UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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July 22,2002

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SUBJECT: GRAND GULF NUCLEAR STATION - FINAL EXERCISE REPORT

Dr. Mr. Eaton:

Enclosed is a copy of the Federal Emergency Management Agency's (FEMA) Region VI exercise evaluation report of the March 6, 2002, emergency preparedness exercise at the Grand Gulf Nuclear Generating Station. The exercise was originally scheduled for September 19, 2001, but was granted a one time scheduler exemption due to the events of September 11, 2001.

The report indicates that FEMA VI observed no deficiencies and one area requiring corrective action (ARCA) during the exercise.

The purpose of this letter is to transmit to you the results of the FEMA VI evaluation of the emergency exercise. No response to the Nuclear Regulatory Commission is required.

If you have any further questions, please contact Ryan E. Lantz of my staff at (817) 860-8158.

Sincerely,

/RA/

Gail M. Good, Chief
Plant Support Branch
Division of Reactor Safety

Docket: 50-416
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Enclosure:
FEMA Final Exercise Report
of March 6, 2002

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FINAL

EXERCISE REPORT

GRAND GULF NUCLEAR STATION

Licensee:	**Entergy Operations, Inc.**
Exercise Date:	**March 6, 2002**
Report Date:	**July 16, 2002**

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI

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I. EXECUTIVE SUMMARY

On March 6, 2002, a biennial Radiological Emergency Preparedness (REP) exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Grand Gulf Nuclear Station (GGNS). The exercise, which was originally scheduled for September 19, 2001, was granted a scheduler exemption by the Nuclear Regulatory Commission following the events of September 11, 2001. The Louisiana portion of the Grand Gulf exercise was evaluated by Region VI of the Federal Emergency Management Agency (FEMA). The purpose was to assess the level of preparedness of the State and local responders to react to a simulated radiological emergency at GGNS. It was held in accordance with FEMA's policies and guidance concerning the implementation of State and local radiological emergency preparedness plans and procedures.

The qualifying exercise to satisfy 44 CFR 350 requirements for Nuclear Regulatory Commission (NRC) licensing to operate the facility was conducted in November 1981. Including the exercise on March 6, 2002, there have been 13 FEMA evaluated exercises plus numerous drills conducted since that time.

FEMA Region VI wishes to acknowledge the dedicated participation of many individuals in the State of Louisiana, Tensas Parish, and Winnsboro Reception Center. Many of these participants are paid civil servants whose full-time job is to protect the health and safety of the public within the jurisdictions they serve. There are many more who are volunteers that make themselves available to perform a service to the community in which they live.

This report contains the final written assessment of the Louisiana portion of the biennial exercise including the identification of any exercise issues and recommendations for corrective action where appropriate.

All Louisiana State and local organizations, except where noted in this report, demonstrated an adequate knowledge of the emergency plans and procedures and properly implemented them. There were no Deficiencies and one Area Requiring Corrective Action (ARCA) identified during this exercise.

II. INTRODUCTION

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all off-site nuclear power facility planning and response. The FEMA activities are conducted pursuant to 44 CFR Parts 350, 351 and 352. These regulations are a key element in the REP Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

The 44 CFR 350 establishes the policies and procedures for FEMA's initial and continued approval of State and local government radiological emergency planning and preparedness for commercial nuclear power plants. This approval is contingent, in part, on State and local governments' participation in joint exercises with licensees.

FEMA's 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, ensuring 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.

- Responding to requests by the Nuclear Regulatory Commission (NRC) pursuant to the Memorandum of Understanding between the NRC and FEMA dated June 17, 1993 (Federal Register, Vol. 58, No. 176, September 14, 1993); and

- 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)
  - U.S. Department of Interior (DOI)
  - U.S. Food and Drug Administration (FDA)

The findings presented in this report are based on the Federal evaluation team's assessment of the participants' response to a simulated radiological incident at the Grand Gulf plant that affected the off-site population. The Region VI RAC Chairman made the final classification of any issues identified and the Regional Director approved the report.

The criteria used in the evaluation process are contained in:

- NUREG-0654, FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (November 1980);

- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual" (September 1991); and

- FEMA-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology (EEM)" (September 1991).

Section III of this report entitled "Exercise Overview" presents basic information and data relevant to the exercise. This section contains a description of the emergency planning zone, a listing of all participating jurisdictions which were evaluated and a tabular presentation of the times of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents basic information on the demonstration of applicable exercise objectives at each jurisdiction or functional entity in a jurisdiction-based format. This section also contains descriptions of all Deficiencies and ARCAs assessed during the exercise and recommended corrective actions, as well as descriptions of ARCAs assessed during previous exercises and the current status of each.

III. EXERCISE OVERVIEW

This section contains data and basic information relevant to the exercise to test the off-site response capabilities in the area surrounding the Grand Gulf Nuclear Station. This section of the report includes a description of the EPZ, a listing of all participating jurisdictions which were evaluated and a tabular presentation of the times of actual occurrence of key exercise events and activities.

A. EPZ Description

The area within the GGNS EPZ involves both the State of Louisiana and the State of Mississippi. The most prominent natural feature in the EPZ is the Mississippi River, which runs from the north to the southwest and defines the border between Louisiana and Mississippi. The GGNS EPZ involves Tensas Parish in Louisiana and Claiborne County in Mississippi.

The only incorporated city within 10 miles of GGNS is Port Gibson, Mississippi; however, the EPZ extends more than 10 miles from the site to include the towns of Newellton and St. Joseph in Louisiana and Alcorn State University in Mississippi. The Grand Gulf Military Park borders the nuclear station site boundary to the north. The small community of Grand Gulf is 1 1/2 miles north of the nuclear station, and Lake Bruin State Park in Louisiana is approximately 10 miles west of the site.

The population of the entire EPZ is 15,126 persons (combined resident and transient populations), most of whom live in Port Gibson and Alcorn State University in Mississippi, and St. Joseph and Newellton in Louisiana. With the exception of schools and churches, there are few other special facilities. There is one hospital, two nursing homes and three incarceration facilities.

The major roadways in the Louisiana portion of the EPZ include U.S. Highway 65 and LA Highways 128 and 605. In Mississippi, the major roadways are U.S. Highway 61, MS Highways 18, 547, and the Natchez Trace Parkway, which is a part of the National Park Service.

The GGNS EPZ is divided into 16 Protective Action Areas (PAA) defined by geographical boundaries for the purpose of emergency response planning and the implementation of protective actions. The only PAAs in Louisiana are numbered 8 through 12 on the EPZ map.

B. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Louisiana portion of the Grand Gulf Nuclear Station exercise:

State of Louisiana

Louisiana Department of Environmental Quality (LDEQ)
Louisiana Office of Emergency Preparedness (LOEP)
Louisiana Department of Health and Hospitals (LDHH)

Risk Jurisdictions

Tensas Parish

Support Jurisdictions and Organizations

Winnsboro Reception Center, Franklin Parish

C. Exercise Timeline

Table 1 on the following page presents the times at which key events and activities occurred during the Grand Gulf exercise held on March 6, 2002.

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: March 6, 2002, Grand Gulf Nuclear Station

Emergency Classification Level or Event	Time Declared By Utility	Time That Notification Was Received or Action Was Taken				
		LA STATE EOC	LDEQ @ SEOF	EMERGENCY NEWS MEDIA CENTER	TENSAS PARISH EOC	EAS
Unusual Event						
Alert	8:35 a.m.	8:44 a.m.	9:30 a.m.	9:24 a.m.	8:44 a.m.	
Site Area Emergency	10:45 a.m.	10:55 a.m.	11:00 a.m.	10:59 a.m.	10:55 a.m.	
General Emergency	11:28 a.m.	11:41 a.m.	11:29 a.m.	11:37 a.m.	11:43 a.m.	
Rad. Release Started	10:35 a.m.	11:03 a.m.	11:00 a.m.	10:58 a.m.	10:55 a.m.	
Rad. Release Terminated						
Facility Declared Operational		8:59 a.m.	11:12 a.m.	9:37 a.m.	9:30 a.m.	
Declaration of State of Emergency				10:55 a.m.	9:10 a.m.	
Exercise Terminated		2:45 p.m.	2:45 p.m.	2:46 p.m.		
Early Precautionary Actions – School evacuation St. Joseph					10:02 a.m.	
First Protective Action Decision **Shelter:** Remainder of EPZ **Evacuate:** 2 mile; 5 mile-KLM			11:34 a.m.		10:56 a.m.	
First Siren Activation				11:50 a.m.	12:10 p.m.	
First EAS Message				8:44 a.m.	12:10 p.m.	12:10 p.m.
Second Protective Action Decision Evacuate 5 mi radius & 10 mi downwind, sections 10, 11, 12			12:17 p.m.		12:35 p.m. 12:59 p.m.	
Second Siren Activation					1:10 p.m.	
Second EAS Message				11:05 a.m.	1:10 p.m.	
KI Administration Decision: **2 mile** **5 mile**		12:22 p.m. 1:00 p.m.	12:13 p.m.	12:50 p.m.	1:13 p.m.	

