



Federal Emergency Management Agency

Washington, D.C. 20472

JUN 29 1983

Mr. William J. Dircks
 Executive Director for Operations
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555

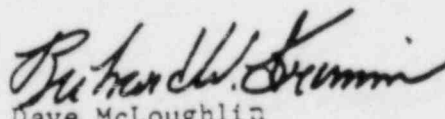
Dear Mr. Dircks:

In accordance with the proposed Federal Emergency Management Agency (FEMA) Rule, 44 CFR 350, the States of Mississippi and Louisiana submitted their State plans and supporting local plans related to the Grand Gulf Nuclear Power Station to the Directors of FEMA Regions IV and VI, for their review and approval. The Regional Directors forwarded findings on their respective State and local plans to me pursuant to Section 350.11 of the proposed rule. Each Director's original submission included a critique of the Grand Gulf exercise conducted on November 4 and 5, 1981, and a report of the public meetings held on October 27, 1981, at the Tensas Parish Courthouse, St. Joseph, Louisiana, and on November 3, 1981, in the Addison Junior High School, Port Gibson, Mississippi, to explain the site-specific aspects of the State and local plans. The results of the most recent exercise conducted on January 26, 1983, have also been considered as part of this finding.

Based on an overall evaluation, I find and determine that, subject to the condition stated below, the plans and preparedness for offsite protection near the Grand Gulf Nuclear Power Station are adequate to protect the health and safety of the public and that there is reasonable assurance that appropriate protective measures can and will be taken offsite in the event of a radiological emergency. The condition for the above approval is that the adequacy of the public alerting and notification system, which is now in operation, must be verified as called for in Appendix 3 of NUREG-0654/FEMA-REP-1, Rev. 1.

Accordingly, I approve the State plans for Mississippi and Louisiana and the local plans relevant to the Grand Gulf Nuclear Power Station subject to the aforementioned condition.

Sincerely,

for 
 Dave McLoughlin
 Deputy Associate Director
 State and Local Programs
 and Support



Federal Emergency Management Agency

Washington, D.C. 20472

JUL 30 1984

MEMORANDUM FOR: Edward L. Jordan
 Director, Division of Emergency Preparedness
 and Engineering Response
 Office of Inspection and Enforcement
 U.S. Nuclear Regulatory Commission

FROM: *Richard W. Kriem*
 RICHARD W. KRIEM
 Assistant Associate Director
 Office of Natural and Technological Hazards
 Programs

SUBJECT: Exercise Report for the April 11, 1984, Exercise of
 the Offsite Radiological Emergency Preparedness
 Plans for the Grand Gulf Nuclear Power Station

Attached are two copies of the Exercise Report for the April 11, 1984, full participation joint exercise of the offsite radiological emergency preparedness plans for the Grand Gulf Nuclear Power Station. The State of Mississippi and Claiborne County, and the State of Louisiana and Tensas Parish, which have jurisdictional authority in the 10-mile plume emergency planning zone, participated in the exercise. The Federal Emergency Management Agency (FEMA) Region IV exercise report, dated April 24, 1984, was submitted on May 15, 1984, and includes the comments resulting from the the FEMA Regional staff and Regional Assistance Committee review. The FEMA Region VI exercise report covering the State of Louisiana and Tensas Parish is currently in preparation. The completed report will be forwarded to you in approximately thirty days. Preliminary staff reviews do not indicate deficiencies significant to the protection of public health and safety.

The attached report identifies certain problems in the State of Mississippi which required immediate remedial action and were of significant concern in regard to the protection of the health and safety of the public in the event of an accident at the Grand Gulf Nuclear Power Station. The primary deficiency was the uncoordinated approach to the issuance of information to the public. The use of separate media facilities by the State and the utility permitted neither the coordination nor the timely issuance of public information. This deficiency has been noted in both previous exercises at the Grand Gulf Nuclear Power Station. It can only be resolved through improved cooperation and coordination between representatives of the Mississippi Emergency Management Agency (MEMA) and the Mississippi Power and Light Company (MP&L). Plan amendments in the area of public information, as well as a remedial exercise to demonstrate that this deficiency has been adequately addressed will be required by FEMA.

The State of Mississippi, MP&L, and FEMA Region IV, in an effort to expedite resolution of this deficiency, have taken a number of actions. FEMA Region IV hosted a meeting on May 31, 1984, which included representatives from MEMA, Port Gibson/Claiborne County Civil Defense (PG/CCCD), and the MP&L. MEMA agreed to accept a leadership role in resolving the public information problem.

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The parties agreed to participate in regularly scheduled meetings between government officials and MP&L until a solution, agreeable to all parties, has been developed. These meetings are being held monthly and are attended by representatives of MEMA, PG/CCCD, MP&L, the State of Louisiana, and Texas Parish. Additional ad hoc meetings are being held to discuss issues in greater detail. In an interim agreement, MEMA and MP&L have agreed to participate jointly in the Emergency News Center (ENC) at the Chamberlain-Hunt Academy, and have set an October 31, 1984, milestone for documented progress towards an acceptable solution to the ENC's permanent location.

