

JUL 09 1986

Mississippi Power and Light Company
✓ATTN: Mr. O. D. Kingsley, Jr.
Vice President, Nuclear Operations
P. O. Box 23054
Jackson, MS 39205

Gentlemen:

SUBJECT: FEMA EXERCISE EVALUATION TEAM REPORT FOR THE DECEMBER 3, 1985,
GRAND GULF EXERCISE

Enclosed are copies of correspondence received from FEMA documenting their evaluation of the offsite emergency preparedness for the Grand Gulf exercise which was conducted on December 3-4, 1985, and the remedial drill conducted on May 14, 1986. Three deficiencies were identified as well as several improvement items. According to FEMA correspondence dated May 28, 1986 (see enclosure, letter from R. D. Greer to B. Spell), most of the identified items were corrected during the offsite remedial drill. However, we direct your attention to the remaining deficiency as identified on Page 18 of the FEMA Report:

Limitation of the primary dedicated hot line telephone system in the Louisiana State Emergency Operations Center.

This matter is being brought to your attention for immediate action in assisting the State of Louisiana to correct this deficiency. We request that you provide to the NRC, documentation of corrective actions.

Based on our discussions with Mr. L. Dale of MP&L, it is our understanding that actions to be taken include:

1. Installation of "call waiting" on the phone line to the Control Room as soon as possible, and
2. Installation of reverse "ring down" capability for phone service from the State of Louisiana to Grand Gulf to supplement the current "ring down" capability from Grand Gulf to the State of Louisiana.

We also encourage you to work closely with the States and counties within the 10-mile EPZ in the development of a scenario for the next exercise that will test as many of the areas as practical in which the previously identified deficiencies were found.

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We appreciate your cooperation in this matter.

Sincerely,

Luis A. Reyes, Acting Director
Division of Reactor Projects

Enclosures:

1. Memorandum from R. W. Krimm to
E. L. Jordan, dated May 1, 1986
with Attachment
2. Letter from R. D. Greer to
B. Spell, dated May 28, 1986

cc w/encls:

- ✓ J. H. Cloninger, Vice President, Nuclear
Engineering and Support
- ✓ E. Cross, GGNS Site Director
- ✓ R. Hutchinson, GGNS General Manager
- ✓ L. F. Dale, Director, Nuclear Licensing
and Safety
- ✓ R. T. Lally, Manager of Quality Assurance
Middle South Services, Inc.
- ✓ R. B. McGehee, Esquire
Wise, Carter, Child, Steen and Caraway
- ✓ W. S. Reynolds, Esquire
Bishop, Liberman, Cook, Purcell
& Reynolds
- ✓ R. W. Jackson, Project Engineer

bcc w/encls:

- ✓ NRC Resident Inspector
Document Control Desk
State of Mississippi
- ✓ D. Matthews
R. Trojanowski

RII a.g. AGooden 6/27/86	RII TD TDecker 6/19/86	RII rsmc DCollins 6/27/86	RII HDM HDance 6/19/86	RII D DVerrelli 7/9/86	RII JPS JPS tohr 7/9/86	RII RET RTrojanowski 7/9/86
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rsmc for
D Matthews
by phone
on 6/25



Federal Emergency Management Agency

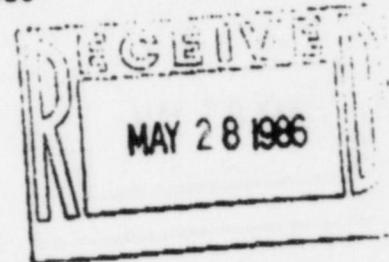
Region VI

Federal Center

Denton, Texas 76201-3698

NTH

May 23, 1986



Bill Spell, Administrator
Louisiana Nuclear Energy Division
P.O. Box 14690
Baton Rouge, Louisiana 70898

Dear Mr. Spell:

Based on the preliminary results of the Grand Gulf remedial drill conducted May 14, 1986, and confirmed with you at the critique meeting on May 15, 1986, the identified deficiency concerning the State field monitoring teams, field team staging area, and EOF was corrected. This previous deficiency noted from the December 3-4, 1985, REP exercise related to the lack of direction and control of the field monitoring teams. Installation of a new two-way radio base station at the EOF for directing the field monitoring teams proved to be very effective in providing direction and control to the teams. Therefore, this deficiency has been adequately corrected during the May 14, 1986, remedial drill.

Most areas requiring corrective actions identified in the December 3-4, 1985, Grand Gulf Final Exercise Report were corrected during the remedial drill. However, one of the two State field monitoring teams (team #2) failed to adequately demonstrate FEMA objectives #7 and #8. Description of these two FEMA objectives are as follows:

- FEMA Objective #7 - Demonstrate appropriate equipment and procedures for determining ambient radiation levels.
- FEMA Objective #8 - Demonstrate appropriate equipment and procedures for measurement of airborne radio-iodine concentrations as low as 10^{-7} uCi/cc in the presence of noble gases.

As discussed with you in the critique meeting, it is requested that field team #2 redemonstrate objectives #7 and #8 either in a second remedial drill or during the up-coming scheduled REP exercise at Grand Gulf in December 1986.

If the State chooses to retest field team #2 as part of the Grand Gulf full-scale exercise in December 1986, rather than a second remedial drill, FEMA suggests that all three field monitoring teams participate.

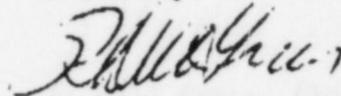
Bill Spell, Administrator

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As soon as possible, we would like for you to advise us in writing when you plan to redemonstrate the two objectives relating to field team #2. A draft report of the May 14, 1986, remedial drill will be forthcoming. This draft addendum to the Final Grand Gulf Exercise Report will be sent to you for review and comment no later than June 14, 1986, in order to meet the 30-day time frame requirement.

If you should have any questions, please contact Al Lookabaugh, Chief, Technological Hazards Branch.

Sincerely,



R. Dell Greer, Chief
Natural and Technological
Hazards Division

cc: Gloria Joyner, FEMA-HQ
Gary Sanborn, NRC
John Heard, FEMA-RIV
Gary Kaszynski, ANL



Federal Emergency Management Agency

Washington, D.C. 20472

MAY 1 1986

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

SUBJECT: Exercise Report of the December 3, 1985, Exercise of the
Louisiana Radiological Emergency Preparedness Plans for
the Grand Gulf Nuclear Station

Attached are two copies of the exercise report of the December 3, 1985, full-participation exercise of the Louisiana radiological emergency preparedness plans site-specific to the Grand Gulf Nuclear Station. This exercise report was prepared by the Region VI staff of the Federal Emergency Management Agency (FEMA).

There were three deficiencies identified as a result of this exercise which can be summarized as follows:

- o limitations of the primary dedicated hot line telephone system in the State Emergency Operations Center;
- o unsatisfactory direction and control of the field monitoring teams including communication problems involving the Louisiana Nuclear Energy Division;
- o unsatisfactory handling of contaminated individuals by the Madison Parish Hospital and Ambulance Services;

There are several areas requiring corrective actions as well as areas recommended for improvement.

A copy of this exercise report has been transmitted to the State of Louisiana and a schedule of corrective actions has been requested. The State of Louisiana has also been requested to conduct a remedial exercise prior to June 4, 1986, to address the deficiencies identified above. A copy of the schedule of corrective actions and the results of the remedial exercise will be forwarded to you when they become available.

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While there were impediments to protecting the public identified in the exercise, the approval of offsite radiological emergency preparedness plans under FEMA rule 44 CFR 350 will remain in effect pending the results of the remedial actions since: (1) the State of Louisiana is already working on a schedule of corrective actions, and (2) it is anticipated that required remedial drills will be conducted during late April or early May 1986.

If you should have any questions, please contact Robert S. Wilkerson, Chief, Technological Hazards Division, at 646-2860.

Attachments



FINAL

RADIOLOGICAL EMERGENCY PREPAREDNESS EXERCISE REPORT

Nuclear Power Plant: Grand Gulf Nuclear Station
Applicant: Mississippi Power and Light Company

Location of Plant: State of Mississippi
Port Gibson, Mississippi

Date of Report: March 4, 1986

Date of Exercise: December 3-4, 1985

Participants: State of Louisiana (full scale)
Tensas Parish (full scale)
Tallulah Reception Center
Madison Parish Hospital and Ambulance Service

Federal Emergency Management Agency
Region VI
Federal Center
800 N. Loop 288
Denton, Texas 76201

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ABBREVIATIONS

ANL - Argonne National Laboratory
DOE - Department of Energy
DOT - Department of Transportation
EOC - Emergency Operations Center
EOF - Emergency Operations Facility
EPA - Environmental Protection Agency
EPZ - Emergency Planning Zone
FEMA - Federal Emergency Management Agency
FRC - Field Response Center
GGNS - Grand Gulf Nuclear Station
HHS - Health and Human Services
HP - Health Physicist
IGSOC - Inter-granular Stress Corrosion Cracking
KI - Potassium Iodide
LNED - Louisiana Nuclear Energy Division
LOEP - Louisiana Office of Emergency Planning
LP&L - Louisiana Power and Light Company
LPRM - Local Power Range Monitors
MP&L - Mississippi Power and Light Company
NRC - Nuclear Regulatory Commission
PAG - Protective Action Guide
SAE - Site Area Emergency
USDA - United States Department of Agriculture

EXERCISE SUMMARY

The Grand Gulf Radiological Emergency Preparedness Exercise held on December 3-4, 1985, was the fifth exercise testing the response capabilities of the off-site organizations. Previous exercises were held on November 4, 1981; January 26, 1983; April 11, 1984; and February 27, 1985. The Federal Emergency Management Agency (FEMA) evaluated the off-site response capabilities in each of these exercises. The State of Louisiana participated in the Grand Gulf exercise to support the Tensas Parish response effort and to demonstrate State emergency response capabilities.

The Grand Gulf Nuclear Station is located on the Mississippi side of the Mississippi River. Portions of the 10-mile EPZ extend into Tensas Parish, Louisiana, for which Region VI has evaluation responsibilities for off-site response capabilities. Tensas Parish has also assumed responsibility for the evacuation of a small portion of Madison Parish which enters into the 10-mile EPZ. There are no permanent residents in this area, however. Occupants would be limited to hunters and fishermen in the areas.

On December 5, three post-exercise meetings were held: An 8:00 a.m. meeting with the 19 member Federal evaluation team to develop a preliminary evaluation and an 11:00 a.m. evaluation meeting with Louisiana State representatives and Tensas Parish officials at the Ramada Inn, Natchez, Mississippi. A public critique of the exercise was held at St. Joseph, Louisiana at 2:30 p.m. with representatives of the NRC, Mississippi Power and Light Company, Federal, State, and Parish officials, and the general public.

This document provides narratives and evaluation of performances of the response agencies as well as Deficiencies, Areas Requiring Corrective Action, and Areas Recommended for Improvement for each jurisdiction and field activity tested. The demonstrations of response capabilities of the Madison Parish Hospital and Ambulance Service and the State Field Monitoring Teams were inadequate to the extent that remedial drills for these specific areas are requested by the Regional Assistance Committee Chairman.

Remedial drills addressing these deficiencies must be satisfactorily conducted within six (6) months from the exercise date. The remedial drills thus must be conducted by 6/4/86. Following satisfactory completion of the remedial drills, an addendum to this report will be published and distributed to all appropriate emergency response organizations.

The first problem area identified concerns control and direction of the field monitoring teams. As presented in the exercise critique, the flow of information was cumbersome between the LNEE EOF personnel and the field monitoring teams via the LNEE field team staging area. This resulted in transfer of misinformation between the three locations and a lack of control and coordination of the field teams. FEMA believes that this situation can be remedied by having the appropriate LNEE personnel direct the field teams from the EOF. The use of Tensas Parish Courthouse complex as a field team staging area should be continued.

Because of other field team problems identified, we also recommend that the following activities of the field teams be demonstrated as part of the remedial drill.

- ° Proper calibration of all field team equipment
- ° Capability of all field teams to measure radioiodine levels in the air.
- ° Equipment checkout procedures.
- ° Method of determining the correct locations of monitoring points.
- ° Proper radio procedures.
- ° Proper sampling techniques.

The second area which requires a remedial drill relates to the activities at the Madison Parish Hospital and Ambulance Service in Tullaluh. Based on the exercise evaluation, it was determined that the two objectives (FEMA Objective 30 and 31) applicable to these activities could not be evaluated.

Prior to conducting the remedial drill, priority should be given to training and radiological equipment needs. Demonstration should include but not be limited to the following activities:

- ° Setting up a radiological management room (closing duct vents, etc.)
- ° Wearing of protective clothing and dosimeters
- ° Decontaminating the patient
- ° "Hotline" procedures
- ° Patient surveying techniques

- ° Exit procedures in removing protective clothing
- ° Proper disposal and security of contaminated waste
- ° Transportation of a contaminated injured patient
- ° Surveying of Ambulance vehicle and EMS personnel following removal of contaminated patient and exchange of patient to hospital staff
- ° Security of ambulance vehicle
- ° Communication capabilities and coordination between Parish Civil Defense Director, EMS and hospital.

Section 1 of this report provides an introduction which includes exercise background information and explanation of other exercise related items. Section 2 of this Report provides individual narratives, Deficiencies, Areas Requiring Corrective Actions, and Areas Recommended for Improvement for each jurisdiction and field activity tested. Section 3 provides a summary listing of Deficiencies and Areas Requiring Corrective Action in tabular format (entitled Table 1 Remedial Actions For the Grand Gulf Exercise) and provides space for State and Local agencies response and scheduled corrective actions. Section 4 of the report contains in tabular format an "Objectives Met or Yet to Be Achieved" compilation, based upon FEMA Objectives developed from NUREG-0654, II, as well as a summary sheet of those Objectives which have not been satisfactorily demonstrated to date.