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the exercise to test the off-site emergency response capabilities of State and local governments in the Louisiana portion of the 10-mile EPZ surrounding GGNS.

Each jurisdiction and functional entity was evaluated on its demonstration of criteria contained in exercise objectives delineated in FEMA-REP-14, Radiological Emergency Preparedness Exercise Manual, dated September 1991. Detailed information on the exercise objectives and the extent-of-play agreement for this exercise is found in Appendix 3 of this report.

A. Summary Results of Exercise Evaluation

The matrix presented in Table 2 on the following page presents the status of all exercise objectives from FEMA-REP-14, which were scheduled for demonstration during this exercise at all participating jurisdictions and functional entities. Exercise objectives are listed by number and the demonstration status of those objectives is indicated by the use of the following letters:

M - Met (No Deficiency or ARCAs assessed and no unresolved ARCAs from prior exercise)

D - Deficiency assessed

A - ARCAs assessed or unresolved ARCAs from previous exercises

N - Not Demonstrated (Reason explained in subsection B)

TABLE 2. SUMMARY OF EXERCISE RESULTS

DATE AND SITE: March 6, 2002, Grand Gulf Nuclear Station

JURISDICTIONAL OR FUNCTIONAL ENTITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
STATE OF LOUISIANA																																	
STATE EOC	M	M	M	M					M					M																			
LDEQ at GGNS EOF	M	M	M	M	M		M							M																			
EMERGENCY NEWS MEDIA CENTER	M	M	M	M								M	M																				
RISK JURISDICTIONS																																	
TENSAS PARISH EOC	M	M	M	M	M				M	M	M			M	M	M	M					M	M										
T/ACP	M			M	M												M																
SCHOOL BUS DRILL	M			M	M											M																	
MON/DECON STATION	M			M	M																	M											
SUPPORT ORGANIZATIONS																																	
WINNSBORO RECEPTION CENTER	M			M	M													A	M											M			
KNOE RADIO STATION											M																						

LEGEND: M = Met (No Deficiencies or ARCAs Assessed) **A = ARCA Assessed**
D = Deficiency Assessed **N = Not Demonstrated**

B. Status of Jurisdictions Evaluated

This section provides information on the evaluation of each participating jurisdiction and functional entity, in a jurisdiction-based format. Presented below is a definition of the terms used in this subsection relative to objective demonstration status.

- **Met** - Listing of the demonstrated exercise objectives under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.

- **Deficiency** - Listing of the demonstrated exercise objectives under which a Deficiency was assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

- **Areas Requiring Corrective Action** - Listing of the demonstrated exercise objectives under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises that remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.

- **Not Demonstrated** - Listing of the exercise objectives which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.

- **Prior Issues - Resolved** - Description of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.

- **Prior Issues - Unresolved** - Description of ARCAs assessed during prior exercises which were not resolved during this exercise. Included is the reason the ARCAs remain unresolved and recommended corrective action to be demonstrated before or during the next biennial exercise.

The following are definitions of exercise issues which are discussed in this report.

- A **Deficiency** is defined in FEMA-REP-14 as "an observed or identified inadequacy of organizational performance in an exercise that could cause a finding that off-site emergency preparedness is not adequate to provide reasonable assurance that appropriate protective measures can be taken in the event of a radiological emergency to protect the health and safety of the public living in the vicinity of a nuclear power plant."

- An **ARCA** is defined in FEMA-REP-14 as "an observed or identified inadequacy of organizational performance in an exercise that is not considered, by itself, to adversely impact public health and safety."

FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise issues on a nationwide basis.

The identifying number for Deficiencies and ARCAs includes the following elements, with each element separated by a hyphen (-).

- **Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.
- **Exercise Year** - The last two digits of the year the exercise was conducted.
- **Objective Number** - A two-digit number corresponding to the objective numbers in FEMA-REP-14.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.
- **Exercise Issue Identification Number** - A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

1. STATE OF LOUISIANA

1.1. STATE EMERGENCY OPERATIONS CENTER

The Louisiana Office of Emergency Preparedness (LOEP) Emergency Operations Center, is located downtown Baton Rouge at 625 N. 4th. For the record, the EOC will move to a new facility at 7667 Independence Blvd. in the spring of 2002. The current facility is adequate to support emergency operations on a continuous 24-hour basis. Copy machines, fax machines, computers, restrooms, an equipped kitchen, and backup power are available. Plans and Procedures were available in the EOC. A Plume pathway EPZ map with sectors was utilized and a status board was posted with current information as each new notification message was received from Grand Gulf.

Regular security was provided during the exercise. If an event requires increased security, the National Guard would be called. The food team is also from the National Guard. Prison inmates perform building maintenance and when 24-hour staffing occurs, their support is increased as necessary.

The primary communication system consists of 100 telephones. There are two backup systems: 800 MHz radios and Skycell satellite phones. Every parish is equipped with the Skycell satellite system. A dedicated hotline telephone linked the utility, parishes, and the LOEP. The EOC has video conferencing capability. The State EOC also uses the Amateur Radio Emergency Services (ARES). The two 350 KW backup generators are tested every Tuesday. There is an uninterruptible power source (UPS) connected to all computers so there is no break in service in the event of a power failure. The telephones have a separate battery backup system. There were no delays or malfunctions with communication equipment.

A telephone call was received in the Communications Center on the dedicated hotline at 8:44 a.m. for the **ALERT** Emergency Classification Level (ECL) declaration made at 8:35 a.m. It was confirmed by phone at 8:53 a.m. The LOEP staff was paged at 8:55 a.m. to report to the EOC. By 8:59 a.m., the EOC was operational. A call down began at 8:56 a.m. to the agencies on the Alert roster and was completed by 9:22 a.m. The **SITE AREA EMERGENCY (SAE)** ECL was declared at 10:45 a.m. and received at 10:55 a.m.; the **GENERAL EMERGENCY (GE)** ECL was declared at 11:28 a.m. and received at 11:41 a.m. Staff briefings followed immediately.

LOEP staffing consisted of the Assistant Director, Finance Officer, Operations Officer (OPS) and Assistant OPS Officer, Radiological Officer, Radiation Coordinator, two Public Information Officers (PIOs), an Information Technology Technician administrative support personnel, and three communications technicians. One communications technician served as a runner to promptly copy and distribute messages. The EOC was also staffed by: Louisiana State Police(LSP), Department of Health and Hospitals (DHH), Louisiana Department of Environmental Quality (LDEQ), and a Grand Gulf technical representative.

The communications center completed their usual Wednesday communication checks with both Grand Gulf and River Bend nuclear plants. The weekly 800 MHz radio system roll call to the LSP Troops was also completed. There are 9 troops covering the 64 parishes, with a designated number scheduled for each Wednesday. Radio checks were made to the Grand Gulf risk parish, Tensas; support parishes Concordia, Franklin, and Madison; and to ingestion parishes Catahoula, East Carroll, and Richland. The Skycell system was also tested. In addition to the Grand Gulf graded exercise activity in the communications center, River Bend was having a drill. The staff did an excellent job of handling the increased workload.

The Public Information (PI) team wrote four news releases, of which three were released. They verified all information for clarity and accuracy. Each was reviewed and signed by the Assistant Director before being sent to the Joint Information Center (JIC) for release to the media.

Direction and control was excellent with good teamwork demonstrated. There were frequent briefings to the staff. LDEQ, DHH, and the Grand Gulf technical representative were consulted and thorough discussions preceded decisions. The Assistant Director made a decision to call the Prison Warden and request that the inmates in Tensas Parish be relocated to an area outside the EPZ. The Duty Log was maintained in an excellent manner by the OPS Officer using the E-Team System. All actions were logged and three Situation Reports (SITREPs) were completed during the exercise. The system is web-based and provides a continuous incident status report to all agencies that have password access.

The DHH is responsible for making the decision to recommend the use of potassium iodide (KI) in Louisiana. However, a decision was made to accept the Protective Action Recommendation (PAR), which affected sectors K, L, and M. When the wind shifted, sectors L, M, and N were then affected. The State was proactive in discussing the use of KI for emergency workers, institutionalized and homebound special populations. LOEP Assistant Director, representatives from LDEQ and DHH began their discussion at declaration of SAE and continued as new information on dose projections became available. Following the **GE** declaration at 11:52 a.m., it was determined that authorizing the use of KI was not indicated at that time. Additional information from the plant indicated that dose projections were changing, which prompted DHH to authorize KI for emergency workers within the 2-mile EPZ at 12:22 p.m. Changing conditions prompted new recommendations at 1:00 p.m., and DHH authorized ingestion of KI for emergency workers out to 5 miles.