State officials and MP&L have satisfactorily addressed issues such as access, communications equipment, work-room areas, press conference procedures and a back-up facility in the interim agreement and subsequent actions. Plans for rectifying the remaining outstanding concern, the provision of teleconferencing capabilities, are underway. Further discussions have been held on the flow of public information and review of press statements. All of these developments lay the groundwork for the formal revision of public information plans and procedures, and testing through subsequent exercises. Region IV staff will continue to assist the State as necessary to assure that the problems are corrected. The State has assured all parties that during the interim period it will respond to any actual event at Grand Gulf using the existing facilities and resources.

An area of concern to offsite safety was the fact that the State Emergency Operations Center did not receive information that a radioactive release had occurred on a timely basis. Such a situation makes accident assessment difficult and limits the States ability to provide timely notification to the public of significant events. This problem area was also noted in the joint exercise conducted for this facility on November 4-5, 1981.

We understand that the NRC identified this problem in their assessment of the on-site portion of this exercise and appropriate corrective actions are being taken. Based upon recent conversations between our staffs, it is my understanding that a drill will be conducted during mid-August that will test the ability of the Technical Support Center/Emergency Operations Facility to make timely decisions and to transmit this information to offsite officials at the State EOC. As noted above, MEMA and MP&L officials have volunteered to conduct a remedial exercise in February 1985.

All deficiencies noted in the exercise report can be corrected through increased coordination and cooperation, training, and procurement of resources and equipment. Progress in correcting the public information deficiency has been made. A formal schedule of corrective actions will be requested from the State by September 15, 1984. The current status and the course of action established at the May 31, 1984, meeting is satisfactory to FEMA for continued approval under 44 CFR 350 provided the involved parties follow through on scheduled corrective actions and exercises.

As soon as we receive and analyze the formal schedule of corrective actions, we will provide you with the results. Subsequent to the planned February exercise, we will provide you a report on its results and a status of offsite preparedness.

If you have any questions, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 287-0200.

Attachments
As Stated



Federal Emergency Management Agency

Region IV 1375 Peachtree Street, NE Atlanta, Georgia 30309

May 15, 1984

MEMORANDUM FOR: ASSISTANT ASSOCIATE DIRECTOR
OFFICE OF NATURAL AND TECHNOLOGICAL HAZARDS SL-NT

ATTENTION: Marlon Stangler - Project Officer

FROM: Major P. May,
Regional Director

SUBJECT: Grand Gulf Nuclear Power Station, Mississippi
Exercise Report

Enclosed are two copies of the Exercise Report for the Grand Gulf Nuclear Power Station Exercise conducted on April 11, 1984.

The report was distributed to the Regional Assistance Committee and the exercise evaluators for their review and comment.

Please notify us when the report is transmitted to the Nuclear Regulatory Commission so that a copy can be formally transmitted to the State of Mississippi.

The demonstration at this exercise has left evaluators with serious concerns regarding off-site preparedness for the Grand Gulf Nuclear Power Station. Two areas require substantial improvement. One of these involves the delay in the report of necessary technical information from the utility to the State, making accident assessment difficult and the timely notification of the public of significant events impossible. Of particular concern is that information that a radioactive release had occurred did not reach the State Emergency Operations Center for an hour and fifty-one minutes.

The other area of concern is the uncoordinated approach to public information, which hampered the accurate and timely flow of information to the public. This problem has been noted in both previous exercises. The separation of facilities operated by the State and utility has neither permitted coordinated nor timely public information.

Both of these problems seem to reflect a general lack of coordination and cooperation between the State of Mississippi and the Mississippi Power and Light Company. Despite a reduction in specific NUREG 0654 deficiencies that surfaced in this exercise, the problems that did emerge were sufficiently significant as to require immediate remedial action. We recommend plan amendments in the area of public information, as well as a remedial exercise to demonstrate that these deficiencies have been adequately addressed. Regional staff will assist the State in assuring that the problems are corrected.

Enclosures

GRAND GULF NUCLEAR POWER STATION
EXERCISE

Conducted on April 11, 1984



**FEDERAL EMERGENCY
MANAGEMENT AGENCY
REGION IV**

*D.P.
840808014*



Federal Emergency Management Agency
Region IV 1375 Peachtree Street, NE Atlanta, Georgia 30309

GRAND GULF NUCLEAR POWER STATION
EXERCISE

Conducted on April 11, 1984

Exercise Report April 24, 1984

Utility: Mississippi Power and Light Company
Plant Location: Port Gibson, Claiborne County, Mississippi

Participating State and local governments:

State of Mississippi
Claiborne County
Copolah County
Port Gibson, Mississippi



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SECTION I

EXERCISE SUMMARY

I. EXERCISE SUMMARY

The full participation exercise at the Grand Gulf Nuclear Station was observed by seventeen Federal evaluators representing five Federal agencies (FEMA, NRC, DOT, USDA, EPA). The exercise was the third test for State and local governments to demonstrate off-site preparedness for the plant. The evaluation was based on NUREG-0654-FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants".