STATE OF LOUISIANA OPERATIONS

The State of Louisiana's planned participation in this exercise included 25 specific objectives designed to test capabilities of State responses to the Plume Exposure Pathway as well as the Ingestion Exposure Pathway. Generally, many of these objectives were effectively demonstrated. However, problems encountered in performances of State Field Monitoring activities necessitated that these objectives be redemonstrated by remedial drills. Additionally, the scenario content did not provide sufficient development for full testing of Ingestion Pathway capabilities. The State did not sufficiently demonstrate that their response role during an Ingestion Pathway incident would be adequate to provide the required protection of the citizens within the 50-mile EPZ. It was determined that this Ingestion Pathway capability should be repeated during the next regularly scheduled exercise at Grand Gulf, but within the six-year cycle allowed for successful demonstration of all 39 FEMA Objectives.

While the communications center seems to be completely adequate for other nuclear facilities in the State, it has two key drawbacks for the Grand Gulf Nuclear Station. First, the communications to Tensas Parish (telephones and telefax) are both telephone-line based. The Communications Director expressed that the limited Tensas Parish telephone system could handle the flow of messages required in a real emergency. The Planning Standard F (section F.1.2. page F.2) in the recently released FEMA-REP-10 (Nov. 1985) does not allow primary and backup communications systems to be subject to common failure under adverse environmental conditions.

A second problem arises from the inability of the State of Louisiana to initiate a telephone call to all affected parties on the dedicated hotline system. If it were necessary to coordinate EBS messages during a joint Louisiana-Mississippi exercise, such coordination would be more difficult on those occasions when Louisiana wished to initiate a message.

A full discussion of problems encountered is presented in the appropriate narrative topic of Section 2 of the report.

LOCAL GOVERNMENT OPERATIONS

Tensas Parish is the only Louisiana Parish which is within the 10-mile EPZ of Grand Gulf Nuclear Station, with exception of a small area of Madison Parish for which Tensas Parish has agreed to provide emergency response measures. The State, through coordination with Tensas Parish, prepared exercise objectives to correlate with the scenario developed by Mississippi Power and Light for the Grand Gulf Exercise. However, since Mississippi was not testing Ingestion Pathway emergency response actions, the basic scenario did not establish situations on which to build Ingestion Pathway objectives. The State of Louisiana's adjustment to the scenario to provide this basis was inadequate to provide for full demonstration by either the State or Tensas Parish response agencies of their capabilities to protect the residents residing in the Ingestion Pathway Exposure Zone. It was decided that this capability will need to be redemonstrated during the next regularly scheduled Grand Gulf exercise, but within the six-year cycle for accomplishing the 39-FEMA Objectives.

Local government activities included the Tensas Parish EOC, Communications, Media Center, Madison Parish Hospital and Ambulance Service, and the Tallulah Reception Center. Overall, performances at the local government level were very good and successfully demonstrated an adequate preparedness capability to protect the citizens within the 10-mile EPZ. However, insufficient training by the Madison Parish Hospital and Ambulance service prevented their successful

demonstration of capabilities to respond to the need to treat an injured, contaminated individual. These capabilities are to be redemonstrated by a remedial drill. Other specific problems identified at individual locations are described in detail under Section 2 of the report.

1 INTRODUCTION

1.1 EXERCISE BACKGROUND

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume lead role responsibility for all offsite nuclear power facility planning and response.

FEMA's immediate basic responsibilities in Fixed Nuclear Facility Radiological Emergency Response Planning include:

- ° Taking the lead in off-site emergency response planning and in the review and evaluation of State and local government emergency plans insuring that the plans meet the Federal criteria set forth in NUREG-0654 FEMA REP-1, Rev.1 (November 1980).
- ° Determining whether the State and local emergency response plans can be implemented on the basis of observation and evaluation of an exercise conducted by the appropriate emergency response jurisdictions.
- ° Coordinating the activities of volunteer organizations and other involved Federal agencies. Representatives of these agencies listed below serve as members of the Regional Assistance Committee (RAC), which is chaired by FEMA.
 - U.S. Nuclear Regulatory Commission (NRC)
 - U.S. Environmental Protection Agency (EPA)
 - U.S. Department of Energy (DOE)
 - U.S. Department of Health and Human Services (DHHS)
 - U.S. Department of Transportation (DOT)
 - U.S. Department of Agriculture (USDA)

1.2 FEDERAL EVALUATORS

Nineteen Federal Evaluators participated in this fifth-year exercise, evaluating the emergency response capabilities of the State of Louisiana, Tensas Parish, Madison Parish Hospital and Ambulance Service, and the Tallulah Reception Center. These individuals, their agencies and evaluation locations are listed below:

Al Lookabaugh	FEMA	Overall Coordination
John Benton	FEMA	State EOC (Baton Rouge)
Dottie Nevitt	USDA	State EOC (Baton Rouge)
Dan Santini	ANL	State EOC (Baton Rouge)
Jim Levenson	ANL	State LNEED Headquarters (Baton Rouge)
Maryetta Cunningham	FEMA	Tensas Parish EOC (St. Joseph)
Travis Ratcliff	FEMA	Tensas Parish Communications (St. Joseph)
Gary Sanborn	NRC	Media Center (St. Joseph)
Michael Brooks	FEMA	Media Center (St. Joseph)
Jeff Slack	DOE	State Dose Assessment at EOF (Plant in Mississippi) and LNEED Laboratory (Baton Rouge)
Gary Kaszynski	ANL	Field Monitoring Teams Staging Area & Emergency Workers Monitoring Area (St. Joseph)
Leon Zellner	FDH	State Field Team #1 (St. Joseph)
Harry Harrison	FEMA	State Field Team #2 (St. Joseph) and LNEED Laboratory (Baton Rouge)

Don Fingleton	ANL	State Field Team #3 (St. Joseph)
Gary Jones	FEMA	Madison Parish Hospital and Ambulance Service (Tallulah)
Phil Edgington	HHS	Madison Parish Hospital and Ambulance Service (Tallulah)
Tom Goertz	FDA	Madison Parish Hospital and Ambulance Service (Tallulah)
Grace Fossati	FEMA	Tallulah Reception Center (Tallulah)
Dee Demmitt	ANL	Tallulah Reception Center (Tallulah)

1.3 EXERCISE OBJECTIVES

The State and Local objectives were developed through joint discussion between Mississippi Power and Light Company (MP&L); the Nuclear Regulatory Commission-Region IV (NRC); the Federal Emergency Management Agency, Region VI (FEMA); the Louisiana Nuclear Energy Division (LNED); Louisiana Office of Emergency Preparedness (LOEP); and Tensas Parish Officials. Exercise objectives for Mississippi Power and Light Company, Grand Gulf Nuclear Station and Mississippi State/Local organizations come under the jurisdictional reporting of FEMA Region IV, Atlanta.

State of Louisiana Exercise Objectives

1. Demonstrate ability to mobilize staff and activate facilities promptly.
2. Demonstrate ability to make decisions and to coordinate emergency activities.
3. Demonstrate adequacy of facilities and displays to support emergency operations.
4. Demonstrate ability to communicate with all appropriate locations, organizations, and field personnel.
5. Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion.
6. Demonstrate appropriate equipment and procedures for determining ambient radiation levels.
7. Demonstrate appropriate equipment and procedures for measurement of air-borne radioiodine concentrations as low as 10^{-7} uCi/cc in the presence of noble gases.
8. Demonstrate appropriate equipment and procedures for collection, transport, and analysis of samples of soil, vegetation, snow, water, and milk.
9. Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures, based on PAGs available shelter, evacuation time estimates and all other appropriate factors.
10. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data; and to determine

10. (cont'd)

appropriate protective measures based on PAGs and other relevant factors.

11. Demonstrate ability to implement protective actions for ingestion pathway hazards.
12. Demonstrate the organizational ability and resources necessary to manage an orderly evacuation of all or part of the plume EPZ.
13. Demonstrate ability to continuously monitor and control emergency worker exposure.
14. Demonstrate ability to make the decision, based on predetermined criteria, whether to issue KI to emergency workers and/or general population.
15. Demonstrate ability to supply and administer KI once the decision has been made to do so.
16. Demonstrate ability to brief the media in a clear, accurate and timely manner.
17. Demonstrate ability to provide advance coordination of information released.
18. Demonstrate ability to establish and operate rumor control in a coordinated fashion.
19. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment and vehicles.
20. Demonstrate the ability to identify need for, request, and obtain Federal assistance.
21. Demonstrate the ability to estimate total population exposure.
22. Demonstrate the ability to determine and implement appropriate measures for controlled recovery and re-entry.
23. Demonstrate the adequacy, operability and effective use of emergency communication equipment and the adequacy of communications procedures and methods.

State of Louisiana Exercise Objectives (cont'd):

24. Demonstrate the ability to monitor emergency classification levels continuously and implement procedures in a timely manner.
25. Demonstrate the capability to effectively process all incoming messages in a timely manner.

Tensas Parish Exercise Objectives:

1. Demonstrate ability to mobilize staff and activate facilities promptly.
2. Demonstrate ability to make decisions and to coordinate emergency activities.
3. Demonstrate adequacy of facilities and displays to support emergency operations.
4. Demonstrate ability to communicate with all appropriate locations, organizations, and field personnel.
5. Demonstrate ability to implement protective actions for ingestion pathway hazards.
6. Demonstrate ability to alert the public within the 10-mile EPZ and disseminate an initial instructional message within 15 minutes
7. Demonstrate the organizational ability and resources necessary to manage an orderly evacuation of all or part of the plume EPZ.
8. Demonstrate ability to continuously monitor and control emergency worker exposure.
9. Demonstrate ability to supply and administer KI once the decision has been made to do so.
10. Demonstrate ability to brief the media in a clear, accurate and timely manner.
11. Demonstrate ability to provide advance coordination of information released.

12. Demonstrate ability to establish and operate rumor control in a coordinated fashion.
13. Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees.
14. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment and vehicles.
15. Demonstrate adequacy of EMS transportation, personnel and procedures for handling contaminated individuals including proper decontamination of vehicle and equipment.
16. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.
17. Demonstrate the ability to determine and implement appropriate measures for controlled recovery and re-entry.
18. Demonstrate the adequacy, operability and effective use of emergency communication equipment and the adequacy of communications procedures and methods.
19. Demonstrate the ability to monitor emergency classification levels continuously and implement procedures in a timely manner.
20. Demonstrate that the authority exists in activating a reception center (as necessary) in a timely manner.

1.4 EXERCISE SCENARIO SUMMARY

The plant shut down 16 days ago from a 92% power level after a high organic contaminant concentration was found in the reactor coolant. Power was limited to 92% prior to shutdown in an attempt to maximize fuel utilization prior to entering the plant's first refueling outage which was scheduled to start next week. Activity was near the maximum allowed by the Technical Specifications. Many incore monitoring instruments became inoperative as a result of the organic contaminant.

The core has been completely off-loaded into the new high density racks in the containment fuel storage pool. The Fuel Pool Cooling system is being used to maintain pool temperature. The vessel cavity and vessel have been drained down and are being decontaminated prior to vessel inspection. Both hydrogen recombiners on the Containment refueling floor are being replaced by the manufacturer due to a design problem. The B unit has already been transferred and the A unit is to be moved today.

A crop duster crashes onto the roof of the Division 1 diesel building. It does not catch fire or cause extensive damage; however, the exhaust duct of the diesel is crushed. No toxic or environmental hazards result from this event. An Alert is declared due to an aircraft crash on the facility.

A CAM alarms in the Rad Waste building in the vicinity of the liner dewatering skid. Inspection by HP determines the cause to be high airborne activity being released by a thermally hot radioactive liner. There are no significant releases of radioactive material and there are no environmental consequences from this event.

The operator of the hoist in the Containment on the refueling floor raises the A recombiner to move it, violates procedure to save time, and transfers it across the refueling area too close to the fuel storage racks. When he gets halfway across, all the lifting lugs break, allowing the recombiner to swing downward and strike the upper containment fuel pool gate. This causes a major failure of the seal. The recombiner then falls onto the top of the steam dryer and then into the fuel storage pool resulting in damaged fuel and increased radiation. As internal radiation levels increase, a Hi alarm on the Containment Ventilation radiation monitor is received and a Site Area Emergency is declared.

There is an airborne release from the plant, compounded by an inability to secure the emergency ventilation system for an extended period of time. (The Filtration and Iodine removal components of this system were removed in error by a maintenance crew replacing the same components in a redundant piece of equipment.) A General Emergency is declared based upon increased dose rates. Protective Action Recommendations are made to evacuate out to 2 miles and shelter out to 5 miles. The water in the Fuel Storage Pool leaks out and into the drained reactor vessel. The residual water in the Fuel Storage Pool begins to boil releasing first the Iodine being held in the water then causing additional fuel damage. A wind shift occurs and the Iodine release increases, resulting in an additional recommendation to evacuate out to 5 miles and shelter out to 10 miles. Water level and then cooling are returned to the pool and the boiling stops. The vent system is finally secured and the release is terminated. Dose rates at the site boundary decrease as the plume dissipates subsequently to Alert level.

Assumptions and Inputs

The assumptions and inputs which are germane to the development of the radiological results follow:

- ° MP&L's off-site dose calculation procedures were used to determine the magnitude of the release required to cause the selected off-site dose. This activity was assumed to originate entirely from damaged fuel in the Containment Fuel Storage Pool.
- ° No filtration of Iodine or particulates is assumed as the filtration media has been removed by mistake.
- ° Projected off-site doses were calculated as a function of distance from the plant, time after release, and meteorology.
- ° Dose rates in the Containment and the Auxillary Building were estimated as a function of time after the hypothetical release. In these estimates other fission products released with the iodines were considered.
- ° Deposition of airborne fission and activation products and stratification of the heavier noble gases may be ignored.
- ° There is no infiltration from the Auxillary Building into the Control Room/TSC habitability envelope.
- ° The operators are assumed to comply with Emergency Procedures.
- ° Insufficient Hydrogen is released to form a combustible concentration.

- ° High density Fuel storage racks are installed and all plant systems are lined up to support a total core offload in the Containment.

Discontinuities

The following identified discontinuities depart in some respect from the expected. Only those discontinuities associated with development of the radiological consequences of the scenario are included. Discontinuities associated with the plant design and operational performance are not included.