Message #10 from Grand Gulf, notification of exercise termination, was received at 2:45 p.m.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 2, 3, 4, 9 and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.2. LDEQ AT GRAND GULF EOF

In accordance with the extent-of-play agreement, the Louisiana Department of Environmental Quality (LDEQ) staff that would deploy to the Grand Gulf Nuclear Station (GGNS) Emergency Operations Facility (EOF) were pre-positioned at the Ramada Inn located in Natchez, MS. At 9:12 a.m., initiated by controller inject to activate their procedures, the Senior EOF Liaison (SEOFL) provided a deployment and safety briefing to the staff. This briefing included instructions to follow plans and procedures; drive safely; have proper dosimetry; read and record direct-reading dosimeters (DRD) every 30 minutes; have potassium iodide (KI) available; perform communications and equipment checks prior to deploying; and practice the principle of "As Low As Reasonably Achievable (ALARA)," not only for all possible radiation exposure activities, but for all activities that involve risk. This briefing also emphasized that if an individual's direct-reading dosimeter registered 150 mR, they were to notify the team leader and if it registered 750 mR, he/she was to leave the area immediately. Each member of the LDEQ EOF team was assigned a direct-reading dosimeter and a bottle of KI tablets. In addition, each of the two deploying vehicles was assigned a CDV-718 radiation survey instrument (calibrated 11/02/01, due for calibration 11/02/02), a hand-held two-way radio, and a cellular telephone. The hand-held two-way radio and the cellular telephone provided back-up communications to the vehicle mounted two-way radios.

At 9:30 a.m., LDEQ Headquarters (HQ) notified the pre-positioned group by pager and returned telephone call that an **ALERT** had been declared at GGNS at 8:35 a.m. The team deployed at 9:33 a.m. One individual deployed to the Emergency News Media Center and the remainder of the pre-positioned team went to the EOF. This LDEQ EOF team consisted of the SEOFL, Accident Assessment Coordinator (AAC), Dose Assessment Coordinator (DAC), Logistics Coordinator (LC), and the Technical Logistics Coordinator (TLC). Since field team activities were not demonstrated during this exercise, the Field Team Coordinator (FTC) did not participate.

A **SITE AREA EMERGENCY (SAE)** was declared at 10:45 a.m. The team arrived at the EOF at 10:58 a.m., and all LDEQ EOF activities and functions were fully operational at 11:12 a.m. Upon arrival at the EOF, the SEOFL received a status briefing by the EOF Director.

Facilities at the EOF were sufficient to support emergency operations. There was adequate space and supplies. Computers, telephones, and fax machines were available. Maps were available to display the plume pathway emergency planning zone (EPZ) with sectors and emergency planning sections, evacuation routes, reception centers, congregate care centers, radiological monitoring points, and population by evacuation sectors. Status boards for displaying emergency classification levels (ECLs), weather information, protective action recommendations (PARs), protective action decisions (PADs), field radiological monitoring team (FRMT) data, and radiological release information were also available. Status boards were updated in a timely manner. The licensee controlled access to the facility.

The SEOFL provided direction and control to the LDEQ EOF staff. He provided leadership and actively involved staff in decision-making and counseled frequently with the AAC and the EOF Director. He frequently coordinated with the Secretary of the DEQ Designee located in the State Emergency Operations Center (SEOC), the Tensas Parish Emergency Manager, LDEQ's Technical Spokesperson at the Joint Information Center, the State of Mississippi staff, and others. He provided for retention of logs for incoming and outgoing messages. The LC did an exemplary job of maintaining detailed, legible logs on all conversations between the SEOFL, the Secretary of the DEQ Designee, the Tensas Parish Emergency Manager, and others. In addition, the SEOFL attended and actively participated in EOF Briefings with the Licensee Off-site Emergency Coordinator.

The AAC did an excellent job of interfacing with the Licensee Radiological Emergency Manager (REM). The AAC approached information provided by the Licensee with healthy skepticism and with a questioning attitude. When informed by the REM that there was a potential for 1-10% clad damage should these conditions persist, the AAC immediately inquired about the time frame such damage would be expected to occur.

All LDEQ EOF staff had in their possession their normal occupational monthly and annual thermoluminescent dosimeters (TLD). In addition, each staff member was assigned a RADOS electronic DRD with full-scale range of 999 roentgens and a bottle of KI. The names of the staff and their assigned electronic DRD's identification numbers were recorded. The DRDs were calibrated on April 27, 2001 and due for calibration on April 27, 2002. The KI had an expiration date of February 2005. During deployment and while performing duties within the EOF, the TLC used a kitchen timer to remind the LDEQ EOF staff to read their DRDs and document the exposures every 30 minutes. The GGNS staff periodically performed radiation surveys of the EOF and, after each survey, declared the facility habitable.

At the end of their shift, the LDEQ EOF staff would assign their electronic DRDs to their replacement who was coming on shift and turn-in their exposure record card to LDEQ.

The SEOFL was very clear on the authority for protective action decisions. He made timely protective action recommendations (PARs) to the Secretary of the DEQ Designee who was responsible for finalizing the recommendations to the Tensas Parish Emergency Manager. When the **GENERAL EMERGENCY (GE)** was declared at 11:28 a.m., the SEOFL discussed the use of the default PARs with the Secretary of the DEQ Designee at 11:31 a.m. At 11:34 a.m., the SEOFL concurred with the Licensee Radiological Emergency Manager and the State of Mississippi staff on the default PARs and recommended the default PARs to the Secretary of the DEQ Designee. At 11:36 a.m., the SEOFL contacted the Tensas Parish Emergency Manager to discuss the default PARs. These PARs recommended evacuation for a distance of two miles for 360 degrees, evacuate sectors K, L, and M for a distance of five miles, and shelter the remainder of the Emergency Planning Zone.

When a radioactive release to the environment was detected and a source term identified, dose projections initiated a second set of PARs which were to evacuate for a distance of five miles for

360 degrees and in the downwind sections 10, 11, and 12 and shelter the remainder of the EPZ. The SEOFL communicated these PARs to the SEOC at 12:17 p.m. A third PAR, to increase evacuation to include sections 8, 10, 11, and 12, was prompted by a wind shift. This PAR was provided to the SEOC by the SEOFL at 12:39 p.m.

Initial discussions between the SEOFL and the Licensee Radiological Emergency Manager concerning the presence of iodine in the release occurred at 11:44 a.m. The SEOFL and the Secretary of the DEQ Designee discussed recommending KI for emergency workers (EW) at 12:13 p.m. There were numerous phone calls and significant discussions among the SEOFL, the Secretary of the DEQ Designee, and the Tensas Parish Emergency Manager concerning KI. At 12:29 p.m., the Department of Health and Hospitals (DHH) Officer authorized the use of KI for all EWs within two miles of GGNS or for any EWs crossing into Mississippi. This was modified at 1:08 p.m. to include KI for all EWs within five miles of GGNS.

The LDEQ EOF DAC had the responsibility for developing LDEQ EOF's dose projections. The DAC performed the dose projections using a desktop computer and LDEQ's computer program, Radiological Emergency Dose Assessment Model (REDAM). For backup, a laptop capable of executing REDAM was available. Also available were procedures, forms, and tables of required parameters and dose conversion factors to perform dose projections manually.

Based on source term estimates and meteorological data provided by GGNS, the DAC successfully calculated dose projections in the off-site areas for Total Effective Dose Equivalent (TEDE) and Committed Dose Equivalent (CDE) to the thyroid. Dose assessors from GGNS and the State of Mississippi were located close to the LDEQ DAC within the EOF. This allowed discussions of activities, resolution of problems, and comparison of input parameters and dose projections. Comparing the DAC's dose projections with GGNS's showed close agreement, well within a factor of two. Dose projections compared with the State of Mississippi's showed a difference of approximately a factor of three.

The DAC also calculated TEDE, CDE thyroid, and EW Multipliers (EW Multipliers are used to calculate an EW's TEDE from DRD readings) from FRMT data injected by a controller. By interview, the DAC correctly explained the process that would be followed if a sampling location was missing or in question. This satisfies the outstanding Area Requiring Corrective Action (70-01-07-A-01).

The LDEQ EOF functioned as an integrated team and the individuals executed their activities and responsibilities in a manner consistent with their high level of professionalism and dedication.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 2, 3, 4, 5, 7, and 14

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES RESOLVED:**

Issue Number: 70-01-07-A-01

Description: Based on Waterford 3 Steam Electric Station field measurements acquired at approximately 12:41 p.m., the Dose Assessment Coordinator (DAC) incorrectly calculated extremely high external exposure rates and thyroid dose rates including 1.23E+18 mR/hour at 10-miles and 1.39E+17 mRem/hour at 10 miles, respectively. This was not consistent with calculations previously performed by the W-3 dose assessor. Upon receipt of these dose projections, the Accident Assessment Coordinator stated that they could not be correct and requested that the DAC review the input parameters and rerun the calculations. The DAC did not detect an error in the input data and the rerun provided identical results. Although the input data was checked, the players did not determine the error that was a result of the distance of the sampling point from the release point and the distance from the sampling point to the plume centerline being incorrectly identified.