The Grand Gulf Nuclear Station is located near the Mississippi River, in Claiborne County, Mississippi. Included in the 10-mile Emergency Planning Zone (EPZ) of the utility are portions of Claiborne County and Tensas Parrish, Louisiana. The Federal boundary between Region IV and VI is the Mississippi River. Accordingly, Region VI is responsible for the evaluation of activities in Tensas Parrish. The risk county, Claiborne County, was fully activated and is evaluated in this report. In addition, Copiah County was exercised as a host county in this exercise and is also evaluated.

In some areas, strides towards improvement were evident during the exercise, and few specific NUREG 0654 deficiencies were noted. Nevertheless, certain problems surfaced which are of significant concern and require immediate remedial action. Among these was the delay in the report of necessary technical information from the utility to the State, making accident assessment difficult, and the timely notification of the public of significant events impossible. This problem was also noted in the exercise on November 4-5, 1981. *added*

Another serious problem was the uncoordinated approach to public information, hampering the timely and accurate flow of information to the public. This deficiency has been noted in both previous exercises at the Grand Gulf Nuclear Station. Basic to the resolution of both of these problems is improved cooperation and coordination between representatives of the State and of the Mississippi Power and Light Company. *added*

Exercise performance is discussed in detail in Part II of this report entitled, "Detailed Discussion". Deficiencies are listed in Part III, "Summary Listing of Deficiencies". All deficiencies noted can be corrected through increased coordination and cooperation, training, and procurement of resources and equipment.

A brief summary of State and county activities follows.

State of Mississippi

The State Emergency Operating Center (SEOC) is an adequate facility with excellent communications capabilities. Personnel successfully demonstrated their capabilities to perform their assigned responsibilities. Staff of the Mississippi Health Department effectively

demonstrated their accident assessment capabilities. However, the void of information flow from the utility to the SEOC hampered accident assessment and protective action decision-making. Coordination of the State monitoring teams was satisfactorily directed by State Health Department officials in the Emergency Operating Facility (EOF). The teams were trained, competent and well-equipped to perform their tasks. Minor problems in the availability and use of equipment could be resolved through the purchase of equipment and use of existing S.O.P.'s. The mobile radiological laboratory is well-equipped and demonstrated an exceptional response capability. The State and utility operated two separate media centers and there were virtually no efforts to coordinate news releases and other public information. This split operation would have led to confusion of the media and public in a real emergency and reduced credibility. An additional problem was the lack of a coordinated arrangement for rumor control. The State has taken an important step towards improving public information through hiring a public information officer for this program. This should greatly enhance opportunities for overcoming current problem areas.

Claiborne County

Leadership and staff at the Claiborne County Emergency Operations Center (EOC) were knowledgeable and performed their functions adequately. An early sounding of the sirens to alert the public to the exercise was not discussed with Tensas Parrish, which could have led to undue concern across the river. Evacuation routes are identified with permanent, noticeable signs and would be an asset to an evacuation. Traffic control points were promptly manned. Additional radiological training for these people would be beneficial. A fire drill at the utility brought a timely response from the Claiborne County and Port Gibson Fire Departments. Personnel were well-equipped and knowledgeable. More frequent training and orientation sessions on-site would be valuable.

Copiah County

As a host county, the Emergency Operations Center (EOC) of Copiah County was adequate. Staff was aware of their responsibilities and performed them well. A formalized plan and set of procedures would enhance operations, as would status displays and maps. A Civil Defense base station is needed for improved communications, as is a telephone.

The facility for the reception center is adequate. However, the shelter capacity is unknown and should be determined. Overall, most functions at the reception center were performed well. More training is needed, however, for radiological monitoring teams regarding use of equipment and contamination problems.

SECTION II

DETAILED DISCUSSION

II. DETAILED DISCUSSION

Introduction

This exercise was the third test conducted at the Grand Gulf Nuclear Station based on NUREG 0654 guidance criteria. These other two exercises were held on November 4-5, 1981, and January 26, 1983. The plant is located in Claiborne County, Mississippi, near the Mississippi River. Participants in the exercise included the State of Mississippi, Claiborne County, and Copiah County. Copiah County participated for the first time and serves as a host county. The three remaining host counties have been tested in prior exercises and were not tested at this time. On the opposite bank of the Mississippi River, Tensas Parrish, Louisiana, also participated. Discussion of their participation is not included here, except as it relates directly to the exercise in Mississippi, as Louisiana is located in FEMA Region VI.

Criteria used to evaluate the exercise are contained in the "Modular Format for Uniformity of Radiological Emergency Preparedness Exercise Observations and Evaluations," issued by FEMA on August 5, 1983.

The Federal evaluators' list, exercise objectives and scenario are contained in Appendices A through C in the last section of this report.

State of Mississippi

State Emergency Operating Center (SEOC)

Emergency personnel of the State of Mississippi responded promptly and effectively. Staffing of the EOC was completed in an efficient and timely manner and all State agencies with emergency responsibilities were represented.

Emergency operations were effectively managed by the State Director and the Operations Officer. Briefings were comprehensive and dealt with plant and weather conditions, and off-site emergency consequences. The EOC staff was kept abreast of the changing emergency classifications.