- ° The excessive Iodine levels used in this scenario are unrealistic and are utilized to accommodate the off-site agency to implement ingestion pathway response and recovery techniques.
- ° The time involved prior to Fuel Handling Ventilation isolation is extended to maintain scenario objective at Site Area Emergency prior to escalation to General Emergency.
- ° Standby Gas Treatment System is not allowed to be secured to enable extended radiological releases to the environment.
- ° When recommended Protective Actions provide for an extended evacuation out to 5 miles, the state of Mississippi will maintain its evacuation radius at 2 miles to complete their stated objectives.
- ° Essentially no dilution of the containment concentration to release concentration is given from Auxillary Building volume in order to achieve off-site doses but still have facility access.
- ° Several Operator errors and procedural violations were necessary to establish the scenario.

(Initial conditions to be given to all key exercise participants prior to the beginning of the exercise.)

- ° This scenario takes place in early summer; school is not in session.
- ° Construction is halted on Unit 2 at this time and there are no personnel on the Unit 2 side of the plant.
- ° The plant shut down 16 days ago from a 92% power level after a high organic contaminant concentration was found in the reactor coolant. An extensive review determined the source of the contaminant to be a cleaning solvent used to strip floors in preparation for painting.

The contractor, aware of MP&L's chemical control program, received approval for the use of a solvent. The approved solvent did not perform as well as expected, so to save time he placed a non-approved solvent in the approved container.

Calculations based on a coolant ph of 4.4 show that at least 13 gallons of the solvent was dumped into a floor drain. The organic portion of the solvent was not removed by the rad waste demineralizers. Since chemistry's total organic carbon analyzer was inoperative, this was not detected prior to being sent to the CST.

When the organic contaminants were injected into the reactor, they were broken down by the action of the heat and radiation, causing the observed decrease in pH and increase in conductivity and chloride concentration. The plant had been operating at increasingly more restrictive power levels due to increasing offgas pretreatment monitor readings for the previous three months. The forced shutdown occurred just prior to entering the plant's first refueling outage which was scheduled to start next week. Activity was near the maximum allowed by GGNS Technical Specifications; off-gas pretreatment was 360 millicuries/sec; coolant activity was 0.19 microcuries/cc. Many local power range monitors (LPRM) are inoperative. One LPRM detector failed within six hours of the first indication of the incident and within 48 hours twenty-seven detectors had failed.

Due to the high potential for inter-granular stress corrosion cracking (IGSOC), the decision was made to perform a full core off-load and a full vessel inspection. (Installation of the upper containment high density fuel storage racks to permit full core off-load was recently completed.)

TIMETABLE FOR EMERGENCY CLASSIFICATIONS

0810	ALERT - Plane crash on facility.
0940	SITE AREA EMERGENCY - Hi-Hi Alarm on Containment Vent Rad Monitor.
1110	GENERAL EMERGENCY - 1R/hr projected at site boundary.
1520	SITE AREA EMERGENCY - Dose rates at the site boundary decreased. Plant conditions stable.
1535	ALERT - Dose rates at the site boundary and off-site have decreased.

1.5 EVALUATION CRITERIA

The Grand Gulf exercise evaluations of Section II, NUREG-0654-1, Revision 1 (November 1980). Region VI evaluated the exercise using the modular format.

Each jurisdiction or off-site activity evaluated is discussed by narrative and listing of Deficiencies, Areas Requiring Corrective Actions, and Areas for Improvement with accompanying recommendations. Deficiencies would cause a finding that the off-site preparedness was not adequate to provide reasonable assurance that appropriate protective measures can and will be taken to protect the health and safety of the public living in the vicinity of the site in the event of a radiological emergency. At least one deficiency in this category would necessitate a negative finding. Areas Requiring Corrective Action are assigned when the demonstrated performance during the exercise was considered faulty or needing corrective action. Even with the presence of these problems, other factors indicate that reasonable assurance could be given that in the event of a real radiological emergency, appropriate measures can and will be taken to protect the health and safety of the public. Areas Requiring Corrective Action should be relatively easy to correct in comparison to Deficiencies. A finding of Adequate could include several Areas Requiring Corrective Action.

Areas recommended for improvement are also listed, as appropriate, for each jurisdiction or off-site activity where suggestions for improved performances were documented by evaluators.

2 EXERCISE EVALUATION

On the basis of general criteria has been performed of the December 3-4, 1985 exercise of the Grand Gulf Nuclear Station. This evaluation, including Deficiencies, Areas Requiring Corrective Actions and Areas for Improvement and Recommendations, is presented herein. FEMA Region VI will maintain close liaison with the State and Local governments in determining the corrective action (including time frame) needed to resolve each problem in accordance with established criteria and guidelines.

2.1 LOUISIANA STATE OPERATIONS

Louisiana participation consisted of exercising the Office of Emergency Operations at the EOC, the Nuclear Energy Division Headquarters and State Field Monitoring Teams, and Dose Assessment at the EOF. There were 25 objectives for these locations and field activities. Detailed discussions of performances are provided under the specific narratives. Demonstration of most objectives successfully showed a satisfactory level of State emergency response capabilities. However, problems arose in field monitoring coordination that necessitate remedial drill(s) to correct the deficiencies. (See Field Monitoring Activities). The communications at the State EOC to the Tensas Parish (telephones and telefax) are both telephone-line based.

While the communications center seems to be completely adequate for other nuclear facilities in the State, it has two key drawbacks for the Grand Gulf Nuclear Station. First, the communications to Tensas Parish (telephones and telefax) are both telephone-line based. The Communications Director expressed that the limited Tensas Parish telephone system could handle the flow of messages required in a real emergency. The ~~Planning~~ Planning Standard F (section F.1.2, page F-2) in the recently released FEMA-REP-10 (Nov. 1985) does not allow primary and back-up communications systems to be subject to common failure under adverse environmental conditions.

A second problem arises from the inability of the State of Louisiana to initiate a telephone call to all affected parties on the dedicated hotline system. If it were necessary to coordinate EBS messages during a joint Louisiana-Mississippi exercise, such coordination would be more difficult on those occasions when Louisiana wished to initiate a message.

The State of Louisiana was unable to successfully demonstrate Ingestion Exposure Pathway capabilities because of insufficient scenario situations for developing response actions. Those objectives relating to Ingestion Pathway, therefore, will require redemonstration during the next scheduled Grand Gulf Exercise within the six-year cycle for accomplishing all FEMA objectives.

The narratives provide descriptions of other response capabilities demonstrated, and summarize problems identified and objectives which were met during the exercise.

2.1.1 STATE EOC

Narrative

The State of Louisiana had a limited staff participating in this exercise. The only Department represented aside from the LNEED (Louisiana Nuclear Energy Division) and LOEP (Louisiana Office of Emergency Preparedness) was the Department of Agriculture. The State EOC was able to only partially demonstrate ability to mobilize staff and activate facilities due to the lack of participation by those agencies and participants who were assigned response roles at the EOC.

With the few exceptions mentioned below, the facilities were excellent. Three formal work spaces were used. These were the EOC, the communications room, and a separate LNEED working area where LOEP and LNEED executive secretaries jointly reached key decisions. Key decisions directly related to the emergency were reached within this LNEED working areas as well as outside the main EOC room. This arrangement inhibited coordination of the EOC operations. If decision making is to be conducted under these arrangements, provisions should be made to make these decisions known to all participating agencies in the EOC. Decisions relating to simultaneous non-nuclear emergency were handled within within the EOC. The staff demonstrated excellent knowledge of the technical requirements of their positions in particular and the emergency in general. However, on two specific occasions, (late in Day 1, and on Day 2) messages were not typed up or sent out in a necessary, timely manner. Nor was there any documentation that this was simulated, making it difficult to judge whether instructions were appropriate. There was not good simulation and documentation of communication messages.

Outgoing directives by the State were too few (only three were sent) and sometimes too late.

While the communications center seems to be completely adequate for other nuclear facilities in the State, it has two key drawbacks for the Grand Gulf Nuclear Station. First, the communications to Tensas Parish (telephones and telefax) are both telephone-line based. The Communications Director expressed that the limited Tensas Parish telephone system could handle the flow of messages required in a real emergency. The ~~Planning~~ Planning Standard F (section F.1.2. page F-2) in the recently released FEMA-REP-10 (Nov. 1985) does not allow primary and back-up communications systems to be subject to common failure under adverse environmental conditions.

A second problem arises from the inability of the State of Louisiana to initiate a telephone call to all affected parties on the dedicated hotline system. If it were necessary to coordinate EBS messages during a joint Louisiana-Mississippi exercise, such coordination would be more difficult on those occasions when Louisiana wished to initiate a message.

Telephone calls in the EOC operations room are to be picked up as a result of messages sent over the speaker system from the communications room to the EOC. The use of this system might cause some problems when many calls come in to the EOC simultaneously. While the State is to be commended for its effort to eliminate confusion arising from multiple ringing of telephones within the EOC, the system might be improved with lights on the telephones.

Evacuation and access control is a local responsibility. Access control points that were established during the exercise were displayed on a map in the State EOC. Local Standard Operating Procedures allow the Parish Civil Defense Director to make direct contact with the State Police to request their assistance in traffic and access control, including rail traffic. During this exercise air and river traffic control was the responsibility of the State of Mississippi. Special evacuation problems are also a local responsibility.

The Louisiana State Plan delegates to the Louisiana Office of Emergency Preparedness the responsibility for providing information concerning Protective Action Recommendations to parishes in the Ingestion Pathway EPZ. The State Department of Agriculture reviewed and analyzed data to submit information to the parishes. This data included lists and designated map areas that described names and locations of dairy farms, food processing plants, and specific crops that are grown in the affected EPZ sectors. This information was used in constructing a draft EBS message for use by the parishes.

The EBS message provided for placing milk producing animals, livestock, and poultry on stored feed and covered water; contacting County Agricultural Agents before harvesting crops; and contacting the Parish Fisheries Agent or Louisiana Department of Wildlife and Fisheries before releasing fish and shellfish for human consumption. The EBS message also included a statement that if farmers were not allowed to permanently return to their farms for several days, they would probably be allowed to return for a short period to tend their livestock.

The State Department of Agriculture also put their Emergency Response Teams on standby in the event their assistance was needed for sampling or other agricultural response actions. Names, locations, and phone numbers of County Agricultural agents; and State and Local Food and Agriculture Council personnel were available.

The State EOC was not in the plume EPZ nor were field workers dispatched from this EOC. However, the evaluator, was shown a supply of low-range, mid-range, and high-range dosimeters and chargers that were available, if needed. There were no film badges or TLDS. The Louisiana State University representative stated that they did not feel use of dosimetry was necessary since they were so far away from the reactor.

The EOC did not hold press briefings. This decision was made because it was felt that it would be unreasonable to hold press briefings when there was to be very little play for Louisiana in this exercise.

Public information regarding safety precautions during recovery, health effects of low-level exposure, and financial compensation is the responsibility of the local parishes.

Ingestion Pathway

As explained in other narratives of Section 2, the exercising of Ingestion Pathway was determined insufficient to allow for demonstration of the capabilities of State and Local governments, and must be redemonstrated by a future exercise.

The following criteria related to the State's (LNED and LOEP) responsibilities -- Communications, Decision-Making, Field Measurements, Sampling and Laboratory Tests, Protective Actions and Public Information.

If the scenario had been stronger for the State of Louisiana, more areas could have been demonstrated. The lack of representation by responsible agencies at the EOC may have lessened the impact of actions that could have been taken. Possibly, those Agencies with specific expertise could have provided further input to expand the opportunities for demonstrating the required capabilities.

A stronger scenario could have brought further recommendations such as: washing leafy vegetables, turning of soil, use of soil stabilizers, and drafting a cost analysis report on losses for insurance purposes.

The LNED official briefed the group on significant actions taken during Day 1 and provided the actions that were currently in effect.

Samples that were taken in Day 1 included water, air, vegetation, and sediment. No milk samples were taken since there are no dairies in the area. These samples were taken to the laboratory at Louisiana State University for analysis and were found to be below EPA level guidelines except for a water sample in Sector P, 5 or 6 miles out at the lake in St. Joseph. This problem sample was too small in volume; this additional water samples were to be made. Although the State had not requested Federal assistance, EPA was also doing a water analysis as backup.

A restriction on fisheries was placed in effect. The Department of Wildlife and Fisheries removed fish from the lake for transmittal to the lab for analysis. The State Department of Agriculture was requested to draft an EPZ message to lift restrictions for sheltering or animals and the use of stored feed and water.

A second briefing advised agencies that the water and fish analysis showed the water was at background levels and there was no significant contamination in the fish.

A recommendation was made to Tensas Parish to lift sheltering restrictions and to bring evacuated people back to the area. The release of this public information is the responsibility of the Parish.

During the course of the exercise the State was able to accomplish some, but not all of the objectives for activities which the LOEP would technically perform at the EOC. The EOC activities on Day 2 relating to Ingestion Pathway were insufficient to evaluate accomplishment of all objectives relating to Ingestion Pathway emergency response. There was very little flow (or simulation of flow) of instruction from the State to appropriate local officials. The State only partially satisfied FEMA objective number 32 by demonstrating the ability to correctly identify the need for Federal assistance. In this exercise, the State correctly recognized that the scenario did not cause Federal assistance to be required. Since the scenario was deficient in this respect, the State did not demonstrate its ability to request and obtain Federal assistance. The State partially satisfied Objective 34, in the sense that it adequately demonstrated an ability to determine appropriate measures for controlled recovery and reentry. However, because of an inadequate scenario, and an inadequately staffed EOC, the State was not able to demonstrate its ability to implement appropriate measures for controlled recovery and reentry.

DEFICIENCIES:

1. Description:

The primary dedicated hotline telephone system does not allow the State of Louisiana opportunity to initiate conversation with the State of Mississippi or other affected parties. (NUREG 0654 II, F.1.b)

Recommendation: Redesign dedicated phone system to allow for two-way or multi-contact capability.

AREAS REQUIRING CORRECTIVE ACTION:

2. Description: Due to lack of participation (except for the LA Department of Agriculture) of agencies having a response assignment at the State EOC, capability for activation and staffing could not be determined adequate (NUREG-0654, II. E.1, E.2).

AREAS REQUIRING CORRECTIVE ACTION: (cont'd)

Recommendation:

Those agencies and personnel having a response role at the State EOC should be required to participate during the next exercise so that determination of capability to mobilize and staff can be established.

