



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION II  
101 MARIETTA STREET, N.W.  
ATLANTA, GEORGIA 30303

JUN 06 1984

Mississippi Power and Light Company  
ATTN: Mr. J. B. Richard  
Senior Vice President, Nuclear  
P. O. Box 1640  
Jackson, MS 39205

Gentlemen:

SUBJECT: REPORT NO. 50-416/84-08

On April 11, 1984, NRC inspected activities authorized by NRC Operating License No. NPF-13 for your Grand Gulf Nuclear Station facility. At the conclusion of the inspection, the findings were discussed with those members of your staff identified in the enclosed inspection report.

Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observation of activities in progress.

Within the scope of the inspection, no violations or deviations were identified.

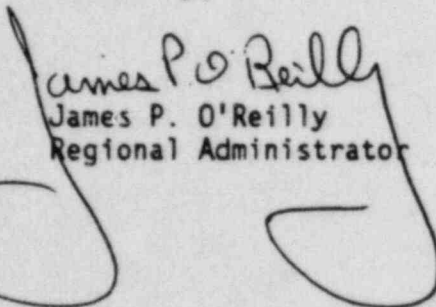
During the course of the inspection, it was noted that improvements were necessary in providing public information during emergencies and communication of protective action recommendations to State and local government authorities. These items were discussed in your telephone conversation with Mr. J. P. Stohr of my staff on April 25, 1984. Your attention is directed to assure that program improvements are made in these areas. In addition, in a telephone conversation with Mr. D. M. Collins of my staff on May 24, 1984, Mr. L. Dale of your staff committed to evaluate your system for communication of information to the State and modify your procedures, equipment and training as is determined to be necessary by this evaluation. In addition, you will discuss with the State any additional information the State may need in routine reports and modify your procedures accordingly. If your understanding of these discussions is different from that stated above, please notify us promptly. Details are discussed in paragraphs 12 and 15 of the enclosed report.

In accordance with 10 CFR 2.790(a), a copy of this letter and the enclosure will be placed in NRC's Public Document Room unless you notify this office by telephone within 10 days of the date of this letter and submit written application to withhold information contained therein within 30 days of the date of the letter. Such application must be consistent with the requirements of 2.790(b)(1).

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PDR FOIA  
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Should you have any questions concerning this letter, please contact us.

Sincerely,

  
James P. O'Reilly  
Regional Administrator

Enclosure:  
Inspection Report No. 50-416/84-08

cc w/encl:  
J. E. Cross, Plant Manager  
Ralph T. Lally, Manager of Quality  
Middle South Services, Inc.



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Report No.: 50-416/84-08

Licensee: Mississippi Power and Light Company  
 Jackson, MS 39205

Docket No.: 50-416

License No.: NPF-13

Facility Name: Grand Gulf

Inspection at Grand Gulf site near Port Gibson, Mississippi

Inspector: R. R. Marston  
 R. R. Marston

5/31/84  
 Date Signed

Inspector: W. E. Cline  
 W. E. Cline

5/31/84  
 Date Signed

Accompanying Personnel: W. V. Thomas, R. J. Traub, F. Vosbury, and G. Wehmann

Approved by: Douglas M. Cline  
 W. E. Cline, Section Chief  
 Division of Radiation Safety and Safeguards

5/31/84  
 Date Signed

SUMMARY

Inspection on April 9 - 12, 1984

Areas Inspected

This routine, announced inspection involved 189 inspector-hours on site in the areas of an emergency preparedness exercise.

Results

Of the areas inspected, no violations or deviations were identified.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

J. B. Richard, Senior Vice President, Nuclear  
J. P. McGaughy, Vice President  
\*L. F. Dale, Manager, Nuclear Services  
\*J. E. Cross, Plant Manager  
\*R. Rogers, Assistant Plant Manager  
L. McKay, Corporate Health Physicist  
\*P. B. Benedict, Emergency Planning Coordinator  
\*J. Vinrelli, Health Physics Supervisor  
\*J. Hurley, Plant Emergency Planning Coordinator

#### Other Organizations

J. Maher, Director, Mississippi Emergency Management Agency  
E. Fuente, Director, Mississippi Radiation Health Program  
A. C. Garner, Claiborne County, Mississippi, Civil Defense Director

#### NRC Resident Inspector

A. Wagner

\*Attended exit interview

### 2. Exit Interview

The inspection scope and findings were summarized on April 12, 1984, with those persons indicated in paragraph 1 above.