The State EOC is an adequate facility to support the operations of Emergency personnel of responding agencies. Back-up generator power is available and was demonstrated. Status boards were clearly visible and kept up-to-date, accurately reflecting changing emergency classification levels. All required maps were available and were posted.

The equipment used to communicate with other facilities, including the utility and Claiborne County, is excellent and staff was knowledgeable in its use.

Decisions to implement protective actions were carefully weighed and frequently discussed among the agency coordinators. All protective actions were announced and posted. Reentry and recovery considerations were not an objective of this exercise and these activities were not demonstrated. The exercise realistically tested the response capabilities of the State EOC and participating emergency personnel stated that it was a beneficial experience in testing their emergency response procedures.

The Mississippi Health Department effectively demonstrated their accident assessment capability, although no off-site projections were found necessary.

The major problem area was the void of information flow between the EOF and the State EOC. The State Health Department could not obtain the technical information it needed to evaluate what was happening at the plant and, consequently, the scope and seriousness of the accident and what protective actions might be appropriate. These problems in coordination between the utility and the State EOC were evidenced in the gap between the time of the radioactive release (9:53 a.m.) and notification to the State of the release (11:44 a.m.). It is suggested that training sessions be held for the utility, State, and counties on communicating promptly, and providing each other with accurate and timely information required by each to perform its function.

Emergency Operating Facility (EOF)

The two Mississippi Health Department officials located at the EOF were responsible for directing the State monitoring teams and serving as interface with the licensee and provided information to the State EOC in Jackson. With minor exceptions, these responsibilities were carried out in a satisfactory manner. These exceptions are as follows: 1) The monitoring teams should have been directed to initiate air sampling sooner, and 2) the monitoring teams could have been more efficiently utilized by traversing their designated sectors more frequently.

Communications available to the State personnel located in the EOF consisted of commercial telephone to the State EOC in Jackson, and a radio channel for communications with the field monitoring teams and the field laboratory. Although these communication links were adequate, there was considerable interference over the radio net due to another radio channel bleeding into the frequency assigned to the State. Corrective action should be initiated to determine and eliminate the source of this interference.

Radiological Monitoring Teams

Overall, the teams were trained, competent, and well equipped to carry out their tasks. Some minor problems in equipment availability and use were noted that hindered their performance.

Notification and mobilization were not fully demonstrated as the teams were already prepositioned at the Division of Radiological Health. The teams were briefed and had checked out their equipment earlier in the week, although not during the morning of the exercise.

The equipment is generally very good. The detection instruments were in calibration, but the air samplers were out of calibration. This limits the ability to detect radioiodines in the field. One team did not have permanent record dosimeters. The lack of at least one silver zeolite cartridge plus environmental sampling supplies is a severe limitation which prohibits direct deployment and collection of samples without the necessity of stopping at the mobile laboratory.

Field team operations were good, but would be improved if the S.O.P.'s were used as a checklist.

Radio communications were generally adequate, but some interference from non-authorized users of the DPH frequency was noted.

Team members were cognizant of the need to frequently read and record dosimeters and did well in this area.

Suggestions for improvement include the following:

- 1) Add at least one silver zeolite cartridge to each field team kit,
- 2) Add some minimal environmental sampling supplies, especially for water samples,
- 3) Team members should use the S.O.P.s rather than just have them present.

Mobile Radiological Laboratory

The mobile radiological health laboratory response capability demonstrated was exceptionally good. Equipment on board the lab was state-of-the-art research grade, and trained personnel were well versed in laboratory techniques and sampling methodology.

Public Information

The State and utility operated and staffed two separate media centers throughout the exercise. The failure of the licensee and the State public information staffs to cooperate and coordinate caused numerous problems, and in a real accident, would have led the public and the media to lose all respect for both agencies' public information staffs. (G.4.b.) In one instance, the public was not informed for over three hours that a radiation release was taking place. In another instance, the State released licensee information (a news release prepared by the licensee) to the public before the licensee intended to release it at their next news conference. The split

operations of two media centers, neither one jointly manned by the State and the utility, would have led to confusion and consternation in the media.

Another problem is the lack of coordinated arrangements for rumor control. The licensee provided a citizen call-in phone number to the public, but did not coordinate their effort with the State. A rumor control number operated by the two staff people in the Claiborne County EOC was not publicized, nor did procedures exist to assure coordination with the utility. (G.4.c.)

Despite these problems, some improvements have been made since the last exercise. Mississippi has hired a full-time, well qualified Public Information Officer for their Emergency Management Agency. The hiring of Mr. Perkins will have a very positive effect on the agency's capability to handle public affairs in emergencies.

Claiborne County

Claiborne County Emergency Operations Center (EOC)

The Claiborne County EOC was completely staffed and located in an adequate yet unprotected facility (located 4 1/2 miles from the utility). However, staff stated that there are plans to build a new facility.

The local coordinator, A.C. Garner, provided strong leadership and delivered complete and frequent briefings. At the end of each briefing, he asked if there were any questions. There were very few.