3. Description:

Message handling capabilities were not successfully demonstrated due to failure to actually send messages or at least to fully document their simulated dispatch and receipt methods (NUREG-0654 II, E.).

Recommendation:

All incoming and outgoing message handling procedures should be fully demonstrated or documentation carefully performed to verify the State's capability.

4. Description:

A satisfactory back-up communications link between the State EOC and Tensas Parish has not been established (NUREG-0654, II, F.1).

Recommendation:

Capability should be established for initiation of calls by State EOC on the dedicated line, or establishment of a two-way radio system.

5. Description:

Capability to successfully perform State EOC functions relating to Ingestion Pathway was not successfully or fully demonstrated. (NUREG-0654, II, I. 10, I. 11, J. 9, J. 11, M. 1)

Recommendation:

State EOC must redemonstrate Ingestion Pathway response activities within the six-year cycle for accomplishing all FEMA objectives.

AREAS REQUIRING CORRECTIVE ACTION: (cont'd)

6. Description:

Decisions made by executive staff were not provided in briefing form to the Operations staff.

Recommendation:

Staff members should be kept knowledgeable through briefing on all activities at the LNEH Headquarters.

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

Possible confusion could arise during an actual incident when incoming calls are relayed over the speaker from the communications room to the EOC.

Recommendations:

Install lights on telephones to indicate calls rather than announcing over speaker system.

2.1.2 STATE LNER HEADQUARTERS

Activation of the LNER Headquarters in Baton Rouge was accomplished according to planned procedures. The Director arrived for normal duty. Other staff were notified and placed on standby using a current call-up list. Personnel with dose assessment responsibilities (at the EOF) were prepositioned in Natchez as were field team members. The Director of LNER was effectively in charge of the Agency's operations. The dose assessment and field teams were dispatched by the Director. Following dispatch, the Director and his deputy relocated to the State EOC.

A new concept of operations for Grand Gulf comparable to that used for Waterford and Riverbend was demonstrated at this exercise. It involved dispatch of the dose assessment team to the EOF to work directly with the utility dose assessment/projection groups. Concurrences with assessments, projections, and protective action decisions were jointly made at the EOF. These actions were communicated to the Director at the State EOC for State concurrence. At the State EOC, authorization for the actions was obtained from the Governor's office and coordinated by LNER with the State EOC. In short, the new concept was smoothly implemented and represents an improvement over earlier concepts.

Copies of the plan and procedures were present. Decisions and media releases were fully coordinated among the executive committee (LOEP, LNER) and members of the EOC operations staff.

During the exercise (both plume and ingestion pathway), decisions were verbally communicated to the EOF, Tensas Parish, and the Media Center. However, press releases in hard copy form were prepared slowly and dissemination was, for the most part, simulated.

Overall, the facilities were adequate for LNER at their headquarters and the State EOC. Capabilities for extended operations at each facility were excellent. At the State EOC, status boards and maps were used and kept current. However, maps indicating areas for protective actions were outdated and incomplete. It is recommended that LNER develop or obtain maps that are up to date and consistent with those used by the utility. Protective action zones used by the utility should be indicated on the LNER maps (e.g., utility recommended sheltering in Zone 12, but LNER had no sector 12 on their maps).

Communication capabilities at LNER were fully demonstrated. The Grand Gulf hot-line worked well. Radio communications capabilities were available for use, but were not demonstrated; commercial telephone was used to notify and activate staff.

According to the new concept of operations, dose projections are performed at the EOF. The Exercise Evaluation and Simulation Facility (EESF) computer program was operational and used in the executive room for plotting plume location. Additionally, the plume was plotted on a map of the EPZ using plant release data and field readings received in the State.

Protective action recommendations (PARs) were made at the EOF with joint concurrence by the utility and LNEC. These PARs were relayed to the executive room at the State for concurrence. Final decisions were made and relayed to the State operations room and the EOF. For the most part, decisions are all "automatic" as dictated by specific events. The State does reserve the right to sign off on each decision. As such, decisions were in accordance with planned procedures.

The decision to administer KI was an exception to the procedures. At 3:26 p.m., LNEC received a call from the EOF requesting authorization to administer KI. Even though the exposure times and rates did not justify its administration, authorization was granted. State SOPs require consideration of KI use for emergency workers receiving an exposure of 10R. Maximum exposure was projected to be 4R at 5 miles after 2 hours. Based on these values, the authorization for KI administration appeared to be conservative.

A demonstration of ingestion pathway protective actions was limited by the relatively little data provided from field samples. Of the 13 samples collected, 12 had values below the EPA's protective action guidelines. The remaining sample was from Lake St. Joseph. The Lake had approximately twice the threshold value for prescribing protective actions. An excellent discussion was conducted concerning whether the lake was a source of drinking water, the level of fishing (for consumption), metabolic uptake of iodine nuclides, and recreation uses. Additional samples of lake water, tap water and fish were requested and collected.

Based on results of the other 12 samples, reentry into the affected area was allowed and shelter restrictions were relaxed. A press release was prepared and issued. A follow-up message regarding the lake was being prepared when it was learned that the lake was a backup water supply and that a deep well was the primary water source. Further, the additional water and fish samples proved to be at background.

The Agriculture Department provided briefings regarding field crops, dairy animals, and food processing areas. In each case, no problems with contamination could be expected or confirmed.

Reentry/recovery decisions were communicated promptly to Tensas Parish, the EOF, and the media center. However, hard copy press releases were prepared only through observer prompting and, for the most part, transmission was only simulated. Verbal decisions should be followed as quickly as possible with hard copy transmissions, and simulation of such kept to a minimum.

The scenario was adequate to drive the plume pathway portion of the exercise; however, it was not adequate to force the demonstration of the exercise objective to request or obtain Federal assistance. At best, the scenario minimally tested the State's resources.

Although ingestion pathway activities were appropriate for the Level of play, the scenario did not allow for adequate demonstration. As a result, objectives remain undemonstrated and another exercise emphasizing these objectives should be scheduled in the future.

DEFICIENCIES: None

AREAS REQUIRING CORRECTIVE ACTION:

7. Description: The authorization to administer KI was unwarranted based on the projected and sample data. The Department of Health policy and LNED headquarter's SOPs differ as to the threshold for administering KI. (NUREG-0654, II J.10.e,f.)

Recommendation:

A clear policy statement should be formulated regarding exposure levels warranting the authorization to administer KI. SOPs and the plan should then be revised to reflect the policy statement. Decision-makers should be trained in these resultant policy changes.

8. Description:

Different maps were used by State and local agencies than those used by Utility to identify protective action zones. (NUREG-0654, II, J.10.a)

Recommendation: All response organizations and Utility should assure consistency in identification of protective action areas by using identical zone designation maps.

9. Description:

Capability to successfully perform all required functions relating to Ingestion Pathway was not fully demonstrated. (NUREG-0654, II; I.10, I.11, J.9, J.11, M.1)

Recommendation:

LNED must redemonstrate Ingestion Pathway emergency response activities within the sixyear cycle for accomplishing all FEMA objectives.

AREAS REQUIRING CORRECTIVE ACTION: (cont'd)

10. Description:

Media releases which were verbally passed to the EOF, Tensas Parish and the Media Center were not always prepared in hard copy form and transmitted for verification of the verbal decision. (NUREG-0654, II., E)

Recommendation:

For future exercises, messages should actually be drafted and distributed and simulation of media release kept to a minimum. Additionally, telephone message logs should be maintained as record of communications in the executive room.

AREA RECOMMENDED FOR IMPROVEMENT:

Description:

The LNEED new concept of operations was implemented during the exercise but was not reflected in State plan.

Recommendation:

Plan should be updated to include LNEED concept of Operation as implemented.

2.1.2.1 LNED RADIOLOGICAL LABORATORY

The Lab is located in Baton Rouge at the LNED Headquarters. Generally the lab's operation was successfully demonstrated. This was the first time for official evaluation of the Lab. State Lab personnel, by actually receiving samples from the Field Monitoring Teams, identified the following suggestions for improvements for the sample taken by the field teams:

- ° Primary containers for samples should be labeled prior to filling
- ° Double bagging should be used for each individual sample
- ° Tape should be carefully placed in order to prevent its removing the label when peeled off.
- ° Samples taken should be surveyed by the field teams and tagged in some way that will warn lab personnel of high readings or gross contamination.

DEFICIENCIES: None

AREAS REQUIRING CORRECTIVE ACTIONS: None

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

No area was available for screening samples outside of the Lab.

Recommendation:

Consideration should be given to establishing a sample screening area outside the lab.

Description:

No portable instrumentation was available except that used for smear counting. Also, an additional person should be assigned with a portable GM detector with pancake probe to screen samples and check for contamination.

Recommendation:

Additional portable instrumentation should be made available along with staffing to carry out this activity.

2.1.3 FIELD MONITORING ACTIVITIES

2.1.3.1 FIELD TEAM STAGING AREA AND LNEED FIELD MONITORING CONTROL

NARRATIVE

Field Monitoring Team activities were evaluated from three different locations by Federal evaluators: (1) Field Team Staging Area; (2) LNEED staff at the EOF (communications); and (3) the three field teams who were deployed. Problems encountered and level of performances made it necessary to request a retesting of the activities of the field teams in a remedial drill.

The following is a narrative summary of the activities and findings which were evaluated at the Field Team Staging Area and LNEED Field Monitoring Controls.

The field monitoring team staging and development occurred at the LNEED trailer at the Tensas Parish Courthouse Complex. The field teams who were prestaged in Natchez, Mississippi were put on standby at the Alert classification at 8:14 p.m.; activated after SAE and arrived at the staging area between 10:30 a.m. and 11:00 a.m. The field team coordinator and dispatcher arrived at 10:45 a.m. FEMA Objectives (1,6) to mobilize, staff, and deploy field monitoring personnel in a timely manner were satisfactorily met.

Communications between the field monitoring teams and the field team coordinator and dispatcher were by radio. A repeater was set up to eliminate "dead spots" in the field. Communications between the field team coordinator and the LNEED personnel at the EOF were by commercial telephone. Based on the effective operation of the communication equipment, FEMA objective (#5) to demonstrate the ability to communicate with all appropriate locations, organizations, and field personnel was met.

The direction and control of the Field Monitoring Teams from the LNEED trailer were not satisfactory. at the EOF to the field monitoring teams via the field team coordinator and dispatcher. It is not likely that this existing arrangement would be improved within the LNEED trailer either by the addition of personnel to log messages or rearrangement of the space and equipment. This arrangement resulted in the field teams not being effectively tracked (one team was directed to the plume centerline and not immediately redirected out following monitoring) and inaccurate information being transferred between all three locations. Thus, FEMA Objectives (#3) relating to coordination of emergency activities; (#4) to demonstration of adequacy of facilities and displays to support emergency operations and (#36) demonstration of adequate communications procedures and methods were not met.

The objective to demonstrate the ability to continuously monitor and control emergency worker exposure was met. This was accomplished by requesting dosimeter readings approximately every 45 minutes. However, it was not clear who was responsible for recording emergency worker exposure either in the field, at the LNEED trailer or at the EOF.

Field Monitoring Team #2 was directed to take KI at approximately 3:15 p.m. This was based upon a directive from the LNEED personnel at the EOF. The objective to demonstrate the ability to supply and administer KI to a field team was met; however, it was unclear how the decision was reached to administer KI.

Based on a controller input, one field monitoring team was contaminated. This team returned to the Tensas Parish Courthouse complex to be monitored for contamination. The monitoring procedures were effectively carried out and proper equipment was used. Demonstration of adequate equipment and procedures occurred; this activity was simulated.

DEFICIENCIES:

11. Description:

Direction and control of the three field monitoring teams was unsatisfactory. The conveyance of information from the LNEED staff at the EOF to the Field Monitoring Teams via the field team coordinator and dispatcher was awkward and inefficient. This arrangement resulted in the field teams not being effectively tracked and inaccurate information being transferred between all three locations. This resulted in objectives 3, 4, and 36 not being met. (NUREG-0654, II, A.2.a., F.1.d, 1)

Recommendation: Consider directing the field monitoring teams by two-way radio from the EOF.

AREAS REQUIRING CORRECTIVE ACTIONS: None

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

It was not clear who was responsible for recording emergency worker exposure either in the field, at the LNED trailer or at the EOF.

Recommendation:

Assign an individual who would be responsible for recording emergency worker exposure readings.

2.1.3.2 FIELD MONITORING TEAMS

Narrative

There were three (3) field monitoring teams (staff of LNEDE) who participated in the exercise. Field monitoring activities were conducted as provided for in the exercise objectives and scenario. Problems encountered and level of performance made it necessary to request a retesting of these activities in a remedial drill. The drill must be conducted no later than June 4, 1986. The major deficiency related to the lack of control and direction of the three field monitoring teams as discussed in the previous section. The flow of information being communicated was cumbersome between the LNEDE EOF personnel and the field monitoring teams via the LNEDE field team staging area. This resulted in transfer of misinformation between the three locations and lack of control and coordination of the field teams. This situation can be remedied by having the appropriate LNEDE personnel with appropriate radio communications equipment direct the field teams from the EOF. The use of the Tensas Parish Courthouse Complex as a field staging area should be continued.

Mobilization of all three field teams was not from Baton Rouge. The teams were prepositioned in Natchez, Mississippi and deployed from St. Joseph. According to field team members, they could be activated at any time via telephone. Key management personnel also have radio pagers. Before deployment, the field teams were briefed on plant and meteorological conditions and the other pertinent information. Dosimeters were zeroed and distributed. A shift change was not demonstrated, however, back-up monitoring teams are available from the State and through mutual agreements with neighboring states.

Federal evaluators for teams #1 and #3 did not observe such things as equipment checks, exposure control (they did receive dosimeters and record cards) and work roles. These should be routine checks before going into the field.

Team #2 was directed to take a reading at a point in the plume. The team leader received the information and did not direct the team to a point out of the plume. Team #2 took initiative and immediately withdrew to non-radiation point. Team #2 is commended for its action, however, the team leader should be faulted for this oversight. Otherwise, Team #2 had adequate equipment and demonstrated competency with its use.