Corrective Action Demonstrated: By interview, the DAC correctly explained the process that would be followed if a sampling location was missing or in question.

f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.3. EMERGENCY NEWS MEDIA CENTER

The Emergency News Media Center (ENMC) is a fixed facility co-located with the Claiborne County Civil Defense (CCCD) Office in Port Gibson, MS. The Rumor Control (RC) function is provided by GGNS with assistance of State and local public information staff, as required. The Rumor Control activity is in the same building but some distance away. GGNS provides the ENMC Manager and is responsible for the facility.

The **ALERT** was declared by the utility at 8:35 a.m. and mobilization notifications were initiated to ENMC staff. The ENMC staff was notified by pager and telephone using a current call-down list.

The facility was opened by the utility's Facility Manager and declared operational at 9:37 a.m. The room designated for use by the states of Mississippi and Louisiana, Claiborne County, and Tensas Parish public information personnel adjoins the room used by the GGNS public information team. When the facility was declared operational, the State of Mississippi and Claiborne County were represented, but Louisiana and Tensas Parish representatives did not arrive until approximately 10:40 a.m. This facility has some limitations (described elsewhere in this section) but is adequate to support emergency response activities.

As a fixed facility, tables, chairs, workstations, permanent phone lines, instruments, televisions, and other support equipment is in-place and activation is a relatively easy operation. The consolidated facility with the CCCD allows shared use of kitchen and other comfort facilities. The entire CCCD/ENMC facility is provided back-up power by a 105KW diesel generator housed in the facility. The facility has limited, but sufficient space to accommodate the respective utility and government staffs to include: breakout areas for administrative support, media monitoring, rumor control, media work area, a pre-brief assembly area, and News Conferences (NC). The separation of work areas in the facility limits effective communication, coordination and conferencing.

Fixed and mobile communications equipment is generally adequate to support internal and external activities, monitor the media, and respond to public inquiries. Both the utility and the State of Mississippi have satellite communications as a backup to the principal means of communications – landlines. The Mississippi mobile communications vehicle is parked adjacent to the ENMC and is available for both Mississippi and Louisiana OROs, if needed. Additional dedicated data connections are needed to support requirements for continuous computer network connections for OROs.

The utility spokesperson provided periodic updates to his staff and subsequently updated State and local representatives. There was not a similar briefing by the State and local team for the utility staff. The layout of the ENMC precluded the conduct of periodic status updates for the entire facility.

The Mississippi Lead Public Information Officer (MLPIO) provides primary direction, coordination, and management for the ORO workroom. The assistant was not trained in the function and was not knowledgeable in the operation of the computer network operation or software. Therefore, the MLPIO was overwhelmed most of the exercise and unable to properly coordinate the activities of the workroom or with the other OROs.

The internal flow of information (e.g., copies of news releases) was not standardized. The utility provided administrative support to the OROs, but there was not a specific or regular system for distribution of information. Distribution and copy production had to be established for each item, each time, and varied throughout the exercise. In combination with an ad hoc news release numbering system by the MLPIO, there was some initial confusion on message sequences. The MLPIO introduced a temporary tracking system that eliminated the potential for a problem to develop, but the process needs to be made a standard operating procedure. The Louisiana news releases were well coordinated by computer data link with the Louisiana Office of Emergency Preparedness and marked appropriately for release tracking.

Neither State plan addresses a method for interface and coordination that should occur in the development and dissemination of critical information. Since the citizenry of the other jurisdictions will know of the information disseminated and actions taken by the others, there is a need to establish a procedure for interaction and coordination. Some confusion and lack of clarity on PAR/PAD status occasionally occurred during the exercise. The lack of coordination contributed to one EAS message and its related news release being produced by the MLPIO with partially incorrect information concerning the areas to be sheltered. The correct information was briefed at the NC and a corrected news release produced.

The Louisiana PIO (LPIO) provided support to the MLPIO when able but was usually not well enough informed of the status of Mississippi actions to be very helpful. The LPIO coordinated four news releases that provided timely information regarding plant status and PAR/PAD information to Louisiana residents. The Tensas Parish President and Director made some precautionary evacuation decisions to move school children to shelters. The LPIO and Tensas PIO were directed not to release the information to the media until the evacuations were all completed. The potential for this information to be discovered by the media through other sources in an actual situation could cause a loss of credibility for spokespersons in the position of stating that no protective measures were being taken.

The ENMC received notification of the **SAE** at 10:59 a.m. and the **GE** at 11:37 a.m. The PIO teams actually were notified of "pending" ECL declarations 15 to 20 minutes prior to the formal declaration and began preparing potential news releases for the anticipated PAR/PAD. The affected counties, parish, and States made declarations of a State Of Emergency/Disaster and notified the media by news release prior to the declaration of the **SAE**.

Within the utility workroom, the use of the full size status board allowed for the posting of all messages received. When faxes were received, they were copied and distributed throughout the three ENMC areas. The ENMC Director conducted frequent briefings of the utility ENMC staff

and sought input from the other ENMC representatives at the scheduled preparation conference prior to all NCs.

The Media Monitoring Room is adjacent to the utility workroom. There were three televisions monitored by one person and two radio stations monitored by another individual. Three staff members were responsible for answering the five telephone lines. The Media Monitoring Supervisor functioned as the liaison between the PIO Control Room and the Media Monitoring Room. There were four TVs available for media monitoring in the ORO workroom, but there did not appear to be procedures for separate media monitoring or analysis by the OROs. The Rumor Control area had no ability to monitor media broadcasts.

The ENMC Director conducted the first media briefing at 10:15 a.m. following a 5-minute preparatory session for participants. The panel included the ENMC Director, the Technical Spokesperson, the MLPIO, and representatives from the affected county and parish. The information regarding the current ECL (Alert) was provided. The spokesman indicated that there was very little information available, but there was no immediate danger and no protective actions had been recommended. The Tensas Parish PIO arrived during the NC, but the LPIO and LDEQ spokespersons did not arrive until 10:38 a.m. after the NC had ended. The mock media had prepared questions for the panel that covered many concerns. All responses were accurate, clear, and generally without technical jargon. The term "rumor control" contained in the first NR was confusing to the media but explained fully. Questions that could not be answered were written down and covered at subsequent NCs. Rumor control trends were coordinated and questions addressed by the utility spokesman at each NC.

Media press packets were available and distributed to the mock media. The packets contained safety information and a map of the Emergency Planning Zone (EPZ) that included: evacuation routes, pickup points, reception centers for adults and school children, and a listing of Emergency Alerting System (EAS) stations. In addition, there was a GGNS fact sheet, full color diagram of the reactor system, brochures with radiation and technical information, contact numbers for the media and rumor control, and a photograph of the plant site. All news releases from the utility and the State were provided to the mock media.

After the information regarding the radioactive release from the plant was received in the ENMC (10:58 a.m.), there was an extensive discussion between the ENMC Director and the ORO representatives regarding the PAR and the need for a NC. The MLPIO participated in a lengthy PAD discussion via teleconference, but there was no way for other ORO workroom staff to track discussions or status. The PAD, EAS, and News Release were completed, but the start of the planned NC was delayed by the declaration of the **GENERAL EMERGENCY (GE)**.

The second media briefing began at 11:41 p.m. following utility ECL escalation to a GE. The utility had escalated to an SAE nearly an hour earlier, but coordination of information, final coordination of a PAR/PAD, and production of EAS messages/news releases had precluded the ability to conduct a NC any sooner. As the delayed NC planned for the SAE was finally about to begin, the PIO team was notified of the pending GE declaration. The utility spokesman

converted the NC to a very brief announcement of the changed ECL with a promise to return soon with more information. The Mississippi radiological health spokesman said the default PAD was going to be implemented. He described the evacuation and shelter zones and the MLPIO announced the anticipated siren sounding time.

The third NC was held at 12:15 p.m. to address the specific information regarding change in plant status, ECL, and PAD. The instructions for evacuation and sheltering were provided using displays and referring to the literature provided by the utility to residents in the EPZ. Each ORO provided appropriate information for the citizens in their respective area. One mock media question concerned the utility spokesperson's statement that the radiation exceeded 1000 times "normal" levels. The spokesperson and technical representative provided an answer that was technically correct but did not use the opportunity to discuss the radiation release offsite in everyday language or in terms that the average member of the public would understand.