### 3. Licensee Action on Previous Enforcement Matters

Not inspected.

### 4. Unresolved Items

Unresolved items were not identified during this inspection.

### 5. Exercise Scenario

The scenario for the emergency exercise was reviewed to determine that provisions had been made to test the integrated capability and a major portion of the 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 was reviewed in advance of the scheduled exercise date and was discussed with licensee representatives on April 10, 1984. While no major problems with the scenario were identified during the review, several inconsistencies became apparent during the exercise. These inconsistencies appeared to detract from the overall performance of the licensee's emergency organization. Scenario problems were discussed with management representatives during the exercise critique on April 12, 1984.

#### 6. Assignment of Responsibility

This area was observed to determine that primary responsibilities for emergency response by the licensee have been specifically established and that adequate staff is available to respond to an emergency as required by 10 CFR 50.47(b)(1), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.A.

The inspectors verified that the licensee has made specific assignments to the emergency organization. The inspectors observed the activation, staffing and operation of the emergency organization in the Control Room, TSC, OSC, EOF and Corporate Emergency Center. At each of these centers, the assignment of responsibility and staffing appeared to be consistent with the licensee's approved procedures. The inspectors had no further question in this area.

#### 7. Onsite Emergency Organization

The licensee's onsite emergency organization was observed to determine that the responsibilities for emergency response are unambiguously defined, that adequate staffing is provided to ensure initial facility accident response in key functional areas at all times, and that the interfaces are specified as required by 10 CFR 50.47(b)(2), 10 CFR 50, Appendix E, paragraph IV.A, and specific criteria in NUREG 0654, Section II.B.

The inspectors determined that the licensee's onsite emergency organization was effective in dealing with the simulated emergency. Adequate staffing of the emergency response facilities was provided for. The on duty Shift Supervisor assumed the duties of Emergency Director promptly upon the initiation of the simulated emergency and directed the response until relieved by the Plant Manager. The inspectors had no further questions in this area.

#### 8. Emergency Response Support and Resources

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 have 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.

A member of the State dose assessment staff was located with the licensee dose assessment staff at the EOF.

Two offsite fire departments responded promptly to the fire which had been set at the plant pistol range.

The licensee established special security precautions during the simulated emergency. It was noted that it took only 18 minutes to process the NRC Response Team through security requirements. Based on the above findings, the previously identified IFI in this area (50-416/83-07-07) is closed.

#### 9. Emergency Classification System

This area was observed to determine that a standard emergency classification and action level scheme is in use by the nuclear facility licensee as required by 10 CFR 50.47(b)(4), 10 CFR 50, Appendix E, paragraph IV.C, and specific criteria in NUREG 0654, Section II.D.

An inspector observed that the emergency classification system was in effect as stated in the Radiological Emergency Plan and in the Implementing Procedures. The system appeared to be adequate for the classification of the simulated accident to some degree in that the Notification of Unusual Event and Alert emergencies were promptly and correctly classified. The Site Area Emergency classification had to be declared by the Exercise Controller, however, to keep the exercise moving reasonably close to schedule. The plant emergency response organization did not recognize that the situation called for an upgrade in the classification, in the approximately 10 minute period called for in the scenario before a prompt was given. The inability to promptly classify emergencies is considered an IFI. (50-416/84-08-01).

The inspector verified that EPIPs 10-S-01-1 through 10-S-01-05 have been clarified since the 1981 exercise. In addition, EPIP 10-S-01-22, Reentry and Recovery, has been implemented. Based on the above findings, the previously identified IFI in this area (50-416/81-44-03; 50-417/81-19-03) is closed.

#### 10. Notification Methods and Procedures

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 followup messages to response organizations has been established; and means to provide early notification to the populace within the plume exposure pathway have 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 II.E.

An inspector observed that notification methods and procedures had been established and were used to provide information concerning the simulated emergency conditions to Federal, State and local response organizations and to alert the licensee's augmented emergency response organization. There



were delays noted with respect to communication of protective action recommendations to the State as outlined in paragraph 15. In addition, State representatives stated that they were not being provided frequent information on plant status. The frequency with which State personnel are provided plant status information will be reviewed in a future inspection. This is an inspector followup item (50-416/84-08-02).