Team #3 seemed to have had the most problems identified. Several survey meters had not been calibrated recently, the ability to measure radio-iodine concentration was not demonstrated nor could they have determined the concentrations. Team #3 members were familiar with the region being monitored, however, sample locations were difficult to identify (lack of landmarks). No samples were collected by Team #3 so proper collection techniques were not demonstrated. Also, the Communicator did not appear to be familiar with the technical aspects of radiological monitoring.

All teams throughout the day were kept informed of plume location, meteorological and plant condition, as well as, dose projections. Teams also were equipped with anti-contamination suits, boots, gloves and respirators. Potassium iodate was provided for field team members in their kits. Dosimeters were read throughout the day.

DEFICIENCIES:

12. Description:

Direction and control of the three field monitoring teams was unsatisfactory. The conveyance of information from the LNED staff at the EOF to the Field Monitoring Teams via the field team coordinator and dispatcher was awkward and inefficient. This arrangement resulted in the field teams not being effectively tracked and inaccurate information being transferred between all three locations. This resulted in objectives 3, 4, and 36 not being met. (NUREG-0654, II, A.2.a., F.1.d, 1)

Recommendation:

Consider directing the field monitoring teams by two-way radio from the EOF.

AREAS REQUIRING CORRECTIVE ACTIONS:

13. Description:

Team #3 had survey meters and the air sampling pump which were not calibrated within the past year. (NUREG-0654, II, H.10., I.9)

Recommendation: Team #3 should ensure that their equipment is calibrated and calibration dates noted on the instruments.

14. Description: Team #3 did not have the capability to measure radio-iodine levels in the air. The appropriate calibration curves were not available with the field team or at LNED Base to determine concentration in uCi/cc. Or, they were not sufficiently trained to make the conversion. (NUREG-0654, II, I.9)

Recommendation:

Instrument calibration curves should be available with the field team and at LNED Base for converting cpm, to uCi, for the determination of radio-iodine concentration in the air. Additional training in this area is needed by field team #3.

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

It was not clear who was responsible for recording emergency worker exposure either in the field, at the LNED trailer or at the EOF.

Recommendation:

Assign an individual who would be responsible for recording emergency worker exposure readings.

Description:

Team #1 did not have a team briefing before deployment.

Recommendation: It is suggested that a plan be implemented to assure that all necessary subjects are included in the briefing before the teams are dispatched.

Description:

Teams #1 and #3 had briefing on plant conditions and meteorological conditions. These teams did not review such things as equipment checks, exposure control (they did receive dosimeters and record cards) and work roles. These should be routine checks before going into the field.

Recommendation: Teams #1 and #3 should have a check list to review all check-out procedures to be sure some are not overlooked during the rush to get dispatched to the field.

Description:

Although the maps for Team #3 were excellent, it was difficult to determine the correct location of monitoring points.

Recommendation:

A better method needs to be designed to identify radiological monitoring points.

AREAS RECOMMENDED FOR IMPROVEMENT: (cont'd)

Description:

Proper radio procedures for Team #3 were not followed during the exercise.

Recommendation: Additional training is necessary for the radio communicator on proper radio protocol.

Description:

The radio communicator was not knowledgeable in radiological health and monitoring. This sometimes caused some confusion for Team #3 in the transfer of information.

Recommendation:

Additional training is suggested in radiological health and terminology for the radio communicator.

2.1.4 EOF DOSE ASSESSMENT

Narrative

Facilities at the EOF were excellent. There were adequate space and equipment for all personnel in performing their assigned functions. There was even a separate room assigned to FEMA. This would be an excellent room for other Federal agencies or State personnel if a private meeting room was needed. Facilities were hardened to prevent entry of airborne contamination. Board space should be available for State personnel to post field team data so that it can be readily discussed with other State and Utility personnel.

Activation was adequate with exception of communication capabilities during the two hours while LNEB staff members are in route to the EOF. If a release occurs before they arrive they may not be able to get into the EOF. Both the administrative assistant and alternate were out sick; and consequently no information was recorded except for personal notes by each staff member.

Communication systems appeared to be adequate for LNEB except for communicating and coordinating with the field monitoring teams. (See Field Monitoring Activities) Four commercial lines were available to LNEB; they were effectively used. Noise in the EOF was a problem for the State personnel because of the air samples being taken. This was later corrected. The addition of a new LNEB base radio station for communicating and coordinating directly with the field monitoring teams from the EOF will greatly increase their capability to protect the public.

Protective actions were consistent with the utility's recommendations. The staff showed professionalism and dedication to their assigned responsibilities. They used good judgment in confirming data and recommending actions. Use of KI was not recommended except to meet the exercise objectives. This was inconsistent with the scenario which did not require KI for emergency workers. The approval of KI use is a little cumbersome because it must be approved by the Assistant Secretary for Environmental Quality before it is recommended for field monitoring teams. Field teams are in and out of the plume, and should be well informed of the consequences of taking KI. Its use should be optional based on available plant information or the recommendation for other emergency workers or selected population.

The scenario was not adequate to demonstrate the use of KI under realistic conditions. The scenario would have been more effective if both Mississippi and Louisiana personnel had been given a common problem. The radiological data for the scenario was not clearly defined in the copies distributed. Color coding was not included for Section A and B which was confusing. However, this was explained to controllers. The scenario did not include any deposition for the ingestion pathway portion of the exercise held on the second day. Therefore, the objectives relating to the ingestion pathway were not demonstrated and still remain to be demonstrated within the six-year cycle.

DEFICIENCIES:

15. Description:

No back-up communications exist at the EOF, and field teams cannot be coordinated from the EOF. Alternatives have been arranged to cover most contingencies but the field team coordination and information flow is cumbersome at best. (NUREG-0654, II, A.2.a., F.l.d., 1)

Recommendation:

LNED's radio (base station) should be installed in the EOF as soon as practical in order to provide for direct coordination of field teams and a radio relay for back-up communications.

AREAS REQUIRING CORRECTIVE ACTION: None.

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

Boards were not posted and field team information was not recorded in an observable form because field teams are not directed from the EOF and because full staff was not available.

Recommendation:

Posting of data would provide a common log of information for Louisiana, Mississippi and Utility coordinators to view. It would also assist in briefing incoming shift.

2.2 LOCAL EOCs AND SUPPORT ORGANIZATIONS

Parish participation included the Tensas Parish Emergency Operations Center, Media Center, the Madison Parish Hospital and Ambulance Service, and the Tallulah Reception Center. Detailed narratives and evaluations of individual performances are presented below under the appropriate location.

2.2.1 Tensas Parish

Narrative

Tensas Parish, Louisiana, lies within the 10mile EPZ of the Grand Gulf Nuclear Station. The EOC is located in the Parish Courthouse, St. Joseph. The Town of St. Joseph itself is located 12 miles from the plant. However, the Parish does have a mobile EOC which is being equipped for relocation should such become necessary in a real emergency.

Tensas Parish has agreed to assume the notification and evacuation responsibilities for the area of Madison Parish which lies within the EPZ. No permanent residents live in this area but transient population could be present during an emergency since the area is a designated hunting and fishing area. The sirens can be heard and the fish camps have been briefed in emergency response procedures.

2.2.2 TENSAS PARISH EOC

Narrative

Tensas Parish EOC regular staff members were on duty, as normal, when the Notice of an Unusual Event was received at 8:04 a.m. At 8:16 a.m. when the situation was upgraded to an Alert, the staff initiated call up of emergency response personnel and placed them on standby. In response at 9:30 a.m. to a Site Area Emergency, the Civil Defense Director activated those on standby; staffing was completed by 10:20 a.m.

The Parish EOC had no uncorrected deficiencies or unresolved problems from previous exercises. There were 20 objectives assigned to Tensas Parish for this exercise, 13 which specifically related to EOC activities. Nine of these objectives were met by this exercise. The three objectives relating to Ingestion Pathway emergency response capabilities could not be demonstrated due to inadequate scenario situations to warrant Parish responses.

Direction and leadership roles during the exercise were capably demonstrated by the Civil Defense Director and his new Assistant Coordinator. All staff members and volunteer employees capably and seriously accomplished their assigned duties with continuous enthusiasm for the exercise.

Staffing in addition to EOC staff consisted of Police Jury representatives, Fish and Wildlife Commission, State Highway Patrol, LOEP representatives, and local Departments of Health and Office of Family Security.

Security measures were not demonstrated due to unavailability of sufficient State Police workers. Their presence possibly would have curtailed the continuous flow of visitors in and out of the EOC. Because the room is small, it often became difficult to hear while conducting required activities. In future exercises, security measures should restrict entrance into the EOC to only those having a role in the on-going, day-today functions of the EOC or in the exercise itself. Unofficial observers should not be allowed in order that those who must be there will have sufficient operational space. Monitoring of personnel was promptly initiated and readings taken every 45 minutes using O-20R and O-200R dosimeters. Additionally, room readings were taken several times by the Director using a survey meter.

The EOC was adequately furnished with sufficient equipment. Back-up power is available if a primary power source failure occurs. All needed materials such as appropriate maps, status board and Parish plans were in place and used as necessary during the exercise. The status board was updated appropriately with all changes in status as soon as information was received. The Director informally briefed all participants on status, proposed parish actions, and accomplished actions as they occurred. Logs were maintained by the Director and other staff of all incoming and outgoing calls, as well as other actions taken.

The communications center is located in a separate building adjacent to the Courthouse where the EOC is located. Messages over the dedicated line are received here, recorded, then hand carried by a runner to the EOC for logging and posting of data to the status board.

Communication systems at the EOC consist of dedicated landline with police radio and commercial telephone as backups to the following: State EOC, other local EOCs, reception centers, neighboring states and utility. Conferencing on the dedicated landline can tie together LNED, LOEP, GGNS, Mississippi OEP, highway patrol, Claiborne County Mississippi Civil Defense, Port Gibson Mississippi Police, and Tensas EOC and sheriff's office. Omnidex is also available. Information can also be received via a radio backup and a telefax machine utilizing telephone lines.

The overall communications system is adequate to receive information, alert and warn the public, and communicate with emergency response forces in Tensas Parish. The Parish has had problems with one or two of the sirens self-starting. A new system has been approved for the Parish which will replace/supplement the current system. Demonstrations of radio communications capabilities reflect excellent training on all systems. Personnel is sufficient for extended communications operations when necessary.

The hard copy equipment jammed on Day 2 of the exercise creating a 15-minute delay in receiving hard copy information. However, telephone confirmation was initiated immediately.

Communications staff and the EOC staff very capably interpreted and clarified the confusing information received from GGNS regarding the emergency action level changes and updates. Messages came over the hotline which could possibly provide confusing PARs to novice or inattentive recipients. Messages were announced as follows:

Message #9 (11:09 a.m.) "...Evacuate to 2 miles in all sectors. Shelter to 5 miles Sectors A-B-C."

Message #10 (11:40 a.m.) "...Evacuate to 2 miles out. Shelter to 5 miles (no sectors given). New information in 10 minutes."

Message #11 (11:55 a.m.) "...Evacuate to 5 miles all sectors, shelter to 10 miles in A, B, C, N, P, Q."

In Message #11 Sector R was completely ignored. Although that sector is sparsely populated, it should not have been ignored in issuance of PARs since it would not be possible for a windshift from A, B, C to N, P, Q to escape effecting Sector R.

The Parish EOC staff, in placing the messages on the status board, correctly interpreted the intent of the messages and reflected the intended meanings on the board. The Director issued evacuation orders for Sector R as well as N, P, Q.

Most activities relating to siren sounding, dispatch of personnel for roadblocks and parish monitoring assignments were simulated. The Director explained the actions he was taking and those simulated for each problem arising during the event. The staff, led by the Director's recommendations, made each "controller-given" problem realistic by addressing other problems which they could foresee arising from the problem handed them. They either took or simulated creative responses to address these.

The Director personally met with representatives of the EBS Network to present his messages for broadcast. Sirens were simulated. They had been tested in November and 10 of 13 sirens worked correctly. They used this situation to bring into play the need to simulate sending mobile sirens into the areas where the 3 sirens had failed in November.

The identification of mobility-impaired persons had been updated earlier this year, and these were used for determining the number of vans to place on standby and later activate to transport the handicapped.

At the end of the plume exposure exercise, available staff, as well as the reception center Director, were placed on standby for participation in the Ingestion Pathway exercise to begin the following day.

Plume exposure activities necessary to demonstrate EOC capabilities were timely, efficiently and capably handled by the Director, Assistant Coordinator and their volunteer staff workers. No deficiencies or Areas Requiring Corrective Actions were identified.

INGESTION PATHWAY - DAY II

All Ingestion Pathway Objectives must be redemonstrated in a later exercise because of the inadequacy of the scenario for establishing Ingestion Pathway situations. However, the following summarizes Tensas Parish EOC performance on Day 2.

The EOC activities for Ingestion Pathway exercising began at 9:15 a.m on December 4 with a pre-briefing by the Director to update players on the status of the exercise. He then announced that he would be available in an advisory capacity and that leadership of Ingestion Pathway activities would be assumed by the new Assistant Coordinator. Testing of capabilities at the Parish level during Ingestion Pathway exercising involves four specific objectives: (1) communication with all locations, organizations, and field personnel; (2) Decision-making and coordination of emergency activities in the ingestion zone; and (3) Implementation of protective actions for Ingestion Pathway hazards; and (4) Recovery/Re-entry. Activities for these objectives from the EOC viewpoint were capably and effectively demonstrated to the limited degree possible using information and guidance provided by the State. Parish plan involvement in Ingestion Pathway states that the Parish will implement protective action recommendations according to the State plan and as determined necessary by the State.

Inadequacy of the scenario for providing both Ingestion zone situations and seriously affecting plume situations which would result in Ingestion Zone contaminants severely limited the participation of Tensas Parish.

Three EBS messages were issued by the Assistant Coordinator as they were received from LOEP. They were approved by him, and the Police Jury, then coordinated with Mississippi State prior to, or concurrent with, release for broadcast.

To the limited extent that the scenario and State decisions permitted, Tensas Parish demonstrated capabilities for Ingestion Pathway emergency responses. When the State notified the EOC that no contamination was found, the Assistant Director appropriately released all agencies and representatives on standby.

