



# Federal Emergency Management Agency

Washington, D.C. 20472

JUN 2 1982

50-259

MEMORANDUM FOR: Brian Grimes  
Director  
Division of Emergency Preparedness  
U.S. Nuclear Regulatory Commission

FROM: *Richard W. Krimm*  
Richard W. Krimm  
Assistant Associate Director  
Office of Natural and Technological Hazards

SUBJECT: Evaluation of Offsite Emergency Preparedness  
for the Browns Ferry Exercise

Attached herewith are two documents relative to the September 9-10, 1981, exercise at Browns Ferry in Alabama.

Attachment 1: Letter from Region IV RAC Chariman to State of Alabama dated September 22, 1981. Includes report entitled "Deficiencies Noted in the Plant Browns Ferry Exercise Conducted in the State of Alabama, September 9-10, 1981."

Attachment 2: Document entitled "Enclosure 1, Browns Ferry Nuclear Facility Radiological Emergency Exercise, September 9-10, 1981, Regional Assistance Committee Observations and Recommendations and State of Alabama Response", undated. This enclosure was included in a detailed review of the exercise by the State of Alabama dated December 8, 1981.

If you have any questions regarding this matter, please contact Vernon E. Adler, Chief, Technological Hazards Division at 287-0200.

Attachments  
as stated



# Federal Emergency Management Agency

Region IV 1375 Peachtree Street, NE Atlanta, Georgia 30309

September 22, 1981

Ira L. Myers, M.D., State Health Officer  
State Department of Public Health  
State Office Building  
Montgomery, Alabama 36210

Mr. Sam Slone, III  
Director, Civil Defense Department  
State of Alabama  
State Administrative Building  
Montgomery, Alabama 36130

Dear Dr. Myers and Mr. Slone:

Enclosed is a list of deficiencies noted in the Plant Browns Ferry REP Exercise conducted September 9-10, 1981. These deficiencies were observed by the Regional Assistance Committee and FEMA IV staff.

We are aware that corrections are currently being made in the Plant Browns Ferry Site-Specific Plans as a result of the exercise and participant critique conducted on September 10, 1981. Thus, at the earliest convenience, please provide the FEMA IV Regional Director with a report on how and when the noted deficiencies will be corrected. Upon receipt of this report, the process of plan review and acceptance may proceed.

We compliment Alabama for the excellent radiological emergency preparedness effort, and assure you RAC IV and FEMA IV staff remain committed to future support of REP activities in your state.

Sincerely,

A handwritten signature in cursive script, appearing to read "Jack D. Richardson", is written over a faint, larger cursive signature that is mostly illegible.

Jack D. Richardson  
Chairman, RAC IV

Enclosure

ATTACHMENT 1

DEFICIENCIES NOTED  
IN THE  
PLANT BROWNS FERRY EXERCISE  
CONDUCTED IN  
THE STATE OF ALABAMA  
SEPTEMBER 9-10, 1981

## DEFICIENCIES NOTED IN THE PLANT BROWNS FERRY EXERCISE

### 1. Notification and Alerting of Officials and Staff

Lauderdale, Lawrence and Limestone counties experienced delays in contacting officials and staff because of limited communications capabilities.

### 2. Notification and Alerting of the Public

The current alerting and notification system does not meet the requirements set forth in NUREG 0654/FEMA REP 1, Rev. 1.

While EBS, by exercise ground rule, received limited use in this exercise, additional and continuous use of this system should have been simulated during the entire exercise period. This would have allowed the public information staff to develop a number of specific releases for the EBS system.

### 3. External Communications Capability Between Sites

Additional telephone and radio communications are needed for effective emergency operations in Lauderdale, Lawrence and Limestone County EOCs.

The State CEOC telephone system should be reviewed to ensure adequacy in the event of an actual emergency. Plans and procedures should be revised to reflect a rapid installation and expansion capability.

The need for a communications link (ring-down telephone) between the Browns Ferry Plant Site and State/local government operating locations should be considered by all parties.

### 4. Emergency Operations Center (EOC) Facilities

Space allocation in the State CEOC should be reevaluated to ensure adequate work area for Rad Health and Utility/Federal Liaison personnel who may be present. Co-location of key State decision makers should be considered, also. Lawrence and Limestone County EOCs lack space and equipment necessary for effective sustained operations.