The prompt notification system (PNS) for alerting the public within the plume exposure pathway was in place and operational. The system was activated during this exercise to simulate warning the public of significant events occurring at the reactor site.

The inspector observed the processing of plant status information at the EOF. Status information was received every half hour and three copies were made. One copy was filed, one was sent immediately to the Offsite Emergency Coordinator, and the third was taken to be entered on the status board. Based on the above findings, the previously identified IFI in this area (50-416/81-44-04; 50-417/81-19-04) is closed.

#### 11. Emergency Communications

This area was observed to determine that provisions exist 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 II.F.

Communications systems between the licensee's emergency response facilities and emergency organization and between the licensee's emergency response organization and offsite authorities appeared adequate. Some problems were noted in maintaining radio communications with onsite survey teams during the exercise for some locations. This item was identified by the licensee.

#### 12. Public Education and Information

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 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. An Emergency News Center (ENC) was established at the Chamberlain-Hunt Academy in Port Gibson, Mississippi. An inspector noted an apparent lack of coordination between the licensee and the State at the ENC. As in the 1983 exercise the work areas for the State and licensee personnel were physically separated and a uniformed guard was posted at the licensee work area to control access. State news media personnel had previously expressed concern about inaccessibility of licensee news media personnel due to this ENC arrangement. A State representative was present when the News Center was set up and participated in one news conference, but left after the news conference. No continuing State presence was maintained

in the ENC, however, and there was no licensee representative at the State News Center in Jackson. The lack of coordination is a recurring item from the 1983 exercise. Management attention is directed to resolution of their problem. Inspector followup item 50-416/83-07-02 will remain open. Since an effective rumor control program is now in place, the previously identified inspector followup item in this area (50-416/83-07-03) is closed.

### 13. Emergency Facilities and Equipment

This area was observed to determine that adequate emergency facilities and equipment to support an emergency response are 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 inspectors observed the activation, staffing and operation of the emergency response facilities and evaluated equipment provided for emergency use 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 and the response was prompt and effective. The inspector had no further questions in this area.

#### b. Technical Support Center (TSC)

The TSC was activated and staffed promptly upon notification by the Emergency Director of the simulated emergency conditions leading to an Alert emergency classification. The TSC staff appeared to be knowledgeable concerning their responsibilities. The TSC appeared to be small compared to the number of personnel who were required to function there during the early stages of the exercise. It was very difficult to move around and the noise level was high. Cords and equipment presented a definite tripping hazard. These problems were discussed with the licensee at the critique. This is an inspector followup item (50-416/84-08-03).

#### c. Operations Support Center (OSC)

The OSC was staffed promptly upon activation by the Emergency Director. An inspector observed that teams were formed promptly, equipped properly and briefed and dispatched efficiently. The inspector had no further questions in this area.

#### d. Emergency Operations Facility (EOF)

The EOF is located in the Energy Service Center approximately 1/2 mile west of the plant site. The facility appeared to be adequately designed, equipped and staffed to support an emergency response. The inspector had no further questions in this area.



e. Corporate Emergency Center (CEC)

The CEC is located in Jackson, Mississippi at MP&L headquarters. At the time of the inspection the facility appeared to be adequately equipped and staffed to support an emergency response. The inspector had no further questions in this area.

14. Accident Assessment

This area was observed to determine that adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use as required by 10 CFR 50.47(b)(9), 10 CFR 50, Appendix E, paragraph IV.B, and specific criteria in NUREG 0654, Section II.I.

The accident assessment program includes both an engineering assessment of plant status and an assessment of radiological hazards to both onsite and offsite personnel resulting from the accident. During the exercise, the engineering accident assessment team functioned effectively in analyzing the plant status so as to make recommendations to the Emergency Director concerning mitigating actions to reduce damage to plant equipment, to prevent release of radioactive materials and to terminate the emergency condition.

Radiological assessments were performed in both the TSC and EOF. In the TSC, dose assessments were calculated from preliminary "default" method calculations. Because of the assumptions in the "default" values, the dose calculations were only approximate and were time consuming to perform. The licensee's computerized dose assessment system is not yet functional. Dose assessment in the EOF was being done by both MP&L and State teams. Continuing cross checking of results was being done.

The dose assessment procedure used in both the TSC and EOF incorporated detailed meteorological parameters which were available from the onsite meteorological instruments.