DEFICIENCIES: None

AREAS REQUIRING CORRECTIVE ACTIONS:

16. Description:

Capability to successfully perform Parish functions relating to Ingestion Pathway could not be demonstrated since they must implement decisions or recommendations made by State of Louisiana. (NUREG-0654, II, I. 10, I. 11, J. 9, J. 11, M. 1)

Recommendation:

Tensas Parish must redemonstrate Ingestion Pathway response activities within the six-year cycle for accomplishing all FEMA Objectives.

AREAS RECOMMENDED FOR IMPROVEMENT

Description:

A continuous flow of traffic into and out of the EOC Room caused much confusion, crowding within the small area, and disruption of activities.

Recommendation:

In future exercises or events, restrict the presence in the EOC to those who either have a required assignment at the EOC or who must conduct on-going day-to-day matters in the EOC room.

2.2.3 MEDIA CENTER

Narrative

Public information activities were conducted by the State of Louisiana and by Tensas Parish, Louisiana. For the State, the Office of Emergency Preparedness and the Nuclear Energy Division were represented by spokespersons. Normally the Governor's press secretary would be present, but was not for this exercise. The normal Tensas Parish public information officer (PIO) also was not present for this exercise. The parish was represented at news briefings by Parish Civil Defense officials.

The Media Center for this exercise was a single room located in the Parish Agricultural Extension office adjacent to the Parish courthouse (in which the Parish EOC is located). This is not the facility that would normally be used as the Media Center. If it were, it would be found seriously lacking in many of the qualities that an adequate Media Center should have. Parish plans call for using the courtroom and adjacent office space on the second floor of the Parish Courthouse as the Media Center during an actual emergency. However, it could not be used as a media center during this exercise as Court was in session. It apparently has several advantages over the facility that was used for this exercise, the most important being that it would permit PIOs to conduct their information gathering and verification activities in private rather than across the table from news reporters. Efforts should be made to use, for the next exercise, the Media Center that would be put into use in an actual emergency.

In general, the State and the Parish demonstrated their ability to gather pertinent information and disseminate it to the news media and the public. In doing so, they demonstrated either fully or partially four of the six exercise objectives that applied to this activity. There were rough spots, and at times there was confusion; but to their credit, the PIOs managed in each case to smooth out the rough spots and eliminate the confusion in a reasonable amount of time.

The Media Center was activated upon the arrival of the PIOs from LOEP and LNED. The State dispatched its representatives at the Alert stage, resulting in a timely activation of the Media Center. Mobilization was only partially demonstrated for this exercise because the State participants were dispatched from Natchez rather than from their normal work stations in Baton Rouge.

There were virtually no problems with the commercial telephones that served as the primary link between the Media Center and other emergency facilities. However, the State, Parish, and Utility should recognize the limitations of this system should it be called upon in an actual emergency and attempt to understand the implications of those limitations. For example, it is unlikely that this Media Center could function if reporters from other locations began calling in for information because they would tie up the few phones that are vital to the PIOs for incoming calls from other emergency facilities and for

outgoing calls to gather information prior to dissemination. PIOs in this facility are extremely dependent upon a commercial phone system that may not be reliable in a real emergency. There is a need for additional telephones to be available for State and Local PIOs. Also, reporters would need access to phones in a real emergency.

Despite some problems, the Media was briefed in a clear, accurate and timely manner. There was a problem at one point in describing protective actions. While the State PIOs announced protective action recommendations in terms of numbered areas (including one number which was not printed on the available maps), the Parish announced protective action recommendations in terms of lettered sectors (R, for example). This problem could have been avoided if: (1) the Parish and State PIOs consulted prior to the parish representative briefing the news media; (2) both parties described protective action areas in terms that are familiar to the public (in this case, the calendars distributed to the public identified these areas by number); and (3) the State refrain from announcing recommendations and announce only those actions that the Parish has decided to implement. (This is particularly important when you consider the confusion that could result from actions announced by the media prior to EBS messages being issued.) On a positive note, the PIOs took prompt steps to eliminate the confusion that had been created. They also did an admirable job of relating information and following it with an explanation of all technical terms they may have used.

As noted in the previous discussion, there was not in all cases consultation between the State and Parish PIOs prior to news briefings.

Although the facility is partly to blame (no private place for PIOs to confer), all should keep in mind the need to exchange information prior to briefings to avoid the possibility of conflicting information being released. There was no coordinated rumor control effort. Although State PIOs attempted to function to a limited extent in this capacity, it is not likely that their telephone numbers would be widely available in the event of a real emergency. In fact, it may be better that they are not, considering the limitations of the phone system and the number of phones. The only published numbers for members of the public to call for information are those published in the emergency preparedness calendars and information brochures. In Louisiana, those numbers are for LNEED in Baton Rouge and for Tensas Parish (the Sheriff's office). There seems to be some question about how or whether they would serve as rumor control phones during a radiological emergency at Grand Gulf. Although there may be no easy solution to this problem, efforts should be made to resolve it. The objective was not satisfactorily demonstrated for this exercise.

Based on observations and discussions with State and local representatives, there are many reasons to doubt whether a media center can work in St. Joseph or anywhere in Tensas Parish. If the State of Louisiana intends to operate a single-state media center (a joint center is preferable), then it may be advantageous to establish it in Baton Rouge where both the PIOs and the media would have adequate resources, phones, etc. This could be done without diminishing the Parish role in disseminating information.

FEMA Objectives 1, 4, 5, 24, 25 and 26 were applicable to the Media Center for this exercise. Objective 1 was partially met since the media representatives were dispatched from Natches rather than from normal work stations in Baton Rouge. Objective 4 was not met since the Facility used was not adequate. Objective 5 was met by State and Parish, however, concern should be directed toward the limitations of the communications system should it be used for an actual emergency. Objective 24 was met but concern should be directed to solving the problems which arose in describing Protective Actions (see Narrative for full description). Objective 25 was only partially met by State and Parish since coordination between PIO's was sought prior to only some news briefing (see Narrative for full discussion). Objective 26 was not met as there was no coordinated rumor control effort during this exercise. (see Narrative for discussion)

DEFICIENCIES: None

AREAS REQUIRING CORRECTIVE ACTION:

17. Description:

Facility used for the operation of Media activities is not adequate to allow successful conduct of Media Center.

Recommendation:

Efforts must be made to establish, and demonstrate use of a facility adequate for the successful conduct of media activities by State and Parish media officials.

18. Description:

Advance coordination between all PIO's was not obtained prior to all news briefings, although some limited coordination was obtained at times.

Recommendation:

To avoid contradictory or confusing releases of information by the media, coordination should be obtained prior to all issuances of all press releases.

19. Description:

There was no coordinated rumor control efforts although this was a stated objective for the exercise.

Recommendation:

Established procedures for Rumor Control should be reviewed, and determination made as to their adequacy.

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

Communication system, although it performed for this exercise, probably would not be adequate to allow for successful media telephone activities during an actual emergency.

Recommendation:

Concern should be directed toward increasing the number of telephones for use by State and Parish PIOs to improve communication capabilities at Media Center.

Description:

Although the media was briefed in a timely manner, descriptions of protective actions were not uniformly described by PIOs, Parish, and Utility.

Recommendation:

One uniform designation of affected areas should be used by all response organizations to eliminate confusing information being released to the public.

2.2.4 TALLULAH RECEPTION CENTER

Narrative

The Director of the Reception Center was placed on standby at 8:30 a.m. by a call from the Tensas Parish EOC Director. At 10:15 a.m. it was requested that the Center be activated. This was accomplished quickly and at 11:00 a.m. communications were established between the Reception Center and the EOC.

Activation and staffing were efficiently demonstrated. Agencies participating and their roles were: Civil Defense Director - overall coordination; Home Demonstration Council - monitoring and registration; Family Security - registration of decontaminated; Council on Aging Relocation; Public Health medical needs; High School students - evacuees.

Excellent participation was demonstrated by all voluntary groups. They were interested and followed instructions; however, all expressed desire for additional training for better performance. The Civil Defense Director demonstrated good leadership qualities even though he had been in his present position for only one week, and had no back-up coverage due to the resignation of his assistant one day prior to the exercise. He showed confidence in volunteers, was courteous, and expressed deep appreciation to all workers for their help. He realized he needs more help to enable him to give better leadership and guidance to the total reception/relocation process. He could also benefit from available training, especially Congregate Care Supervision. Prior to the next exercise, a request to the school for a select group of students to do role play, including specific needs to be addressed would challenge both registration and relocation processes. There also is a need for more tables and chairs.

The monitoring/decontamination volunteers were able to very effectively perform their duties, with only a brief training session.

The designation of a lead registrar would facilitate the paper flow and provide the Facility Manager with all necessary forms in an orderly manner. This procedure would be necessary for establishing the whereabouts of displaced families from a central location.

DEFICIENCIES: None

AREAS REQUIRING CORRECTIVE ACTION: None

AREAS RECOMMENDED FOR IMPROVEMENT:

Description:

The "evacuees" were unfamiliar with what they were to do at the reception center.

Recommendation:

In future exercises, pre-selection, good orientation and some rehearsal of "role-playing" problems of evacuees would benefit the whole process and provide opportunities for workers to test their responses in preparation for an actual emergency.

2.2.5 MADISON PARISH HOSPITAL AND AMBULANCE SERVICE

Narrative

The Madison Parish Hospital is located in Tallaluh, Louisiana, approximately 2 miles from Interstate 20. The hospital also operates the local ambulance (EMS) service. Since this hospital is currently undergoing renovation, it was necessary to simulate a large part of the medical exercise at the facility. The exercise play was also hampered by an actual emergency.

Based on the exercise evaluation, it was determined by the three Federal evaluators that the two FEMA Objectives 30 and 31 applicable to these medical activities could not be evaluated. Problems encountered and level of performance makes it necessary to request a retesting of the activities in a remedial drill. The drill must be conducted by June 4, 1986.

The following is a narrative summary of the findings of performance evaluated during the medical exercise.

A communication call was received by the hospital that two persons who were not contaminated were being brought to the hospital by local ambulance. According to the emergency room nurse, these persons were monitored both at the decontamination center and by the ambulance crew and were determined not to be contaminated. Since they were not contaminated prior to arrival or transport and due to the normal high activity in the hospital emergency room, these persons should have been eliminated from the exercise.

A second communication call was received by the emergency room staff that a third person who was contaminated and injured was being brought to the hospital. At first the ER nurse did not know who had sent the message and could not verify the message. She later was able to contact the person who had telephoned the message and was able to verify it.

The hospital did not have radiation warning placards. Hospital personnel stated that they would put paper over the area in which the contaminated person would be transported to the treatment room. No mention was made about the posting of placards or the roping off and securing of the area to prevent the spread of contamination. Hospital personnel who actually performed the decontamination were not wearing dosimeters. During the exercise, EMS and hospital personnel did not demonstrate dressing out in protective clothing because they did not have any.

When the injured contaminated person was transported into the hospital, proper contamination procedures were not established to prevent the possible spread of radiation. At the conclusion of the exercise, emergency room personnel did not demonstrate how they would exit the radiological management area used to treat the patient. Also, neither the vehicle which transported the contaminated patient nor the EMS personnel was surveyed. Also, security and decontamination of the vehicle was not demonstrated.

A post exercise meeting was held with persons participating in the exercise. At this time it was learned that personnel were not familiar in setting up a radiological management area and that they were not trained in exiting a radiation area.

DEFICIENCIES:

20. Description:

Both Emergency Medical Services (EMS) and hospital personnel need necessary radiological training in the proper handling of an injured, contaminated individual, including demonstration of procedures on how to decontaminate an injured contaminated patient and how to properly set up a radiological management room (including proper demonstration of "Hotline" and "Exit" procedures) etc. (NUREG-0654, II, 0.)

Recommendation:

Insure that proper training is received prior to remedial drill.

AREAS REQUIRING CORRECTIVE ACTIONS:

21. Description:

Proper demonstration EMS personnel following the removal of the contaminated patient. Proper security of the EMS vehicle should also be demonstrated along with proper disposal and security of the contaminated waste. (NUREG-0654, II, 0.)

Recommendation:

Insure that the above training and techniques are demonstrated at the remedial drill.

AREAS REQUIRING CORRECTIVE ACTIONS: (cont'd)

22. Description:

There was inadequate communications capabilities and coordination demonstrated between the Madison Civil Defense Director, EMS and hospital. (NUREG-0654, II, F.)

Recommendation:

Proper communication between all three parties should be established and coordinated before the remedial drill is conducted.

REMEDIAL ACTIONS FOR THE GRAND GULF EXERCISE

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>State Emergency Operations Center (EOC)</u></p> <p>DEFICIENCIES:</p> <p>1. <u>Description:</u></p> <p>The primary dedicated hot-line telephone systems does not allow the State of Louisiana opportunity to initiate conversation with the State of Mississippi or other affected parties. (NUREG-0654, II, F.1.b)</p> <p><u>Recommendation:</u></p> <p>Redesign dedicated phone system to allow for two-way or multi-contact capability.</p> <p>AREAS REQUIRING CORRECTIVE ACTION:</p> <p>2. <u>Description:</u></p> <p>Due to lack of participation (except for the LA Department of Agriculture)</p>				

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
State and Local
Corrective Actions
And Determination of
Adequacy or Inadequacy

Actual
Completion
Date

State EOC (cont'd)

2. Description: (cont'd)

of agencies having a
response assignment at
the State EOC, capabil-
ity for activation and
staffing could not be
determined adequate
(NUREG-0654, II, E.1,
E.2).

Recommendation:

Those agencies and per-
sonnel having a response
role at the State EOC
should be required to
participate during the
next exercise so that
determination of cap-
ability to mobilize and
staff can be established.