A fourth NC was held at 1:30 p.m. to expand the PAD and provide additional information to the public. The Claiborne County spokesperson had not coordinated with the MLPIO prior to the NC and noted, corrected, and clarified somewhat misleading information in the EAS and related NR that described the shelter zone for the PAD. The MLPIO announced that a corrected NR would be released at the end of the NC. Tensas Parish finally briefed the earlier precautionary evacuations that had been directed by the Parish President but not revealed to the media. Tensas added new shelter and precautionary evacuations in reaction to the new PAD. In addition to once again addressing public question trends identified in the RC, the Mississippi radiological health spokesman addressed the radiological release impact in everyday language using analogies to routine public activities such as chest x-rays. Two news subjects were raised by the mock media regarding "mandatory" vs. "recommended" evacuation, and potential agricultural impacts. The LPIO stated that all evacuations in Louisiana were recommended, and the MLPIO stated that agricultural impacts would be addressed later.

The Emergency Information Center (EIC) staff handled Rumor Control functions. The EIC was quickly mobilized following the ALERT ECL. The staff, who were utility employees, reported in response to paging, telephone notification, and announcements at the plant. Staffing consisted of one Coordinator and four Operators. The Mississippi Department of Environmental Quality provided a staff member who worked as technical liaison. Upon arrival, the staff performed operability checks on the telephones. The Coordinator declared the facility operational at 9:31 a.m. The EIC received calls from the public and the media, and the Operators logged all calls. The toll-free number was distributed via the GG Public Information Brochure (PIB), press briefings, and news releases. During the first hour of activation, the Operators averaged 47 calls each, and they received a total of 492 calls during the exercise.

The EIC was located behind a locked door in a separate room of the ENMC. This area was part of the Claiborne County EOC complex located on Highway 18 in Port Gibson, MS. The room contained seven workstations for the Operators and one for the Coordinator. All stations were outfitted with a telephone, chair, adequate office supplies, GG's PIB, Request for Information forms, GG telephone list, Media Kit, and Reference Guide. The Reference Guide contained: an

area telephone book; PIB; MEMA radiological information; evacuation and shelter instructions; plans for school children; ECL information; information on protecting livestock, crops, pets; definitions; and Protective Action Areas for Claiborne County and Tensas Parish with evacuation routes and reception centers. Each station had adequate workspace and lighting. An enlarged EPZ map was posted in the room. Employing the use of headsets and ring indicator lights on the telephones would facilitate noise reduction in the room. Additionally, the Coordinator would be more accessible to all staff if he were provided a cell phone or text pager.

The Coordinator exhibited excellent direction and control. He attended frequent utility staff briefings and kept his staff informed following these briefings. He posted changes and pertinent information without delay on a status board in full view of all Operators. At regular intervals he canvassed the staff for trends in rumors. When the administrative staff delivered news releases to the EIC, the Coordinator immediately distributed the copies to each workstation.

Rumor trends identified during the exercise included: death and injuries at the plant, school children evacuation, earthquakes, explosions, and dumping of the plant's contaminated water into the Mississippi River. The Operators filled out the Request for Information forms when needed and passed these to the Coordinator. The Coordinator identified and consolidated any rumors and passed the information to the Company Spokesperson or State and local authorities for research and resolution. Trends were addressed at the News Conferences. The Operators also made call backs, if appropriate, after research answered the Request for Information.

The utility declared an **ALERT** at 8:35 a.m., SAE at 10:45 a.m., and the **GE** at 11:28 a.m. The Coordinator posted the ECL notifications upon receipt as follows: **ALERT** at 9:24 a.m., **SAE** at 10:50 a.m., and **GE** at 11:48 a.m. This action cleared ARCA 28-99-13-A-01 from the previous exercise.

Of note was the lack of information coming from Louisiana. At the 1:30 p.m. News Conference, Louisiana representatives announced that evacuations had been underway since 11:10 a.m. The EIC Coordinator became aware of this activity shortly before this briefing but had no written confirmation of evacuations. The Operators were not receiving any inquiries concerning Louisiana evacuations nor was the EIC provided any information confirming this fact until 2:30 p.m. when Louisiana's News Release #4 was distributed.

The exercise was terminated at 2:46 p.m.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 2, 3, 4, 12 and 13

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:**

Issue No.: 28-99-13-A-01

Description: There was a delay of approximately one hour in posting the SAE ECL on the status board in the rumor control room. This resulted in the staff continuing to advise callers that the plant was still in an alert status for approximately one hour after the declaration of the SAE. (NUREG-0654 G.4.a.,b.,c.).

Corrective Action Demonstrated: ECLs were distributed to rumor control in a timely manner. The utility declared an **ALERT** at 8:35 a.m., **SAE** at 10:45 a.m., and the **GE** at 11:28 a.m. The Coordinator posted the ECL notifications upon receipt as follows: **ALERT** at 9:24 a.m., **SAE** at 10:50 a.m., and **GE** at 11:48 a.m.

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1. TENSAS PARISH

2.1.1. EMERGENCY OPERATIONS CENTER

The Director of Emergency Preparedness at the Tensas Parish Emergency Operations Center (EOC) was notified at 8:44 a.m. of an **ALERT** situation at the Grand Gulf Nuclear Station. Call-down procedures for support personnel began at 8:59 a.m. and were completed by 9:18 a.m. No one was pre-positioned at this facility with the exception of those whose full time responsibilities are at the EOC. All required agencies were represented in the EOC when the facility was declared operational at 9:30 a.m.

The facility has sufficient space, furnishings, status boards, and current copies of the emergency plans to support emergency operations. There is backup power, which is tested automatically every Wednesday and manually every Thursday. The facility is access controlled, and following a release, no one is allowed entry without being monitored for contamination at an outdoor station. The Director of Emergency Preparedness demonstrated proper direction and control throughout the exercise and gave briefings to the EOC staff at 30-minute intervals and as the situation changed.

The Sheriff's Office communications room is located adjacent to the Emergency Preparedness Office and the connecting door is opened in times of EOC operations. The communications room has 10 commercial telephone lines, dedicated telephone with Grand Gulf and the other affected jurisdictions, radio and computer communications.

All staff in the Tensas Parish EOC were continuously monitored for radiation exposure. One set of dosimetry was worn by the Radiation Officer and used for the entire staff. The Radiation Officer wore a simulated TLD, a 0-20 R direct reading dosimeter (DRD) and a 0-200 R DRD. The DRDs were within the required dates for electrical leak testing. At 11:21 a.m., the turn-back value of 1 R was reduced to 150 mR at the direction of the State. There were an insufficient number of low-range (0-200 mR) DRDs available in the EOC for all emergency workers in the field. Consequently, the Radiation Officer ordered 15 low-range dosimeters from the Louisiana State EOC.

Plume protective action decisions were made in a timely manner in accordance with the Tensas Parish Emergency Operations Plan. At 9:25 a.m., simulated phone calls were made to place the schools, nursing homes, hospitals, campgrounds, Shiloh and Lake State Parks on alert. At 11:30 a.m., the Department of Wildlife and Fisheries was notified to provide assistance, if needed for the area State Parks, area lakes, Mississippi River and hunting camps. A telephone call was made by the Council On Aging liaison in the EOC to his supervisor for assistance with the evacuation of the transportation dependent residents from St. Joseph and Newellton to the reception centers.

At 9:25 a.m. the School Board Liaison in the EOC simulated notification of the school officials in Tensas Parish of a situation at the Grand Gulf Nuclear Station. Bus drivers were mobilized to the St. Joseph schools. There were a sufficient number of 60-passenger buses to evacuate the 620 St. Joseph students to the reception center in Ferriday. At 10:02 a.m., a precautionary decision was made to evacuate the St. Joseph schools, but to delay notification to the parents until the evacuation was complete. By 11:45 a.m. the evacuation was complete and the parents were notified in the first EAS message released at 12:16 p.m. The students in the Newellton schools were evacuated to the Reception Center (RC) in Tallulah. The general public was also evacuated to this RC, after the decision was made at 12:59 p.m. to evacuate the remainder of the population within the 10-mile EPZ.

At 12:35 p.m., a recommendation was received for all Emergency Workers (EW) within 2 miles of the plant site to take KI. At 1:13 p.m. another recommendation was received for all EWs within 5 miles of the plant site to take KI. These recommendations did not affect EWs in Louisiana, as there were no EWs within the 5-mile area. There was a sufficient quantity of KI tablets and their supporting information stored in the Tensas Parish EOC. The expiration date for the tablets was August 2005. As a precautionary measure, a request was made to the Regional Medical Director for an additional 1400 KI tablets.