Staff were very familiar with their roles in the EOC, but there appeared to be a limited amount of sharing of information between staff members. It is hoped that EOC staff, in the future, will more aggressively pursue needed information through questioning and discussion. The EOC facility was well equipped (communications, maps, etc.). However, a different type of status board would be more useful. The status board available only held one message at a time. A more appropriate type of board would have space for multiple messages and information regarding actions taken over time.

Early in the morning, sirens were sounded in an effort to encourage the public to tune to EBS and be informed about the exercise and what was taking place. While this was a good idea, Tensas Parrish should have been notified so that people across the river who might have heard the sirens would know what was happening. (F.1.b)

A release at the utility occurred at 9:53 a.m. This information was not provided by the utility to Claiborne County until 11:44 a.m. The information was shared with the EOC staff at 11:55 a.m., and an action was initiated to alert people to take in place shelter at approximately 12:08 p.m. Following this two hour delay in receipt of information concerning a release, there seemed to be little or no effort to attain additional needed information.

Field Activities

Evacuation around the Grand Gulf Nuclear Power Station should not be difficult, mainly because of the excellent evacuation route signs that have been installed by the Highway Department. These are strategically located and highly visible. These permanent signs, along with the portable informational signs that are placed at designated traffic control points, would make evacuation more efficient and reduce manpower during evacuation.

During the exercise, the Mississippi Highway Patrol and the Highway Department responded in a timely manner. The Highway Patrol manned three traffic control points and was on standby with eight additional personnel. The patrolmen were most cooperative, bright, and eager to learn. They had received minimal training in dosimetry and few were aware of the effects of radiation, or of maximum dose levels. It is suggested that continuing radiological health training concerning worker exposure be a permanent program for the Patrol, particularly for personnel assigned in the Grand Gulf area.

Each trooper was assigned a 0-20R and 0-200R dosimeter. Permanent record devices, such as TLD's or film badges, are recommended.

Fire Activities

A fire drill was held at the utility. Fire departments from Claiborne County and Port Gibson responded in good time and appeared capable of providing valuable assistance in the event of a real emergency. All personnel were properly equipped with turn out gear, apparatus and fire fighting tools. All units were promptly admitted to the fire site and guides were provided to each department. An excellent attitude seemed to exist between the on-site and off-site personnel, creating a potential for improved training programs.

More frequent training and orientation sessions on-site, including all fire personnel, would be valuable to an efficient operation. Radio equipment capable of transmitting information between on-site personnel and incoming units would improve operations.

Copiah County

Copiah County Emergency Operations Center (EOC)

The Copiah County EOC was adequately staffed and personnel knew their responsibilities. The Civil Defense Director successfully demonstrated overall command and control of emergency operations. The staff displayed a strong positive attitude. For the assigned function as a host county, the facility and staff were adequate. The following recommendations are offered to improve the overall operation:

- 1) Call-up/activation procedures need to be formalized.

- 2) Although staff knew their jobs, written procedures are needed.
- 3) Uniform message forms should be developed.
- 4) Periodic briefings with full staff participation are needed.
- 5) A status board with emergency classification levels needs to be posted as well as maps and displays with the following information:
 - Emergency planning zone sectors, population
 - Reception/care centers
 - Evacuation routes
 - Access control points
- 6) A Civil Defense base station is needed. During the interim, the permanent installation of the RACES antennae is needed for reaching the State EOC.
- 7) Staff needs one or two additional phone lines.

Reception and Shelter

A reception center was opened at the Hazelhurst North Campus Elementary School in Hazelhurst. The facilities were quite adequate. The school cafeteria has facilities for feeding. A limited number of cots and blankets were set up. Although the shelter capacity was unknown, it appears to have the capacity to feed and shelter a large number of people. This need was noted in last year's exercise report in which shelters in Adams County were observed. In addition to assessing the capacity of shelters, the shelter manager needs further knowledge on procedures for managing the distribution of evacuees between shelter facilities. Staff needs to be aware of the shelter capacity. In fact, capacities of all shelters in the county need to be assessed.

Communications with the county and State EOC's were adequate and the operator was competent. The nurses station was well equipped and staffed. The nurses had telephone communications and numbers for further medical assistance (hospital, ambulance, physician).

Instructional signs were clearly visible. Access control to the center was demonstrated.

Activation procedures were not observed, as staff of the American Red Cross was prepositioned. Transit time from Jackson, where they are based, is approximately 40 minutes and some staff expressed concern over the length of time needed for travel and to set-up the center. Evacuees arrived before the set-up was complete and waited in their buses for approximately 15 minutes.

Standard American Red Cross procedures and forms were used for registration. Evacuees were monitored for contamination prior to admission to the central registration area. The facilities and set-up for monitoring and decontamination were adequate. Decontamination was simulated in the shower facilities adjacent to the gymnasium. Some of the radiological monitoring teams lacked adequate knowledge in radiological monitoring, decontamination and the use of equipment. A greater understanding of containment and the disposal of contaminated garments and personal effects; and in the organized separation of unmonitored individuals is needed. (J.12.)