### 5. EOC Internal Communications and Displays

Space constraints in the State CEOC (Rad Health Area) interfered with maintaining informational displays and in the conduct of periodic operational situation briefings for key personnel.

Display maintenance procedures and responsibility should be established. This will prevent display of incomplete/outdated operational information. Operations maps at all State and local operating locations should be standardized (this should include TVA Center in Chattanooga).

Maps which display the 50 mile EPZ (includes Tennessee) were not available at all operating locations.

#### 6. Adequacy of Staffing

We would recommend a close review of possible multiple shift operations, over a protracted period of time, for Rad Health Accident Assessment Operations. While DOE and other federal agencies would provide support, the overall responsibility for the assessment of off-site hazards to the public will remain with state government for the duration of the emergency.

#### 7. Facility Access Control/Security

No deficiencies were noted.

#### 8. Support of Responsible Elected and Appointed Officials

No deficiencies noted.

#### 9. Direction and Control

No deficiencies noted.

#### 10. Coordination (Between Officials, Agencies, Federal Government)

State Rad Health, Utility and Federal Agencies should coordinate in the review/revision of internal operating procedures to ensure more effective field coordination and communications during an emergency. In view of limited state resources, consideration should be given to lead time for initial notification of Federal Agencies.

Improvement is needed in the area of State CEOC to County EOC operational information flow. This was addressed in depth during participant critique.

Operational procedures should include more frequent and formalized situation briefings for CEOC and EOC staffs.

#### 11. Emergency Plans

No deficiencies noted.

## 12. Public Information

We recommend a review of current public information plans and procedures to ensure that State (CEOC), Counties and Utility Organizations are in concert on all public information activities. Some of the factors which should be considered in this effort are:

- Release of information from a single source
- Use of technical language in public releases should be minimized
- Education of area media resources during non-emergency periods
- Assurance that CEOC/Utility PI releases and actions are provided to County PIOs in a timely manner
- Plans and procedures should also be developed to accommodate the possible influx of National and International media organizations (press kits for non-local media would be needed)
- Presidential/Congressional interest and response will be a key public information requirement should an accident occur

## 13. Accident Assessment (Monitoring, Projections and Coordination)

Use of incorrect terminology in communicating technical information between sites caused some confusion and delay. Standardization of terms and communicator training is needed.

Consideration should be given to identification of monitoring team vehicles when in the field on assignment.

## 14. Protective Actions (Evacuation Shelter, Reception and Care)

The rapidly developing situation (forced by scenario) in Limestone County demonstrated a need for more field personnel, especially Law Enforcement, to notify residents and transients of the need for evacuation.

## 15. Exposure Control (Access and Traffic Control, Use of KI, Recording Dose)

Access and traffic control needs more emphasis in future site-specific exercises.

The purpose/decision for issuance of KI was not clearly understood at the local level.



Decontamination monitoring stations for emergency personnel and vehicles were not observed in the field or at emergency operating center locations.

One Rad Health Field Monitoring Team was not equipped with self-reading dosimetry.

Monitoring teams were not provided information on plant condition before dispersal to field assignments.

It appears additional training is needed in exposure control procedures for emergency workers.

16. Reentry and Recovery

The initial phase of reentry and recovery operations was addressed in this exercise. However, the Utility decision to terminate play ahead of the scripted schedule caused problems for off-site participating organizations.

17. Adequacy of Scenario to Test State and Local Plans

As indicated above, deviations created unnecessary problems.

The scenario did not provide for exercising off-site medical response capabilities. This should be addressed in future exercises.

18. Benefit of the Exercise to the Participants

No deficiencies noted.

19. Capability of Observed Jurisdiction, Agency and/or Function to Execute REP Plans to Protect the Public

While improvements are needed, and specific lessons were learned, Alabama and the affected local counties/governments are capable of executing site-specific plans for the Plant Browns Ferry Fixed Nuclear Facility.

ENCLOSURE 1

BROWNS FERRY NUCLEAR FACILITY  
RADIOLOGICAL EMERGENCY EXERCISE

September 9-10, 1981

Regional Assistance Committee

Observations and Recommendations  
and  
State of Alabama Response

1. Notification and Alerting of Officials and Staff

Lauderdale, Lawrence and Limestone Counties experienced delays in contacting officials and staff because of limited communications capability.