Liaison personnel in the EOC provided notification via telephone to their supervisors for notification of the transportation dependent, institutionalized, and the fishermen, campers, and hunters within the 10-mile EPZ. By 12:10 p.m. the evacuation inside and outside of Lake Bruin and St. Joseph was initiated. The Council On Aging (COA) liaison in the EOC had a current list of names and phone numbers of the eight transportation dependent persons residing in St. Joseph and the five in Newellton. The COA has two nine-person lift vans with wheel chair access and by 1:00 p.m. the transportation dependent residents and the residents of the nursing homes had been evacuated. Also at 1:00 p.m., the Tensas Parish Sheriffs' liaison notified his supervisor and arranged for evacuation of inmates from Tensas Parish Detention Center to a facility in Waterproof.

A request for supplementary assistance was made by the RO at 9:23 a.m. for additional CDV-700 radiation survey meters from the Louisiana Office of Emergency Preparedness and the additional 0-200 mR low-range dosimeters at 11:21 a.m. The Tensas Parish Sheriff requested supplementary assistance from the Louisiana State Police at 10:55 a.m. and from the Department of Wildlife and Fisheries at 11:30 a.m.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 2, 3, 4, 5, 9, 10, 11, 14, 15, 16, 17, 22, and 23

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES - RESOLVED:** NONE

f. **PRIOR ISSUES - UNRESOLVED:** NONE

2.1.2. TENSAS PARISH TRAFFIC/ACCESS CONTROL POINT

In accordance with the extent-of-play agreement, an out-of-sequence Traffic/Access Control Point (T/ACP) was evaluated through interview with a Tensas Parish Deputy Sheriff and an employee of the Louisiana Highway Department.

The emergency workers were briefed at the Tensas Parish Emergency Operations Center (EOC) by the Radiological Officer (RO) and the Director of the EOC. The emergency workers were issued a dosimetry kit containing two direct-reading dosimeters (DRDs) (0-20R and 0-200R), which were checked for electrical leakage in July 2001, a simulated thermoluminescent dosimeter (TLD), simulated Potassium Iodide (KI), and a dosimeter exposure card to record their DRD readings at 30 minute intervals. The Deputy Sheriff was observed reading his DRDs every 30 minutes and recording the readings on his exposure card. The RO informed the emergency workers that if their DRDs read 1R to contact him at the EOC. They were also briefed regarding a higher authorized dose limit (5R) for their assignment.

Radio communication served as the primary communications system and cellular phones served as the backup. The Deputy Sheriff received a call to respond to a real emergency; demonstrating that the radio functioned properly.

Although no T/ACPs were established, the emergency workers demonstrated knowledge of their duties to block and redirect traffic to an evacuation route or Reception Center and to control access to an evacuated area. The Highway Department representative stated that heavy equipment was available, if needed, to remove impediments. He had barricades, cones, and signs available in his truck.

The Deputy Sheriff was familiar with the roads in Tensas Parish and his responsibilities and the Highway Department representative had adequate equipment to perform his duties.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 4, 5, and 17

b. **DEFICIENCY**: NONE

c. **AREAS REQUIRING CORRECTIVE ACTION**: NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED**: NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

2.1.3. SCHOOL BUS DRILL

In accordance with the extent-of-play, an out-of-sequence school and bus were evaluated through interviews with a bus driver and the Principal and Assistant Principal at Newellton High School Newellton, Louisiana.

The evaluation of the bus driver began at the Tensas Parish Emergency Operations Center (EOC) in St. Joseph, Louisiana. The bus driver and his escort, a Deputy Sheriff from Tensas Parish, were briefed by the Radiological Officer (RO) and the Director of the EOC. The emergency workers were issued a dosimetry kit containing two direct-reading dosimeters (DRDs) (0-20R and 0-200R) which were checked for electrical leakage in July 2001, a simulated thermoluminescent dosimeter (TLD), simulated Potassium Iodide (KI), and a dosimeter exposure card to record their DRD readings at 30 minute intervals. The bus driver and the Deputy Sheriff were observed reading their DRDs every 30 minutes and recording the readings on their exposure cards. The RO informed the emergency workers of the 1R dose limits. If their DRDs read 1R, they were to immediately call him at the EOC. They were also briefed on the higher dose limit (5R), which is authorized for their assignment. The RO assigned the bus driver to go to Newellton High School to pick up students and transport them to the Winnsboro Reception Center in Winnsboro, Louisiana. The bus and the Deputy Sheriff's vehicle proceeded to the high school. Upon arrival, the bus driver contacted the Principal of the school. Communication for the bus was provided by cellular phone and the Deputy Sheriff had radio equipment and a cellular phone.

The alert monitor/receiver and telephone are the systems in place to communicate between the EOC and the school. The Assistant Principal described in detail both administration and teachers' responsibilities: teachers would explain the situation to their students, take roll call, instruct students to collect all their belongings, remain with the students in the classroom until permission is given to board the buses, bring the student register upon departure and remain with their students at the Reception Center. When buses arrive, the teachers and their students board the buses, lower grades first, upper grades last. After all students listed on the teacher's register are present on the bus, the bus departs. The school Principal and/or Assistant Principal make sure all windows are closed and all lights are off. They make a final tour of the building to check safety, security and to ensure that everyone has left the building, place prepared signs in prominent locations in the school, lock all exterior doors and proceed to the Reception Center and remain with the teachers and students.

The Assistant Principal also described in detail the procedures to be followed in the event the school has to shelter the students and other school personnel.

In accordance with the extent-of-play, the bus did not travel to the Winnsboro Reception Center. Twelve buses with a capacity of 28-65 students and two vans are available to evacuate the school. This provides enough capacity to transport 447 enrolled students, teachers, and other school personnel.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET**: Objectives 1, 4, 5, and 16

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION**: NONE

d. **NOT DEMONSTRATED**: NONE

e. **PRIOR ISSUES – RESOLVED**: NONE

f. **PRIOR ISSUES – UNRESOLVED**: NONE

2.1.4. EMERGENCY WORKER MONITORING/DECON STATION

The Tensas Emergency Worker Monitoring and Decontamination Center was an out-of sequence demonstration on Tuesday, March 5, 2002. Evaluation of mobilization was conducted by interview. All emergency workers performing monitoring and decontamination were volunteers with the Tensas Parish Emergency Operations Center (EOC) in St. Joseph, Louisiana. During the interview a roster of qualified monitors and decontamination personnel was provided. Both male and female monitors were available. Real time alerting would have been accomplished via telephone, pager and radio.

The Emergency Worker Monitoring and Decontamination Center is located adjacent to the Tensas Parish EOC, which has a full range of communications equipment available. There were telephones, cell phones, and a hotline phone system available. There were two repeater systems available for use with the Fire Service and the Sheriff's Department. Volunteers are paged through the Fire Service repeater with telephones as a backup. There was also satellite communications available and an 800 MHz radio system available for contacting State Police, Department of Environmental Quality and the Office of Emergency Preparedness.

The Radiological Officers (RO) provided each monitoring and decontamination worker with a kit containing a simulated non-direct-reading dosimeter (TLD), two direct reading dosimeters (DRD), 0-20R and 0-200R, simulated potassium iodide (KI) tablets, and an emergency worker exposure card. A record was made of the DRDs assigned to each person. The RO provided an excellent briefing covering all aspects of emergency worker exposure control, including the potential need to take KI. Instructions were provided on how to use the DRDs and on the need to read the DRDs, approximately every 30 minutes. All DRDs were inspected for electrical leakage in July 2001. All DRDs were zeroed prior to issue.

The DRDs were read every 30 minutes and the readings recorded on the workers' exposure record cards. All personnel were familiar with their maximum authorized mission exposure limit (1R) and the turn-back value (5R). All personnel were aware to contact the RO in the EOC should their DRDs read 1R. All personnel were aware of the potential need to take KI when requested by the RO.

The method of performing instrument checks as led by the RO was a model of good practice. All instruments were checked simultaneously. All monitors were stepped through the checkout process in unison. CDV-700 instruments were calibrated in August 2001 and were available for monitoring. The survey meters were checked for proper operation using the check source on the side of the meters. Background radiation was established using the X1 scale on the meters. The background readings were recorded.

Monitoring was accomplished with the beta shields open and facing the worker or vehicle during surveys. Probes were covered with plastic bags to avoid contaminating the probes. All monitors were aware of the contamination action level of 0.1mr/hr above background. All monitors understood the need to decontaminate above that level.

Adequate space was available for monitoring and decontamination of emergency workers and vehicles. The facility was set up to separate contaminated and non-contaminated emergency workers and vehicles. Procedures were followed to minimize contamination of the facility. Contamination control measures, including wearing gloves, shoe covers, covering of the probes of the survey meters, temporary covers on the floor, separation of contaminated and uncontaminated individuals and vehicles, were employed. Provisions and procedures were available for monitoring and decontamination of both male and female workers. Monitoring and decontamination procedures were followed. A sign was in place to advise emergency workers who were not contaminated to bathe and change clothes within three days. Records were made for each contaminated individual.