3. Description:

Message handling capabil-
ities were not success-
fully demonstrated due to
failure to actually send

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>State EOC (cont'd)</u></p> <p>3. <u>Description:</u> (cont'd)</p> <p>messages or at least to fully document their simulated dispatch and receipt methods (NUREG-0654, II, E.).</p> <p><u>Recommendation:</u></p> <p>All incoming and outgoing message handling procedures should be fully demonstrated or documentation carefully performed to verify the State's capability.</p> <p>4. <u>Description:</u></p> <p>A satisfactory back-up communications link between the State EOC and Tensas Parish has not been established (NUREG-0654, II, F.1).</p> <p><u>Recommendation:</u></p> <p>Capability should be established for initiation of calls by State EOC on</p>				

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>State EOC (cont'd)</u></p> <p>4. <u>Recommendation:</u> (cont'd)</p> <p>the dedicated line, or establishment of a two-way radio system.</p> <p>5. <u>Description:</u></p> <p>Capability to successfully perform State EOC functions relating to Ingestion Pathway was not successfully or full demonstrated. (NUREG-0654, II, I. 10, I. 11, J. 9, J. 11, M. 1)</p> <p><u>Recommendation:</u></p> <p>State EOC must redemonstrate Ingestion Pathway response activities within the six-year cycle for accomplishing all FEMA objectives.</p>				

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>State EOC (cont'd)</u></p> <p>AREAS REQUIRING CORRECTIVE ACTION:</p> <p>6. <u>Description:</u></p> <p>Decisions made by executive staff were not provided in briefing form to the Operations staff.</p> <p><u>Recommendation:</u></p> <p>Staff members should be kept knowledgeable through briefing on all activities at the LNEH Headquarters.</p> <p><u>State LNEH Headquarters</u></p> <p>AREAS RECOMMENDED FOR CORRECTIVE ACTION:</p> <p>7. <u>Description:</u></p> <p>The authorization to administer KI was unwarranted based on the projected and sample data. The Department of Health policy and LNEH Headquarter's</p>				

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p>State LNED Headquarters (cont'd)</p> <p>AREAS REQUIRING CORRECTIVE ACTIONS: (cont'd)</p> <p>7. (cont'd)</p> <p>SOPs differ as to the threshold for administering KI. (NUREG-0654, II, J. 10.e, f.)</p> <p><u>Recommendation:</u></p> <p>A clear policy statement should be formulated regarding exposure levels warranting the authorization to administer KI. SOPs and the plan should then be revised to reflect the policy statement. Decision-makers should be trained in these resultant policy changes.</p> <p>8. <u>Description:</u></p> <p>Different maps were used by State and Local agencies than those used by Utility to identify protective action zones. (NUREG-0654, II, J.10.a)</p>				

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>State LNED Headquarters</u> (cont'd)</p> <p><u>Recommendation:</u></p> <p>All response organizations and Utility should assure consistency in identification of protective action areas by using identical zone designation maps.</p> <p>9. <u>Description:</u></p> <p>Capability to successfully perform all required functions relating to Ingestion Pathway was not fully demonstrated. (NUREG-0654, II; I.10, I.11, J.9, J.11, M.1)</p> <p><u>Recommendation:</u></p> <p>LNED must redemonstrate Ingestion Pathway emergency activities within the six-year cycle for accomplishing all FEMA objectives.</p>				

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
State and Local
Corrective Actions
And Determination of
Adequacy or Inadequacy

Actual
Completion
Date

State LNEH Headquarters
(cont'd)

10. Description:

Media releases which were verbally passed to the EOF, Tensas Parish and the Media Center were not always prepared in hard copy form and transmitted for verification of the verbal decision. (NUREG-0654, II., E)

Recommendation:

For future exercises, messages should actually be drafted and distributed and simulation of media release State LNEH Headquarters kept to a minimum. Additionally, telephone message logs should be maintained as record of communications in the executive room.

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p>State LNE D Headquarters (cont'd)</p> <p><u>Field Team Staging Area and LNE D Field Monitoring Control</u></p> <p>DEFICIENCIES:</p> <p>11. <u>Description:</u></p> <p>Direction and control of the three field monitoring teams was unsatisfactory. The conveyance of information from the LNE D staff at the EOF to the Field Monitoring Teams via the field team coordinator and dispatcher was awkward and inefficient.</p>				

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>Field Team Staging Area and LNEC Field Monitoring Control</u> (cont'd)</p> <p>11. <u>Description:</u> (cont'd)</p> <p>This arrangement resulted in the field teams not being effectively tracked and inaccurate information being transferred between all three locations. This resulted in Objectives 3, 4, and 36 not being met. (NUREG-0654, II, A.2.a., F.1.d, 1)</p> <p><u>Recommendation:</u></p> <p>Consider directing the field monitoring teams by two-way radio from the EOF.</p>				

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction

State (S) and Local (L) Proposed Corrective Actions

Proposed Completion Date

FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy

Actual Completion Date

Field Monitoring Teams

DEFICIENCIES:

12. Description:

Direction and control of the three field monitoring teams was unsatisfactory. The conveyance of information from the LNEE staff at the EOF to the Field Monitoring Teams via the field team coordinator and dispatcher was awkward and inefficient. This arrangement resulted in the field teams not being effectively tracked and inaccurate information being transferred between all three locations. This resulted in Objectives 3, 4, and 36 not being met. (NUREG-0654, II, A.2.a., F.1.d, 1)

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
State and Local
Corrective Actions
And Determination of
Adequacy or Inadequacy

Actual
Completion
Date

Field Monitoring Teams (cont'd)

12. (cont'd)

Recommendation:

Consider directing the field
monitoring teams by two-way
radio from the EOF.

AREAS REQUIRING CORRECTIVE
ACTIONS:

13. Description:

Team #3 had survey meters
and the air sampling pump
which were not calibrated
within the past year.
(NUREG-0654, II, H.10.,
I.9)

Recommendtion:

Team #3 should ensure that
their equipment is calibra-
ted and calibration dates
noted on the instruments.

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
State and Local
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Actual
Completion
Date

Field Monitoring Teams (cont'd)

14. Description:

Team #3 did not have the capability to measure radio-iodine levels in the air. The appropriate calibration curves were not available with the field team or at LNED Base to determine concentration in uCi/cc. Or, they were not sufficiently trained to make the conversion. (NUREG-0654, II, I.9)

Recommendation:

Instrument calibration curves should be available with the field team and at LNED Base for converting cpm, to uCi, for the determination of radio-iodine concentration in the air. Additional training in this area is need by field team #3.

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
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Actual
Completion
Date

EOF Dose Assessment

DEFICIENCIES:

15. Description:

No back-up communica-
tions exist at the EOF,
and field teams cannot
be coordinated from the
EOF. Alternatives have
been arranged to cover
most contingencies but
the field team coordina-
tion and information
flow is cumbersome at
best. (NUREG-0654, II,
A.2.a., F.1.d., 1)

Recommendation:

LNED's radio (base sta-
tion) should be installed
in the EOF as soon as
practical in order to pro-
vide for direct coordina-
tion of field teams and
a radio relay for back-up
communications.

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction

State (S) and Local (L) Proposed Corrective Actions

Proposed Completion Date

FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy

Actual Completion Date

Tensas Parish EOC

AREAS REQUIRING CORRECTIVE ACTIONS:

16. Description:

Capability to successfully perform Parish functions relating to Ingestion Pathway could not be demonstrated since they must implement decisions or recommendations made by State of Louisiana. (NUREG-0654, II, I.10, I.11, J.9, J.11, M.1)

Recommendation:

Tensas Parish must redemonstrate Ingestion Pathway response activities within the six-year cycle for accomplishing all FEMA Objectives.

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction

State (S) and Local (L) Proposed Corrective Actions

Proposed Completion Date

FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy

Actual Completion Date

Media Center

AREAS REQUIRING CORRECTIVE ACTIONS:

17. Description:

Facility used for the operation of Media activities is not adequate to allow successful conduct of Media Center.

Recommendation:

Efforts must be made to establish, and demonstrate use of a facility adequate for the successful conduct of media activities by State and Parish media officials.

18. Description:

Advance coordination between all PIO's was not obtained prior to all news briefings, although some limited coordination was obtained at times.

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
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Actual
Completion
Date

Media Center (cont'd)

18. (cont'd)

Recommendation:

To avoid contradictory
or confusing releases of
information by the media,
coordination should be
obtained prior to all
issuances of all press
releases.

19. Description:

There was no coordinated
rumor control efforts al-
though this was a stated
objective for the exer-
cise.

Recommendation:

Established procedures for
Rumor Control should be
reviewed, and determina-
tion made as to their
adequacy.

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
State and Local
Corrective Actions
And Determination of
Adequacy or Inadequacy

Actual
Completion
Date

Madison Parish Hospital and
Ambulance Services

DEFICIENCIES:

20. Description:

Both Emergency Medical
Services (EMS) and hos-
pital personnel need
necessary radiological
training in the proper
handling of an injured,
contaminated individual,
including demonstration
of procedures on how to
decontaminate an injured
contaminated patient and
how to properly set up
a radiological manage-
ment room (including
proper demonstration of
"Hotline" and "Exit"
procedures) etc.
(NUREG-0654, II, 0.)

Recommendation:

Insure that proper train-
ing is received prior to
remedial drill.

Deficiencies and Areas Requiring Corrective Actions With FEMA/RAC Recommendations for Correction	State (S) and Local (L) Proposed Corrective Actions	Proposed Completion Date	FEMA Evaluation of State and Local Corrective Actions And Determination of Adequacy or Inadequacy	Actual Completion Date
<p><u>Madison Parish Hospital and Ambulance Service (cont'd)</u></p> <p>AREAS REQUIRING CORRECTIVE ACTIONS:</p> <p>21. <u>Description:</u></p> <p>Proper demonstration of surveying the ambulance vehicle (including patient compartment) and EMS personnel following the removal of the contaminated patient. Proper security of the EMS vehicle should also be demonstrated along with proper disposal and security of the contaminated waste. (NUREG-0654, II, 0.)</p> <p><u>Recommendations:</u></p> <p>Insure that the above training and techniques are demonstrated at the remedial drill.</p>				

Deficiencies and Areas
Requiring Corrective Actions
With FEMA/RAC Recommendations
for Correction

State (S) and Local (L)
Proposed Corrective Actions

Proposed
Completion
Date

FEMA Evaluation of
State and Local
Corrective Actions
And Determination of
Adequacy or Inadequacy

Actual
Completion
Date

Madison Parish Hospital
and Ambulance Service
(cont'd)

22. Description:

There was inadequate com-
munications capabilities
and coordination demon-
strated between the Madi-
son Civil Defense Director,
EMS and hospital. (NUREG-
0654, II, F.)

Recommendation:

Proper communication be-
tween all three parties
should be established and
coordinated before the re-
medial drill is conducted.

4 EVALUATION OF OBJECTIVES

4.1 SUMMARY OF FEMA OBJECTIVES REMAINING TO BE MET

Table 2 on the following pages provides listing of those FEMA objectives which according to the FEMA RAC Chairman, have not been satisfactorily met or tested and which should be incorporated into the exercise objectives on or by the sixth year of the six-year period in which all the objectives must be tested. These should be considered in the development of future exercise objectives; as well as those FEMA objectives which, although previously tested and satisfactorily demonstrated, must be tested and evaluated during any full participation exercise of offsite State and Local response capabilities.

TABLE 2 Summary of FEMA Objectives Remaining to be Met
Grand Gulf Nuclear Station As of February 27, 1985

FEMA Objectives	Jurisdiction
1. Demonstrate ability to mobilize staff and activate facilities promptly.	State (not met)
3. Demonstrate ability to make decisions and to coordinate emergency activities.	State (not met)
4. Demonstrate adequacy of facilities and displays to support emergency operations.	State/Local (not met)
5. Demonstrate ability to communicate with all appropriate locations, organizations and field personnel.	State (not met)
7. Demonstrate appropriate equipment and procedures for determining ambient radiation levels.	State (not met)
8. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} uCi/cc in the presence of noble gases.	State (not met)
9. Demonstrate appropriate equipment and procedures for collection, transport, analysis of samples of soil, vegetation, snow, water and milk.	State (partially met)
11. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data; and to determine appropriate protective measures based on PAGs and other relevant factors.	State (not met)
12. Demonstrate ability to implement protective actions for ingestion pathway hazards.	State (not met) Local (partially met)

TABLE 2 (cont'd)

FEMA Objectives	Jurisdiction
20. Demonstrate ability to continuously monitor and control emergency worker exposure.	Local (not met)
21. Demonstrate ability to make the decision, based on predetermined criteria, whether to issue KI to emergency workers and/or the general population.	State (not met)
22. Demonstrate ability to supply and administer KI, once the decision has been made to do so.	Local (not tested)
24. Demonstrate ability to brief the media in a clear, accurate and timely manner.	State/Local (not met)
25. Demonstrate ability to provide advance coordination of information released.	State/Local (not met)
26. Demonstrate ability to establish and operate rumor control in a coordinated fashion.	State/Local (not met)
29. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment and vehicles.	Local (not met)
30. Demonstrate adequacy of EMS transportation, personnel and procedures for handling contaminated individuals including proper decontamination of vehicle and equipment.	Local (not met)
31. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals.	Local (not met)
32. Demonstrate ability to identify need for, request, and obtain Federal assistance.	State (partially met)

TABLE 2 (cont'd)

FEMA Objectives	Jurisdiction
34. Demonstrate ability to determine and implement appropriate measures for controlled recovery and reentry.	State/Local (partially met)
36. Demonstrate the adequacy, operability and effective use of emergency communication equipment and the adequacy of communications procedures and methods.	State (not met)
38. Demonstrate capability to effectively process all incoming messages in a timely manner.	State (not met)

4.2 OBJECTIVES MET OR YET TO BE MET

Table 3 on the following pages provides elements, December 3-4, 1985 exercise objectives, jurisdictional responsibility, exercise dates, deficiencies and Areas Requiring Corrective Actions noted during past exercises, and dates on which objectives were met.