Response

Concur. Negotiations are currently underway with TVA to acquire additional pagers for the key personnel of these counties. This will eliminate the need to contact each person by telephone in the future and should speed up the notification process.

2. Notification and Alerting of the Public

The current alerting and notification system does not meet the requirements set forth in NUREG 0654/FEMA REP 1, Rev. 1.

Response

The prompt notification system is in the process of being installed by TVA and should be operational by early January 1982.

While EBS, by exercise ground rule, received limited use in this exercise, additional and continuous use of this system should have been simulated during the entire exercise period. This would have allowed the public information staff to develop a number of specific releases for the EBS system.



### Response

Excellent suggestion. Future exercises will incorporate simulated use of the EBS. This will also assist in decreasing lag time for the participants.

### 3. External Communications Capability Between Sites

Additional telephone and radio communications are needed for effective emergency operations in Lauderdale, Lawrence and Limestone County EOCs.

#### Response

Lawrence and Limestone County EOCs will have additional telephones installed when the new facilities are constructed. They will also have an expansion capability. All three counties are in the process of increasing their radio communications capability.

The State CEOC telephone system should be reviewed to ensure adequacy in the event of an actual emergency. Plans and procedures should be revised to reflect a rapid installation and expansion capability.

#### Response

The system in use during the exercise was not the complete system to be installed by TVA. The final system should be adequate for an actual emergency.

The need for a communications link (ring-down telephone) between the Browns Ferry Plant Site and State/local government operating locations should be considered by all parties.

#### Response

The State of Alabama concurs that there should be a direct telephone access between the Browns Ferry site and off-site officials. This has been discussed with TVA in the past with negative results.

### 4. Emergency Operations (EOC) facilities

Space allocation in the State CEOC should be reevaluated to ensure adequate work area for Rad Health and Utility/Federal liaison personnel who may be present. Collocation of key State decision makers should be considered also. Lawrence and Limestone County EOCs lack space and equipment necessary for effective sustained operations.

#### Response

The replacement of the desks and tables in the RMDA with custom made narrow tables should improve the crowded conditions. The Director of the Radiation Control Agency and the Director of Civil Defense are located in adjoining offices and do converse with each other on decisions. TVA has agreed to fund a portion of the construction of new larger EOCs in Limestone and Lawrence Counties. This, along with the equipment that will be placed in the new facilities, should resolve the crowding and operational problems.

5. EOC Internal Communications and Displays

Space constraints in the State CEOC (Rad Health Area) interfered with maintaining informational displays and briefings for key personnel.

Response

The space constraints should be solved by the installation of the narrow tables. Procedures have been revised to include periodic display updates and operational situation briefings in the RMDA.

Display maintenance procedures and responsibility should be established. This will prevent display of incomplete/ outdated operational information. Operations maps at all state and local operating locations should be standardized (this should include TVA Center in Chattanooga).

Response

The State officials in the Alabama CEOC are not responsible for radiation in Tennessee; therefore, all maps need not include Tennessee. One map that displays all of the injestion pathway will be added in the RMDA room of the CEOC.

Maps which display the 50 mile EP<sub>3</sub> (includes Tennessee) were not available at all operating locations.

Response

Maps that display the 50 mile EP<sub>3</sub> are being acquired for all operating locations.

6. Adequacy of Staffing

We would recommend a close review of possible multiple shift operations, over a protracted period of time, for Rad Health accident assessment operations. While DOE and other federal agencies would provide support, the overall responsibility for the assessment of off-site hazards to the public will remain with state government for the duration of the emergency.

Response

The State Radiation Control Agency has only sufficient health physics staff for two 12-hour shifts in the RMDA. This precludes any health physics staffing in the State EOC. After day one this can be revised to three shifts provided DOE technical assistance can assume the non-decision making functions.

7. Facility Access Control/Security  
No deficiencies were noted.
8. Support of Responsible Elected and Appointed Officials  
No deficiencies were noted.
9. Direction and Control  
No deficiencies were noted.
10. Coordination (Between Officials, Agencies, Federal Government)

State Rad Health, Utility and Federal Agencies should coordinate in the review/revision of internal operating procedures to ensure more effective field coordination and communications during an emergency. In view of limited state resources, consideration should be given to lead time for initial notification of Federal agencies.