An emergency worker was determined to be contaminated (simulated) and directed to the decontamination station. The monitoring personnel advised the contaminated worker on the method for decontamination. The monitoring personnel gave excellent instructions to the individual being decontaminated. Instructions were very specific and well understood. Following decontamination, the emergency worker was again monitored before being released.

Radiological monitoring and decontamination of a vehicle was also demonstrated. The monitor began surveying the side of the vehicle and identified two areas (simulated) on the tires, which exceeded the action level of 0.1mr/hr above background. The monitor described in detailed the need to survey the bumpers, grill, door handles, and air cleaners. The monitor demonstrated the proper procedures for having occupants exit the vehicle. The monitor demonstrated monitoring the interior of the vehicle.

Contaminated vehicles would be separated from non-contaminated vehicles by relocating to an isolated area. If the contamination outside the vehicle was above the action level, the vehicle would be impounded and held for decontamination at a later time by Louisiana Department of Environmental Quality personnel.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 4, 5, and 22

b. **DEFICIENCY**: NONE

c. **AREAS REQUIRING CORRECTIVE ACTION**: NONE

d. **NOT DEMONSTRATED**: NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED**: NONE

3. SUPPORT ORGANIZATIONS

3.1. WINNSBORO RECEPTION CENTER

At 5:36 p.m. on Monday, March 4, 2002, the Tensas Parish Director of Emergency Preparedness notified by telephone the Franklin Parish Sheriff's Office Dispatcher that a Site Area Emergency (SAE) had been declared at the Grand Gulf Nuclear Station and requested the Reception Center at Winnsboro High School to be activated. The Dispatcher notified by telephone the Franklin Parish Director of Emergency Preparedness. A current roster identifying names and phone numbers for 37 personnel for two shifts was subsequently used to notify the Reception Center staff. The 31 personnel assigned to the Reception Center, who are volunteers and live in close proximity to the facility, began arriving by 5:40 p.m. after being notified by telephone or pager. Each person completed the sign-in roster upon arrival.

Each Emergency Worker (EW) was issued a packet containing dosimetry. The dosimetry consisted of a simulated thermoluminescent dosimeter (TLD), a 0 – 20 R Direct Reading Dosimeter (DRD) and a 0 – 200 R DRD. The DRDs had been electrically leak checked in July 2001. The packet also contained an Exposure Control Card. A record was made identifying the serial numbers of the TLD and the DRDs issued to each EW and the time the dosimetry was issued and returned. The EWs were instructed to read their DRDs every 30-minutes and to record the readings on the exposure control card. The EWs were aware of their reporting limit of 1 R. Personnel inside the Reception Center that interface with monitored non-contaminated evacuees are not issued dosimetry.

The evacuee and vehicle monitors were issued CD V-700 radiation monitoring instruments. The instruments were calibrated in July 2001. They were correctly setup and source checked following procedures to ensure proper operation. The earphones were attached, the beta windows opened and the probes were covered to reduce the potential for contamination. A background reading was obtained on the X1 scale. The monitors and recorders wore multiple layers of gloves and booties for contamination control. After receiving dosimetry and survey instruments, the EWs setup the inside of the facility for receiving evacuees to be monitored, decontaminated and registered. Inside the facility, the traffic pattern walkways were covered with paper. Signs were posted on the walls as reminders for adherence to procedures. Outside, the facility was setup to receive vehicles for monitoring and decontamination. The reception center was declared operational at 6:20 p.m.

Inside the Winnsboro High School there are commercial telephones. The presence of the Winnsboro Police Department, Franklin Parish Sheriff's Department, Winnsboro Fire Department, Franklin Parish 911 Office, and EMS personnel provided a large complement of hand-held and mobile radios. Cell phones were also available.

EW personnel at the vehicle monitoring area represented the Franklin Parish Public Health Unit for monitoring and recording and a Winnsboro Police Officer. A vehicle arrived at the vehicle monitoring area at 6:20 p.m. The driver was instructed to remain in the vehicle while the outside

of the vehicle was surveyed. The survey began at the left front wheel and a reading of 1.0 mR/hr above background was obtained. A vehicle is considered contaminated if a reading of 0.1 mR/hr above background is observed. The left rear tire also read 1.0 mR/hr above background. The front bumper and grill each had a reading of 0.3 mR/hr. The door handles and air filter were not contaminated. The readings were explained to the driver. The driver was instructed to drive to the segregated vehicle area on the football field and to remain inside the vehicle.

At the segregated vehicle area, the driver was again instructed to remain in the vehicle and was informed of what was to occur. EW personnel at the contaminated vehicle monitoring area represented the Franklin Parish Police Jury and the Franklin Parish Office of Emergency Preparedness. The monitor noticed the Vehicle Contamination Survey Report was not in the vehicle. The Controller intervened and corrected the situation. The correction required delivery of the report by a Police Officer. The vehicle monitor advised the officer that he might be contaminated and that he would have to report to the evacuee monitoring station. The driver of the vehicle was instructed to don two sets of booties. The driver and the police officer were escorted to the personnel monitoring station. The segregated vehicle monitor surveyed the vehicle and determined that the interior was not contaminated. Potentially contaminated material, such as rubber gloves, was bagged for proper disposal. Proper monitoring techniques were demonstrated at both vehicle-monitoring locations.

Evacuees from the vehicle parking areas were directed to the evacuee monitoring station where personnel from the Winnsboro Fire Department and LSU Agriculture Center demonstrated the monitoring and recording procedures. At this station, each evacuee was instructed on what to do during the monitoring process and the purpose for the monitoring. The monitors and the recorder at this location demonstrated a clear understanding of their training, their responsibilities and their monitoring techniques. An evacuee was considered contaminated if a reading exceeded 0.1 mR/hr above background. Six evacuees were monitored in a time period of 27 minutes. Evacuees who were not contaminated were directed to the Registration Desk. Two evacuees were found contaminated. A Personnel Contamination Survey Report was prepared for each contaminated evacuee and the report inserted inside a baggie. The survey report was given to the contaminated evacuee with instructions to proceed to the decontamination station. The paper on the floor was changed after a contaminated person had been surveyed. The Franklin Parish Director of Emergency Preparedness provided a status report on the number of evacuees, number of vehicles, and number of contaminated evacuees and the levels of contamination to the Tensas Parish Director of Emergency Preparedness. According to the plan additional information was required to be reported.

The decontamination stations are located in the shower areas of the gymnasium, but only the male side was demonstrated in accordance with the extent-of-play agreement. Trained personnel from the Winnsboro Fire Department and the Franklin Medical Center were at this location to demonstrate monitoring and recording. Contaminated evacuees were escorted to the decontamination area. The escort provided good instructions to the evacuee to stay on the paper and not to touch the walls. The monitor retrieved the Personnel Contamination Survey Report from the baggie and re-surveyed the suspected area. Decontamination of clothing was

demonstrated by performing lift-off using masking tape. It is suggested that the tape ends be folded over to allow easier use of the tape and for ease of discarding the tape after use. A contaminated coat and a police officer's pistol were confiscated (simulated). The confiscated items were noted on the evacuee's Survey Report form and the items bagged. The bags were labeled and marked with radiation caution signs, however, the labels were not completed to match the item to the owner. Evacuees were monitored after decontamination and escorted to the registration area. The monitor at the decontamination station did not demonstrate good monitoring techniques. The probe was held too far from the surface being monitored and the probe was moved too fast to enable the instrument to respond. This technique is not acceptable for detecting contamination at the levels specified. The monitor was given the opportunity to correct the monitoring technique, but continued to monitor incorrectly. Consequently, more training is required to correct this observation.

Following the monitoring and/or successful decontamination process, evacuees were referred to the registration desk on the main floor of the facility. A procedure was in place to identify evacuees who had been through the monitoring process. Franklin Parish personnel registered the evacuees using a three-copy registration form. Appropriate information was recorded including names, addresses, telephone numbers, monitoring information and special medical or diet requirements. Evacuees were a given a copy of their registration form for admittance into the shelter and sent to the appropriate desk for shelter assignment, medical assistance, and locator information. Bus transportation was available for evacuees requiring transportation. The Office of Family Support, Louisiana Department of Social Service staff was on-site to assist in locating and reuniting family members. The staff of the Monroe ARC Chapter was on hand to coordinate shelter requirements.

A trained ARC shelter manager was present and discussed the procedures to be followed to open and operate the designated shelters in the event of an actual emergency. Although none of the shelters were activated, an on-site visit and interview with the Director was conducted with the Golden Door Center, a health care and assisted living facility, which can provide living space for several families. According to the Director, the capacity of this Congregate Care Center is approximately 22 families of four. The center could handle disabled evacuees and procedures were available to ensure that center capacity was not exceeded. All essential services such as food, sanitation services, child-care, medical care, and first aid would be available for evacuees. Support staff such as clerks, managers, nurses, kitchen help, servers, social workers, and security personnel would be present during an actual emergency. The center has adequate space and is equipped with a back-up generator. The Golden Door Center would have sufficient supplies and workers on hand to support extended emergency operations.