SECTION III

SUMMARY LISTING OF DEFICIENCIES

III. SUMMARY LISTING OF DEFICIENCIES

NUREG 0654 Deficiency

State of Mississippi

G.4.b. Public Education and Information

G.4.c. Public Education and Information

Claiborne County

F.1.b. Emergency Communications

Copiah County

J.12. Protective Response

SECTION IV

APPENDICES

IV. APPENDICES

- A. Evaluator List and Assignments
- B. Exercise Objectives and Scenario

SECTION IV

APPENDIX A

EVALUATOR LIST AND ASSIGNMENTS

FEDERAL EVALUATOR ASSIGNMENTS
GRAND GULF NUCLEAR STATION EXERCISE
April 10-12, 1984

CHIEF OF EVALUATORS AND RAC IV CHAIRMAN
Glenn C. Woodard, Jr. (FEMA)

STATE EMERGENCY OPERATING CENTER (JACKSON)

John Heard (FEMA)
Cheryl Malina (USDA)
Dick Payne (EPA)
Jack Glover (FEMA)

STATE RADIOLOGICAL HEALTH MOBILE LABORATORY
Ray Boyett (FEMA)

RADIOLOGICAL FIELD MONITORING TEAMS

Don Fingleton (FEMA)
Tony Foltman (FEMA)
Jim Opelka (FEMA)

EMERGENCY OPERATING FACILITY
Bob Trojanowski (NRC)

JOINT MEDIA CENTER (PORT GIBSON)
Cheryl Stovall (FEMA)

CLAIBORNE COUNTY EMERGENCY OPERATIONS CENTER

Brad Loar (FEMA)
Doug Hoell (FEMA)

COPIAH COUNTY ACTIVITIES

Jim Levenson (FEMA)

FIRE ACTIVITY
Russ Yarbrough (FEMA)

MOBILE EVALUATORS
Shana Aucsmith (FEMA)
Al Hall (DOT)

SECTION IV

APPENDIX B

EXERCISE GOALS AND OBJECTIVES



MISSISSIPPI EMERGENCY MANAGEMENT AGENCY

P. O. Box 4501, Fondren Station
JACKSON, MISSISSIPPI 39216
(601) 352-9100

March 2, 1984

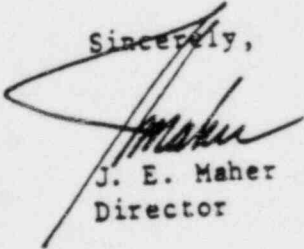
Mr. Glenn C. Woodard, Jr., Chief
Natural and Technological Hazards Division
Federal Emergency Management Agency
Region IV
1375 Peachtree Street, N.E.
Atlanta, GA 30309

Dear Mr. Woodard:

Enclosed is the scenario package for the April 1984, Grand Gulf exercise. Included is a schedule of activities, a narrative summary, and the scenario sequence of events. We apologize for the delay in sending these materials but Mississippi Power and Light changed exercise consultants and therefore there was a delay in receiving the materials necessary to complete the offsite scenario.

We appreciate the assistance of your staff in the development of this exercise. If you have any questions please call Jim Genesse of our staff.

Sincerely,



J. E. Maher
Director

Enclosures

MISSISSIPPI EXERCISE PACKAGE

GRAND GULF NUCLEAR STATION
EMERGENCY PREPAREDNESS EXERCISE
APRIL 10-12, 1984

Mississippi Emergency Management Agency
March 5, 1984

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Introduction

A. Purpose

On April 10-12, 1984, Grand Gulf Nuclear Station will conduct a full scale emergency preparedness exercise. This will be the third exercise to be evaluated by Federal observers, and will fully involve local, State, and support agencies in Mississippi. The exercise is being held in accordance with the regulations set forth in 44 CFR 350, and the guidance found in NUREG 0654, FEMA REP 1, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants.

B. Mississippi Agencies Involved

1. State

Mississippi Emergency Management Agency
Mississippi Department of Health
Mississippi Department of Natural Resources
Mississippi Department of Wildlife Conservation
Mississippi Department of Agriculture and Commerce
Mississippi Department of Public Welfare
Mississippi Military Department
Mississippi Highway Department
Mississippi Highway Patrol

2. Local

Port Gibson/Claiborne County Civil Defense
Claiborne County Sheriff's Office
Port Gibson Police Department
Claiborne County Fire Department
Port Gibson Fire Department
Claiborne County Agricultural Extension Office
Claiborne County Hospital
Claiborne County Public Schools
Copiah County Civil Defense
Copiah County Welfare Department
Copiah County Public Schools

3. Support Agencies

American Red Cross
National Weather Service
Natchez Trace Parkway

4. Mississippi Power and Light Company

C. Facilities Activated

1. State EOC: located in Jackson, operational throughout the

exercise.

2. Port Gibson/Claiborne County EOC: located in Port Gibson, operational throughout the exercise.
3. Grand Gulf EOF: located adjacent to the plan site, activated at Site Area Emergency.
4. Emergency News Media Center: located in Port Gibson, activated at Site Area Emergency.
5. State Mobile Radiological Laboratory: dispatched from Jackson to Port Gibson by Site Area Emergency.
6. Radiological Field Teams: three teams will be dispatched from Jackson to Port Gibson as needed.
7. Covich County Shelter: demonstration of the reception and sheltering plans will be conducted in Hazelhurst at 12:00 noon.
8. Claiborne County Schools: demonstration of school evacuation plans will be conducted in Port Gibson at 1:00 p.m.
9. Traffic Control Points: activated throughout the 10 mile EPZ at Site Area Emergency.
10. Claiborne County Fire Department: respond to onsite fire approximately 1:30 p.m.

