully staffed and radiation monitoring teams will be dispatched to perform environmental monitoring. The plant will cooldown during safety injection, and proceed to cold shutdown with RHR in a normal cooldown lineup.

1990 EXERCISE SCENARIO - TECHNICAL EVENTS (CONT.)

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.

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.

APCo

OCTOBER 1990 EMERGENCY EXERCISE FINDINGS AND RECOMMENDATIONS

The 1990 Emergency Exercise consisted of an inadvertent opening then closing of a pressurizer safety valve with subsequent valve seat leakage. An ALERT Classification was declared at 0743 due to increased valve seat leakage on the affected pressurizer safety valve. At 0800, indications of minor fuel cladding damage were received with an accompanied increase in RCS activity. A steam break and steam generator tube rupture at 0900 caused a reactor trip and safety injection. Based on a containment pressure increase above 27 psig and excessive radiation levels in containment a SITE AREA EMERGENCY was declared at 0910. The failure of a containment isolation valve on the pressurizer relief tank nitrogen supply line resulted in a radiological release to the environment. Based on a loss of three fission product barriers a GENERAL EMERGENCY was declared at 1035.

In the opinion of the APCo monitors, the participants' performance satisfactorily demonstrated that the Emergency Plan and Implementing Procedures are adequate to protect the health and safety of the public. The monitors feel the objectives of the 1990 Emergency Exercise were met based on the following observations:

1. The control room staff assessed the event, classified the event, took corrective measures to control the event and activated emergency response procedures.

2. The Plant Staff:

- a. Activated and staffed the Technical Support Center (TSC) and performed required accident response activities.
- b. Provided timely and accurate protective action recommendations to offsite agencies.
- c. Prepared the Emergency Operations Facility (EOF) in a timely fashion for use by the corporate staff upon arrival.
- d. Augmented the EOF staff with non-essential plant personnel.
- e. Performed radiological monitoring.
- f. Obtained and processed liquid samples and responded to elevated direct radiation measurements in the plant.
- g. Obtained environmental samples.
- h. Performed personnel accountability for all personnel on-site.
- i. Demonstrated adequate communication capabilities with offsite authorities and effectively exchanged technical information.

3. The Corporate Staff:

- a. Activated the EOC in a timely manner.
- b. Provided initial support from the General Office Emergency Operations Center.

4. The EOF Staff:

- a. Assumed the dose assessment and the RMT direction and control functions from the TSC staff.
- b. Assumed the logistics, manpower, and engineering function from General Office EOC.
- c. Prepared and coordinated news releases and activated the Emergency News Media Center.

5. The Emergency Public Information Organization responded to media and public inquiries, established a rumor control center, issued and coordinated news releases, and conducted joint agency news conferences.

The following findings and recommendations were identified by the exercise monitors. Individual comments provided by monitors and not included below will be placed on the Emergency Planning Punchlist for resolution.

FINDINGS:

No exercise findings were identified.

RECOMMENDATIONS:

1. Stress adherence to established instructions and precautions on re-entry guidelines.
 - a. One of nine re-entry teams failed to follow the guidelines established.
 - . Respirators were not obtained until questioned by a drill monitor.
 - . The team traveled outside the established route to recover a misplaced checklist and syringe.
 - b. Poor radiological practices were exhibited during post accident sample preparation.
 - . Some sample dilution was conducted outside the fume hood.
 - . One individual lifted his respirator to talk on the telephone.

2. Ensure that all significant plant wide announcements are made in a timely manner. Plant wide announcements of the Alert and Site Area Emergency Classifications occurred in a timely manner; however, the General Emergency Classification was not communicated to all assembly areas until approximately one hour and thirty minutes after declaration.

3. Resolve the following equipment problems:
 - a. Continued failure of ADMS.
 - b. RMT radio reliability.
 - c. ENN headset background noise.

POSITIVE COMMENTS:

1. Integration of NRC drill players into the TSC and EOF was accomplished smoothly and effectively.

2. Communication and coordination with off-site agencies was significantly improved over past exercises.

3. Conduct of the drill reduced the impact on control room operation from previous exercises.

4. TSC facility improvements significantly enhanced accident management capabilities.

5. Effective command and control in the EOF, TSC, and Control Room contributed to the strength of the emergency organization.

6. TSC management and control of the reentry process was significantly improved from previous exercises.