TABLE 3 FEMA OBJECTIVES TRACKING CHART - GRAND GULF NUCLEAR STATION

FEMA Objectives	NUREC-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
1. Demonstrate ability to mobilize staff and activate facilities promptly. [Objective for which capability should be demonstrated during each full participation exercise]	E.1, E.2 [S&L]	Demonstrate ability to mobilize staff and activate facilities promptly (1)	X	X	12/3-4/85	12/3/85 - #2 (State EOC)	2/27/85 Not Met 12-3-85	2/2785 12-3-85
2. Demonstrate ability to fully staff facilities and maintain staffing around the clock.	A.2.a., A.4 [S&L]		X	X			4-11-84	4-11-84
3. Demonstrate ability to make decisions and to coordinate emergency activities. [Objective for which capability should be demonstrated during each full participation exercise]	A.1.d., A.1.e., A.2.a. [S&L]	Demonstrate ability to make decisions and to coordinate emergency activities (2)	X	X	12/3-4/85	12/3/85 #11, 12 Field Monitoring Staging Area and Teams must be re-tested in Remedial drill #6 (State EOC)	Not Met 12-3-85	2/27/85 12-3-85

TABLE 3 Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
<p>4. Demonstrate adequacy of facilities, equipment, maps and displays to support emergency operations.</p> <p>[Objective for which capability should be demonstrated during each full participation exercise]</p>	J.10.a.b. C.1.a., H.2., H.3. [S&L]	Demonstrate adequacy of facilities and displays to support emergency operations (3)	X	X	12/3-4/85	Deficiencies on 11/3/81 & 1/26/83 12/3/85 #8 LNEH Hdqtrs. #17 Media Center	1/26/83 Not Met 12/3/85	Not Met 12/3/85 (Media) 2-27-85
<p>5. Demonstrate ability to communicate with all appropriate locations, organizations and field personnel.</p> <p>[Objective for which capability should be demonstrated during each full participation exercise]</p>	F. [S&L]	Demonstrate ability to communicate with all appropriate locations, organizations, and field personnel (4)	X X	X	12/3-4/85	12/3/85: #1, 4 (State EOC) #11, 12 (Field Team Staging Area and Teams) #15 (EOF Dose Assessment) #22 (Madison Hospital)	Not Met 12/3/85	12/3/85
<p>6. Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion.</p> <p>[Objective for which capability should be demonstrated during each full-participation exercise]</p>	I.8. [S&L]	Demonstrate ability to mobilize and deploy field monitoring teams in a timely fashion (S-5)	X	N/A	12/3-4/85		1/26/83 12/3/85	

TABLE 3 Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
7. Demonstrate appropriate equipment and procedures for determining ambient radiation levels. [Objective for which capability should be demonstrated during each full-participation exercise]	1.8., 1.11. [1.8-S&L] [1.11-S]	Demonstrate appropriate equipment and procedures for determining ambient radiation levels (S-6)	X	N/A	12/3/85	12-3-85 #13 (Field Monitoring Must be Retested in Remedial Drill)	Not Met 12/3/85	N/A
8. Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} $\mu\text{Ci/cc}$ in the presence of noble gases. [Objective for which capability should be demonstrated during each full-participation exercise]	1.9. [S]	Demonstrate appropriate equipment and procedures for measurement of airborne radioiodine concentrations as low as 10^{-7} $\mu\text{Ci/cc}$ in the presence of noble gases. (S-7)	X	N/A	12/3-4/85	12-3-85 #14 (Field Monitoring Teams) Must be retested in Remedial Drill	11/4/81 Not Met 12/3/85	N/A
9. Demonstrate appropriate equipment and procedures for collection, transport, analysis of samples of soil, vegetation, snow, water and milk. [Objective for which capability should be demonstrated during each full-participation exercise]	1.8. [S&L]	Demonstrate appropriate equipment and procedures for collection, transport, and analysis of samples of soil, vegetation, snow, water, and milk. (S-8)	X	N/A	12/3-4/85	Must be Retested in Remedial Drill since all teams did not take samples	Partially 12/3/85	

TABLE 3 Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
10. Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures based on PAGs, available shelter, evacuation time estimates and all other appropriate factors. [Objective for which capability should be demonstrated during each full-participation exercise]	I.10., J.10. [I.10-S] [J.10-S&L]	Demonstrate ability to project dosage to the public via plume exposure, based on plant and field data, and to determine appropriate protective measures based on PAGs, available shelter, evacuation time estimates and all other appropriate factors. (S-9)	X	N/A	12/3-4/85		1/26/83 12/3/85	N/A
11. Demonstrate ability to project dosage to the public via ingestion pathway exposure, based on field data; and to determine appropriate protective measures based on PAGs and other relevant factors.	I.10., I.11., J.11. [S]	Demonstrate ability to protect dosage to the public via ingestion pathway exposure based on field data; and to determine appropriate protective measures based on PAGs and other relevant factors (S-10)	X	N/A	12/3-4/85	12/2/85 #15 (State EOC) #9 (LNED Hqtrs)	Not Met 12/3/85	N/A
12. Demonstrate ability to implement protective actions for ingestion pathway hazards.	J.9., J.11. [J.9-S&L] [J.11-S]	Demonstrate ability to implement protective actions for ingestion pathway hazards. (S-11, L-5)	X	X	12/3-4/85	12/3/85 #5 (State EOC) #9(LNED Hdqtrs) #16(Tensas Par.)	Not Met 12/3/85	Partially Met 12/3/85

TABLE 3 Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
11. Demonstrate ability to alert the public within the 10-mile EPZ and disseminate an initial instructional message within 15 minutes. [Objective for which capability should be demonstrated during each full-participation exercise]	E.6., App. 3 [S&L]	Demonstrate the ability to alert the public within the 10-mile EPZ and disseminate an instructional message within 15 minutes. (L-6)	N/A	X	12/3-4/85		N/A	1/26/83 12/3/85
14. Demonstrate ability to formulate and distribute appropriate instructions to the public in a timely fashion.	E.5., E.7. [S&L]		X	X		11/4/81 Deficiency	1/26/88	1/26/83
15. Demonstrate organizational ability and resources necessary to manage an orderly evacuation of all or part of the plume EPZ. [Objective for which capability should be demonstrated during each full-participation exercise]	J.9., J.10.a, g. [S&L]	Demonstrate the organizational ability and resources necessary to manage an orderly evacuation of all or part of the plume EPZ. (S-12, L-7)	X	X	12/3-4/85	11/4/81 Deficiency	12/3/85	4/11/84 12/3/85

TABLE 3, Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
16. Demonstrate organizational ability and resources necessary to deal with impediments to evacuation, as inclement weather or traffic obstructions.	J.10.k. [S&L]		N/A	X			N/A	1/26/83
17. Demonstrate organizational ability and resources necessary to control access to an evacuated area.	J.10.j. [S&L]		N/A	X			N/A	11/4/81 1/26/83
18. Demonstrate organizational ability and resources necessary to effect an orderly evacuation of mobility-impaired individuals within the plume EPZ.	J.10.d. [S&L]		N/A	X			N/A	11/4/81
19. Demonstrate organizational ability and resources necessary to effect an orderly evacuation of schools within the plume EPZ.	J.9., J.10.g [S&L]		N/A	X			N/A	11/4/81

TABLE 3, Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
20. Demonstrate ability to continuously monitor and control emergency worker exposure. [Objective for which capability should be demonstrated during each full-participation exercise]	K.3.a, b. [S&L]	Demonstrate ability to continuously monitor and control emergency worker exposure. (S-13, L-8)			12/3-4/85	Deficiency - 1/26/83 12/3/85 # 21 Madison Hospital	Partially met 1/26/83 12/3/85	Partially met 1/26/83 2/27/85 Not Met 12/3/85
21. Demonstrate ability to make the decision, based on predetermined criteria, whether to issue KI to emergency workers and/or the general population.	J.10.f. [S&L]	Demonstrate ability to make the decision, based on predetermined criteria whether to issue KI to emergency workers and/or general population. (S-14)	N/A		12/3-4/85	12/3/85 - #7 (LNED Hdqtrs)	Not Met 12/3/85	N/A
22. Demonstrate ability to supply and administer KI, once the decision has been made to do so.	J.10.e. [S&L]	Demonstrate ability to supply and administer KI once the decision has been made to do so (S-15, L-9)	X	X	12/3-4/85		12/3/85	Not Tested 12/3/85
23. Demonstrate ability to effect an orderly evacuation of onsite personnel.	J.2. [S&L]		N/A	N/A			N/A	N/A

TABLE 3, Continued

FEMA Objectives	NUREC-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
24. Demonstrate ability to brief the media in a clear, accurate and timely manner.	G.3.a., G.4.a., [S&L]	Demonstrate ability to brief the Media in a clear, accurate and timely manner. (S-16, L-10)	X	X	12/3-4/85	Deficiency on 11/4/81 & 1/26/83 12-3-85 - #18 (Media Center)	Not Met 12/3/85	Not Met 12/3/85
25. Demonstrate ability to provide advance coordination of information released.	G.4.b. [S&L]	Demonstrate ability to provide advance coordination of information released. (S-17, L-11)	X		12/3-4/85	Deficiency - 11/4/81 12/3/85 - #18	Not Met 12/3/85 Media Center	2/27/85 Not Met 12/3/85
26. Demonstrate ability to establish and operate rumor control in a coordinated fashion.	G.4.c. [S&L]	Demonstrate ability to establish and operate rumor control in a coordinated fashion. (S-18, L-12)	X	X	12/3-4/85	Deficiency - 1/26/83 12/3/85 - #19 (Media Center)	Not Met 12/3/85	Not Met 12/3/85
27. Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees. [Objective for which capability should be demonstrated during each full-participation exercise]	J.12. [S&L]	Demonstrate adequacy of procedures for registration and radiological monitoring of evacuees. (L-13)	N/A	X	12/3-4/85		N/A	2/27/85 12/3/85

TABLE 3 (Cont'd)

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
28. Demonstrate adequacy of facilities for mass care of evacuees.	J.10.h [S&L]		N/A	X				1/26/83 (Winnsboro) 2/27/85 (Ferriday) 11/4/81 (Tallulah)
29. Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment and vehicles. [Objective for which capability should be demonstrated during each full-participation exercise]	K.5.a, b [S&L]	Demonstrate adequate equipment and procedures for decontamination of emergency workers, equipment and vehicles. (S-19, L-14)	X	X	12/3-4-85	12/3/85 - #20 (Madison Hospital) Must be Retested in Remedial Drill	12/3/85	2/27/85 Ferriday Recept. Ctr. Not Met 12-3-85 (Madison Hospital)
30. Demonstrate adequacy of EMS transportation, personnel and procedures for handling contaminated individuals including proper decontamination of vehicle and equipment [Objective for which capability should be demonstrated during each full-participation exercise]	L.4. [S&L]	Demonstrate adequacy of EMS transportation, personnel and procedures for handling contaminated individuals including proper decontamination of vehicle and equipment. (L-15)	N/A	X	12/3-4/85	12-3-85 #21 (Madison Hospital) Must be Retested in Remedial Drill	N/A	1/26/83 Not Met 12/3/85 (Madison Hospital)

TABLE 3, Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective December 3-4, 1985	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
11. Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals. [Objective for which capability should be demonstrated during each full-participation exercise]	L.1. [S&L]	Demonstrate adequacy of hospital facilities and procedures for handling contaminated individuals. (L-16)	N/A	X	12/3-4/85	Deficiency 4-11-84 12-3-85 - #20 (Madison Hospital) Must Be Retested by Remedial Drill	N/A	4/11/84 (Tensas Parish Hospital) Not Met 12/3/85 (Madison Hospt.)
12. Demonstrate ability to identify need for, request, and obtain Federal assistance.	C.i.a., b., [S]	Demonstrate ability to identify need for, request, and obtain Federal assistance. (S-20)	X	N/A	12/3-4/85		Not Tested 12/3/85	N/A
13. Demonstrate ability to estimate total population exposure.	H.4. [S]	Demonstrate ability to estimate total population exposure. (S-21)	X	N/A	12/3-4/85		12/3/85	N/A
14. Demonstrate ability to determine and implement appropriate measures for controlled recovery and reentry.	H.1. [S&L]	Demonstrate the ability to determine and implement appropriate measures for controlled recovery and re-entry. (S-22, L-17)	X	X	12/3-4/85	12/3/85 - #5. (State EOC) #9. (LNEH Hqtr) #16 (Tensas Par. EOC)	Not Met 12/3/85	11/4/81 Partially Tested (no re-entry) Partially Met 12/3/85

TABLE 3, Continued

FEMA Objectives	NUREG-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
15. Demonstrate the ability to effectively call upon and utilize outside support agencies when local capabilities are exceeded.	C.4. [S&L]		X	X			11-4-81	1/26/83
16. Demonstrate the adequacy, operability and effective use of emergency communication equipment and the adequacy of communications procedures and methods. [Objective for which capability should be demonstrated during each full-participation exercise]	F.1. [S&L]	Demonstrate the adequacy, operability and effective use of emergency Communications procedures and methods. (S-23, L-18)	X	X	12/3-4/85	12-3-85-#1,4 (State EOC) #11, 12 (Field Tm. Staging Area and Teams) #15 (EOF Dose Assessment) #22 (Madison Hospital)	Not Met 12/3/85 2-27-85	Not Met 12/3/85 (Madison Hospt.)
17. Demonstrate ability to monitor Emergency Classification levels continuously and implement procedures in a timely manner. [Objective for which capability should be demonstrated during each full-participation exercise]	D.4. [S&L]	Demonstrate the ability to monitor emergency classification levels continuously and implement procedures in a timely manner. (S-24, L-19)	X	X	12/3-4/85	12-3-85/#1,4 (State EOC) #11, 12 (Field Tm. Staging Area & Teams) #15 (EOF Dose Assessment) #22 (Madison Hospital)	1/26/83 12/3/85	1/26/83 2/27/85 12/3/85

TABLE 3, Continued

FEMA Objectives	MUREC-0654 Reference	Exercise Objective	Jurisdictional Responsibility		Date of Exercise	Deficiency/Area Requiring Corrective Action (by Tracking No.)	Date Objective Met	
			State	Local			State	Local
38. Demonstrate capability to effectively process all incoming/outgoing messages in a timely manner, including the documenting of both actual and simulated messages.	E [S&L]	Demonstrate the capability to effectively process all incoming messages in a timely manner. (S-25)	X	X	12/3-4-85	12/3/85 - #8 (State EOC) #10(LNED Headqrts)	Not Met 12/3/85	2/27/85 12/3/85
39. Demonstrate that authority exists in activating a reception center (as necessary) in a timely manner. [Objective for which capability should be demonstrated during each full-participation exercise]	A.2.a, A.3 [S&L]	Demonstrate that the authority exists in activating a reception center (as necessary) in a timely manner. (L-20)	N/A	X	12/3-4/85		N/A	1/26/83 - Winnsboro; 4/11/84 & 12/3/85 - Tallulah; 2/27/85 - Ferriday 12-3-85 (Tallulah Recept. Ctr.)