#### Response

Standard Operating Procedures have been jointly revised by the State and Utility to eliminate the problem. The State of Alabama has on file at DOE standing IRAP requests which provide infinite lead time for the possible needs by the State in the event of a classified emergency. The State Radiation Control Agency will endeavor to keep DOE better informed of classified incidents at reactors within Alabama.

Improvement is needed in the area of State CEOC to County operational information flow. This was addressed in depth during participant critique.

#### Response

The State is requesting that TVA place telecopiers and tape recorders capable of recording telephone conversations in the County EOCs. These two pieces of equipment should eliminate the problems experienced with the exchange of data between the State and the counties.

Operational procedures should include more frequent and formalized situation briefings for CEOC and EOC staffs.

### Response

The need for situation briefings for CEOC and EOC staffs has been discussed with the Directors and there is a general consensus that personnel in the two areas need to be kept informed on the status of the emergency, be it simulated or real.

#### 11. Emergency Plans

No deficiencies noted.

#### 12. Public Information

We recommend a review of current public information plans and procedures to ensure that State (CEOC), Counties and Utility organizations are in concert on all public information activities. Some of the factors which should be considered in this effort are:

- Release of Information

### Response

Steps have been taken to have only one point from which information will be released at the State level. This point of contact will be the Governor's Press Secretary.

- Use of technical language in public releases should be minimized

### Response

Technical language in the public releases will be carefully edited and kept to a minimum.

- Education of area media resources during non-emergency periods

### Response

Attempts to educate the media have been met with apathy. Prior to the exercise at Browns Ferry, a class for media personnel was conducted in the Morgan County EOC. Representatives from TVA, State and County Civil Defense and State Radiation Control Agency were available to brief the media participants and to answer any questions they might have. Although the initial turnout was good, by noon only approximately four media personnel were left in attendance.

- Assurance that CEOC/Utility PI releases and actions are provided to County PIOs in a timely manner

Response

Steps are being taken to get the equipment necessary to keep the Counties informed in a timely manner.

- Plans and procedures should also be developed to accommodate the possible influx of National and International media organizations (press kits for non-local media would be needed)

Response

Plans are being developed to transfer the Near-site Press Center to a larger facility with adequate work space and outside telephone lines in the event the EOC auditorium proves to be too small to accommodate the press.

- Presidential/Congressional interest and response will be a key public information requirement should an accident occur

Response

The State recognizes the potential for Presidential/Congressional interest and feels current procedures should accommodate any public information requirements that might be generated.

13. Accident Assessment (Monitoring, Projections and Coordination)

Use of incorrect terminology in communicating technical information between sites caused some confusion and delay. Standardization of terms and communications training is needed.

Response

The RAC comment does not contain sufficient information about where the incorrect terminology caused confusion and delay for the State to take corrective measures.

Consideration should be given to identification of monitoring team (vehicles when in the field on assignment).

Response

TVA has been requested to fund the purchase of magnetic stick-on signs for vehicles used by Public Health employees while doing emergency environmental monitoring.

14. Protective Actions (Evacuation, Shelter, Reception and Care)

The rapidly developing situation (forced by scenario) in Limestone County demonstrated a need for more field personnel, especially Law Enforcement, to notify residents and transients of the need for evacuation.

Response

This problem probably would not exist during an actual incident. For exercise purposes the County cannot afford to pay overtime and many of the auxiliary personnel cannot take off time from their normal jobs.

15. Exposure Control (Access and Traffic Control, use of KI, Recording Doses)

Access and traffic control needs more emphasis in future site-specific exercises.

Response

This item will receive added emphasis.

The purpose/decision for issuance of KI was not clearly understood at the local level.

Response

The State Radiation Control Agency will place more emphasis on KI during future training sessions. The subject has apparently not received enough attention in the past; this was due in part to a lack of adopted federal guidelines on the subject.

Decontamination monitoring stations for emergency personnel and vehicles were not observed in the field or at emergency operating center locations.

Response

Decontamination monitoring stations are established in the plan. All of these were at least partially exercised except the Environmental