During the initial Emergency Preparedness Appraisal at Grand Gulf Nuclear Station, Improvement Item 82-03-06 was used to track the incomplete status of the post accident sampling system. During a later Appraisal, Deficiency 82-57-02 was also used to track the incomplete status of the same system. When the system was evaluated in IE Report 50-416/83-53 and Deficiency 50-416/82-57-02 was closed out, IFI 50-416/82-03-06 should also have been closed. Based on the above findings IFI 50-416/82-03-06 is closed.

15. Protective Responses

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

An inspector verified that the licensee had and used emergency procedures for formulating protective action recommendations for offsite populations within the 10 mile EPZ. The licensee's protective action recommendations were consistent with the EPA and other criteria. There were delays in notifying State and local agencies of changes in emergency status. The Site Area Emergency was declared by a controller at 10:10. This information was not promptly provided to the State. Shortly after the Site Area Emergency was declared, the NRC site team arrived in the TSC. At that time, the licensee was considering protective action recommendations (PAR). Based on the information available at 10:30, the licensee concluded that no PARs were needed. At approximately 11:10, offsite dose results were provided that would prompt declaration of a General Emergency. The licensee decided to declare a General Emergency and make PARs for sheltering and evacuation. At this point, a controller stated that the appropriate decision had been made but that the exercise would restrict emergency classification to Site Area Emergency. This discontinuity resulted in a reevaluation by the Emergency Director and a recomposing of the State notification form to be used to transmit information to the State. This discontinuity caused the individual assigned to communicate to the State to recompose the State notification form. This could be expected to cause some minor delay in transmitting the PARs to the State, but a review of the notification forms showed that this PAR was not sent to offsite agencies until 11:44. Management attention is directed to the need for improvement in this area.

The inspector stated that this is an inspector followup item (50-416/84-08-04) and that it will be reviewed during a subsequent inspection.

The inspectors noted that protective actions were instituted for onsite workers which included periodic radiation surveys in the facility, evacuation of nonessential personnel and continued accountability of emergency response personnel.

The inspector discussed feedback received by EOF management from offsite agencies concerning actions taken on licensee protective action recommendations with both licensee and State representatives. It appeared that at the EOF, there was adequate feedback on actions taken. Based on the above findings, the previously identified IFI in this area (50-416/83-07-01) is closed.

The inspector noted that maps of the 10 mile EPZ are marked in either 22 1/2 degree sectors or in evacuation zones. Maps are also available with both the sectors and the zones marked on them. The sector maps are necessary to use in tracking the plume while the others are necessary to determine the evacuation zones. The irregularly shaped evacuation zones are necessary due to the unusual topographic features in the areas. Based on the above findings, the previously identified IFI in this area (50-416/83-07-05) is closed.

#### 16. Radiological Exposure Control

This area was observed to determine that means for controlling radiological exposures, in an emergency, are established and implemented for emergency workers and that they include exposure guidelines consistent with EPA recommendations as required by 10 CFR 50.47(b)(11), and specific criteria in NUREG 0654, Section II.K.

The inspectors noted that radiological exposures were controlled throughout the exercise by issuing dosimeters to emergency workers and by periodic surveys in the emergency response facilities. Habitability surveys were not conducted in the control room until late afternoon, however. Exposure guidelines were in place for various categories of emergency actions and adequate protective clothing and respiratory protection were available and used as appropriate.

An inspector noted that the offsite monitoring teams apparently had complete sets of equipment and the equipment was operational. The field teams took measurements to account for both beta and gamma radiation, and appeared to be knowledgeable on protective measures. Based on the above findings, the previously identified IFI in this area (50-416/83-07-06) is closed.

#### 17. Exercise Critique

The licensee's critique of 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.

A formal critique for exercise participants was held on April 12, 1984. Personnel in attendance included plant and corporate management, players, controllers, and NRC representatives. Strong points and weaknesses were discussed. Items requiring followup actions were identified. Review of the licensee's action on these matters will be reviewed during subsequent inspections.

Public critiques were held in both Mississippi and Louisiana on the same date. Representatives from licensee management, the States, local governments, FEMA and the NRC presented their preliminary findings on the exercise.

#### 20. Federal Evaluation Team Report

The report by the Federal Evaluation Team (Regional Assistance Committee and Federal Emergency Management Agency, Region IV staff) concerning the activities of offsite agencies during the exercise will be forwarded by separate correspondence.