D. Briefings and Critiques

Enclosed is a schedule of activities to be held during the exercise. A State controller briefing will be held on Tuesday morning, April 10th. A participants briefing will be held at 1:30 p.m. that same afternoon. Federal evaluators are invited to be present for this meeting. At 3:00 p.m., a special briefing will be held for Federal evaluators.

Immediately following the exercise, individual critiques will be conducted at each facility. These will be for the participants only and will be closed to the Federal evaluators. The conference room of the State EOC has been reserved for use by the Federal team in conducting their critique during this time.

On Thursday morning, the joint local, State, and Federal critique will be held at the State EOC. At 7:00 p.m. that evening, the public critique will be held at the Claiborne County Courthouse in Port Gibson.

E. Miscellaneous

1. Identification
All FEMA/RAC evaluators will be required to obtain State identification. This will be issued during the Federal evaluator briefing on April 10th.
2. Transportation
It is requested that all Federal evaluators provide their own transportation. In certain instances, observers may wish to accompany State and local personnel during the exercise. These arrangements will be made during the evaluators briefing on April 10th.
3. Lodging
It is suggested that all observers stay at the Holiday Inn-Medical Center in Jackson. It is very close to both the State EOC and the offices of the Division of Radiological Health. It is requested that each person make their own reservations to accomodate their individual schedules.

Holiday Inn-Medical Center
2375 N. State Street
Jackson, MS 39202
601-948-8650
4. Observer Packets
An observer packet will be issued during the evaluator briefing on April 10th. The packet will contain all relevant scenario materials, observer/controller assignments, maps, and other related information.

Schedule of Activities
 Grand Gulf Nuclear Station
 Emergency Preparedness Exercise
 April 10-12, 1984

<u>Date</u>	<u>Time</u>	<u>Event</u>
4/10/84	8:30 a.m.	Controller briefing. State EOC, Jackson.
	1:30 p.m.	Participant briefing. State EOC, Jackson.
	3:00 p.m.	Federal evaluator briefing. State EOC, Jackson.
4/11/84	5:30 a.m.	Exercise begins.
	3:00 p.m.	Exercise terminates.
	3:30 p.m.	Independent local, State, and Federal evaluations.
4/12/84	8:30 a.m.	Joint local, State, Federal critique. State EOC, Jackson.
	7:00 p.m.	Public critique. Claiborne County Courthouse, Port Gibson.

Mississippi State/Local Objectives

Grand Gulf Nuclear Station Emergency Preparedness Exercise April 10-12, 1984

1. Demonstrate ability to receive and disseminate notification of an event.
2. Demonstrate ability to assemble and maintain adequate staffing. 24 hour operations will not be tested.
3. Demonstrate ability to properly coordinate emergency activities. Claiborne and Copiah counties will be fully activated. Other host counties will only participate on a communications basis.
4. Demonstrate ability to request assistance from other States and from the Federal government.
5. Demonstrate adequacy of facilities and equipment to support emergency activities.
6. Demonstrate ability to properly utilize radiological field teams.
7. Demonstrate the availability and proper use of radiological field equipment.
8. Demonstrate ability to perform laboratory analyses on field samples using the mobile laboratory.
9. Demonstrate ability to estimate accident consequences and determine appropriate protective actions.
10. Demonstrate ability to provide emergency public information using sirens, tone alert receivers, and the emergency broadcast system.
11. Demonstrate ability to coordinate the collection and dissemination of public information with other principal organizations.
12. Demonstrate ability to provide the news media with accurate and timely information.
13. Demonstrate the ability to handle public inquiries and rumor control.
14. Demonstrate the ability to implement protective actions for the plume exposure EPZ. Scenario will only call for sheltering in-place. Evacuation shelters will be tested independently in Copiah County. Recovery and reentry will not be tested.
15. Demonstrate the ability to implement protective actions for the ingestion exposure EPZ. Field operations will be simulated. Recovery and reentry will not be tested.

Narrative Summary

Grand Gulf Nuclear Station Emergency Preparedness Exercise April 10-12, 1984

The reactor is operating at 95% power and the grid is tight. Operations are normal. Early morning warnings of Hurricane Patti have been issued by the National Weather Service and forwarded to the Control Room by the load dispatcher. Continuing weather reports cause declaration of an Unusual Event in preparation of the hurricane's reaching GGNS about 0745 the morning of April 11. The southwest quadrant of the hurricane has wind speeds which cause an escalation to an Alert. The following damage to the Turbine Building results: a hole is torn in the siding on the south side above elevation 166' and four smoke vents are blown off.

The hurricane in passing disrupts the power distribution system, causing the reactor to scram. The wind and the rain stop abruptly, resulting in a near calm condition. The plant transient causes a main steam line break in the Turbine Building. Previous failure of the MCC feeding the motorized main steam line shutoff valve prevents closure. The two MSIV's fail to control the leak at the steam line failure. The steam line break results in an escalation to a Site Area Emergency. A considerable amount of reactor water is released, flashes to steam, and creates an airborne release. The release inventory is high in iodines which are normally held in solution. A thyroid dose commitment projected to be above 5 rem develops from an estimated 3-hour release. This results in sheltering recommendations for the 2-mile EPZ. At 2.5 hours after the initial release, the wind shifts. Dose projection, however, establishes no additional need for further protective actions for the public health and welfare.

During the airborne release, OSC personnel discover that a liquid condensate release of unknown quantity and unknown activity has entered the storm water system with unimpeded access to Lake Hamilton. The unimpeded access is due to the high water level, which resulted from the hurricane's intense rainfall. Investigation reveals a water analysis slightly above background, with no further protective actions called for.

The OSC personnel succeed in closing the main steam line stop valve. The release from the Turbine Building terminates, independent of the valve closing. Plant recovery and reentry operations begin. The airborne release continues to be followed by EOF and state personnel until dose projection recommendations have proven to be adequate.

Mississippi Offsite
Sequence of Events

Grand Gulf Nuclear Station
Emergency Preparedness Exercise
April 10-12, 1984

<u>Time</u>	<u>Event</u>
0530	EXERCISE BEGINS. Distribute initial conditions to key players. Duty officer makes appropriate notifications based on weather conditions.
0600	National Weather Service issues severe weather statement.
0615	UNUSUAL EVENT DECLARED. Declaration is based on severe weather conditions. Appropriate notifications are made based on conditions at GGNS.
0645	Reports of flash flooding in Claiborne County.
0700	National Weather Service issues severe weather statement.
0730	Reports of tornado sightings in Claiborne County.
0800	ALERT DECLARED. Declaration is based on severe weather conditions. Appropriate notifications are made based on conditions at GGNS.
0800	National Weather Service issues severe weather statement.
0815	State Communications Officer unable to get to Jackson.
0830	TIME COMPRESSION.
0840	Loss of power at Claiborne EOC.
0855	Power restored at Claiborne EOC.
0900	National Weather Service issues severe weather statement.
0910	Reports of wind damage in Claiborne County.
0910	Loss of power at State EOC.
0915	RESUME REAL TIME.
0925	Power restored at State EOC.
0945	State Communications Officer arrives at State EOC.

1000 SITE AREA EMERGENCY DECLARED. Declaration based on uncontrolled, unmonitored release. The release inventory is high in iodines. Projected thyroid dose should result in a recommendation for sheltering out to two miles in sector B, which will affect protective action area 1.

1015 Activation of sirens, tone alert receivers, and EBS.

1050 Report that portions of Highway 18 are washed out.

1100 Report of a fire in Port Gibson.

1105 Reports of debris blocking roads.

1115 Reports of fallen power lines.

1125 Inquiry about protecting dairy cattle.

1135 Report of a fire in the county.

1140 Possible problems with water system contamination.

1145 Warren County shelters request that arrangements be made for substitute clothing.

1150 Claiborne County Hospital needs portable generators due to power failure and problems with existing generators.

1155 Requests for transportation assistance.

1200 Evaluate Copiah County shelters.

1200 Reports of spontaneous evacuation.

1205 Fire in Port Gibson reported out.

1205 Local industry requests information on how to shut down during sheltering.

1210 Health Department requests Wildlife Conservation to arrange for boats and personnel to support sampling activities.

1220 Inquiry about the availability of stored feed.

1230 Reports that gasoline supplies are low.

1240 GGNS Hot-Line communications lost.

1240 Fire in county reported out.

1245 Claiborne County Hospital requests that ambulances be arranged for evacuating patients if necessary.

1250 Inquiry about protecting unharvested crop.

1255 Report of traffic congestion on evacuation routes.
1300 Evaluate school evacuation plans.
1310 Reports of helicopters flying near the plant.
1315 Wind shifts release toward sector C. Dose projections should indicate that additional protective actions are not required.
1315 Citizen inquires about relative in Port Gibson.
1320 Report of fish kill.
1325 GGNS Hot-Line communications restored.
1325 Health Department requests Highway Patrol courier to deliver equipment to Port Gibson.
1325 Citizen arrives at hospital complaining of radiation sickness.
1330 Plant requests offsite fire assistance.
1330 Water department requests water supplies due to broken water mains.
1335 Inquiry about radiation effects on stored milk products.
1340 Truck accident, blocking road.
1345 **RELEASE ENDS.**
1350 Hunter's association inquires about providing feed to wildlife in the affected area.
1400 Inquiry about the effects of radiation on recently turned soil.
1405 Red Cross regional director inquires about status.
1410 U.S. Department of Energy requests assistance in moving equipment from Jackson to Port Gibson.
1435 Truck accident clear of road.
1435 Fire near plant site reported out.
1440 Inquiry regarding harvesting of contaminated crop.
1500 **EXERCISE TERMINATED.**