The Reception Center Manager is commended for using the exercise to conduct training. The second shift personnel were actually called at his direction and provided an estimated arrival time. The Reception Center Manager additionally had one of the simulated evacuees pretend to be a distraught mother looking for her diabetic son who had been evacuated from a school earlier in the day. He had special diet and medication requirements. The location of the evacuee was handled by calling the Franklin Parish OEP who located the child and confirmed that special diet

and medical needs had been met. This was an excellent demonstration of reception and congregate care procedures by a well-trained and highly motivated team of professionals.

In accordance with the extent-of-play agreement, an actual shift change did not occur. The shift change was demonstrated by evaluating the briefing that would be given to the oncoming shift. This exchange of information was demonstrated at the clean and contaminated vehicle monitoring stations, the evacuee monitoring station, and the decontamination station. In the Registration area a simulated shift change was demonstrated by production of a second shift roster and an interview with personnel at each station.

In summary, the status of FEMA exercise objectives for this location is as follows:

a. **MET:** Objectives 1, 4, 5, 19, and 30

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** 28-01-18-A-01

Description: The monitor at the decontamination station did not demonstrate good monitoring techniques. The probe was held too far from the surface being monitored and the probe was moved too fast for the instrument to respond. This technique is not acceptable for detecting contamination at the levels specified. The monitor was given the opportunity to correct the monitoring technique, but continued to monitor incorrectly.

Recommendation: Sufficient training must be given for the emergency workers to understand the basic properties of radiation and the function of the instruments in detecting external radiological contamination.

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES – RESOLVED:** NONE

f. **PRIOR ISSUES – UNRESOLVED:** NONE

APPENDIX 1

ACRONYMS AND ABBREVIATIONS

ALARA	As Low As Reasonably Achievable
ANL	Argonne National Laboratory
A/N	Alert and Notification
Anti-C	Anti-Contamination
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARFI	Area Recommended for Improvement
CD	Civil Defense
CFR	Code of Federal Regulations
CR	Condition Report
DHHS	U.S. Department of Health and Human Services
DOE	U.S. Department of Energy
DOI	U.S. Department of Interior
DOT	U.S. Department of Transportation
DRD	Direct-Reading Dosimeter
DSS	Louisiana Department of Social Services
EAS	Emergency Alerting System
ECL	Emergency Classification Level
EEM	Exercise Evaluation Methodology
EIC	Emergency Information Center

ENMC	Emergency News Media Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPZ	Emergency Planning Zone
EWM/D	Emergency Worker Monitoring/Decontamination
FDA	U.S. Food and Drug Administration
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
FTC	Field Team Coordinator
GE	General Emergency
GGNS	Grand Gulf Nuclear Station
GM	Guidance Memorandum
HHS	Health and Human Services
HP	Health Physicist
HPT	Health Physicist Technician
KI	Potassium Iodide
LAF	Louisiana Agriculture and Forestry
LDHH	Louisiana Department of Health and Hospitals
LDOTD	Louisiana Department of Transportation and Development
LDWF	Louisiana Department of Wildlife and Fisheries
LNG	Louisiana National Guard

LOEP	Louisiana Office of Emergency Preparedness
LDEQ	Louisiana Radiation Protection Division
LP&L	Louisiana Power and Light Company
LSU	Louisiana State University
MEMA	Mississippi Emergency Management Agency
M/D	Monitoring/Decontamination
Mon/Decon	Monitoring/Decontamination
MS/DSR	Mississippi Radiological Officer
NAWAS	National Warning System
NOUE	Notification of Unusual Event
NRC	Nuclear Regulatory Commission
NWS	National Weather Service
PAA	Protective Action Area
PAD	Protective Action Decision
PAG	Protective Action Guide
PAR	Protective Action Recommendation
PC	Protective Clothing
PIB	Public Information Brochure
PIO	Public Information Officer
RAC	Regional Assistance Committee
R/C	Reception/Care
REA	Radiological Emergency Area

REDAM	R
REP	R
RO	R
RT	R
SAE	S
TAR	T
TEDE	T
T/ACP	T
TLD	T
USDA	U

REDAM	Radiological Emergency Dose Assessment Model
REP	Radiological Emergency Preparedness
RO	Radiological Officer
RT	Response Team
SAE	Site Area Emergency
TAR	Tone Alert Radio
TEDE	Total Effective Dose Equivalent
T/ACP	Traffic/Access Control Point
TLD	Thermoluminescent Dosimeter
USDA	U. S. Department of Agriculture

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

LOCATION	EVALUATOR	AGENCY
REP RAC Chair	Larry Earp	FEMA
Exercise Coordinator	Willie Malone	FEMA
State EOC, Baton Rouge	Brenda Mosley	FEMA
	Rosemary Samsel	ICF
LDEQ at GGNS EOF	Daryl Thome'	ICF
	Terry Blackmon	ICF
Emergency News Media Center	Brett Kriger	ICF
	Marilyn Boots	FEMA
	Bill Larrabee	*ICF*
Tensas Parish EOC	Russ Bookser	FEMA
	Bill Serrano	ICF
School Bus Drill	Eddie Fuente	ICF
Traffic/Access Control	Eddie Fuente	ICF
Emergency Worker	Terry Blackmon	ICF
Mon/Decon	Daryl Thome'	ICF
	Eddie Fuente	ICF
Winnsboro Reception Center	Bill Serrano	ICF
	Marilyn Boots	FEMA
	Russ Bookser	FEMA
	Brett Kriger	ICF
EAS Station KNOE	Eddie Fuente	ICF

APPENDIX 3

STATE AND LOCAL EXERCISE OBJECTIVES AND EXTENT-OF-PLAY AS SUBMITTED BY THE STATE

OBJECTIVE 1: **MOBILIZATION OF EMERGENCY PERSONNEL**

Demonstrate the capability to alert and fully mobilize personnel for both emergency facilities and field operations. Demonstrate the capability to activate and staff emergency facilities for emergency operations.

Locations: Louisiana State EOC (Baton Rouge), LDEQ Operations at GGNS EOF, LDEQ Field Monitoring Teams, LDEQ Laboratory (Baton Rouge), Emergency News Media Center (ENMC, Port Gibson), Tensas Parish {EOC (St. Joseph), Mon/Decon, Traffic Access Control, School Bus}, Winnsboro Reception / Care Center (Winnsboro)

Extent of Play: Only the Core State Agencies will be called to participate at the State EOC. A list of "Core State Agencies" will be provided to the lead evaluator for this facility. LDEQ EOF and ENMC Response Team and the Field Monitoring Teams will pre-stage at the Hilltop RAMADA Inn in Natchez, MS. Mobilization will be demonstrated at this location. Mon/Decon, Traffic Access control, School Bus out of sequence see objectives 16, 17, and 22.

ARCA: **None**

OBJECTIVE 2: **FACILITIES - EQUIPMENT, DISPLAYS, AND WORK ENVIRONMENT**

Demonstrate the adequacy of facilities, equipment, displays, and other materials to support emergency operations.

Locations: Louisiana State EOC (Baton Rouge), LDEQ Operations at GGNS EOF, Emergency News Media Center (ENMC, Port Gibson), Tensas Parish EOC (St. Joseph)

Extent of Play: LDEQ EOF Response Team will pre-stage at the Hilltop RAMADA Inn in Natchez, MS. Proper maps and drawings will be used at this location for deployment and assessment purposes.

ARCA: **None**

OBJECTIVE 3: **DIRECTION AND CONTROL**

Demonstrate the capability to direct and control emergency operations.

Locations: Louisiana State EOC (Baton Rouge), LDEQ Operations at GGNS EOF, Emergency News Media Center (ENMC, Port Gibson), Tensas Parish EOC (St. Joseph)

Extent of Play: LDEQ EOF Response Team will pre-stage at the Hilltop RAMADA Inn in Natchez, MS. Direction and control will be demonstrated at this location, and deployment will be conducted from this location as well.

ARCA: **None**

OBJECTIVE 4: **COMMUNICATIONS**

Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

Locations: Louisiana State EOC (Baton Rouge), LDEQ Operations at GGNS EOF, LDEQ Field Monitoring Teams, LDEQ Laboratory (Baton Rouge), Emergency News Media Center (ENMC, Port Gibson), Tensas Parish {EOC (St. Joseph), Mon/Decon, Traffic Access Control, School Bus}, Winnsboro Reception / Care Center (Winnsboro)

Extent of Play: LDEQ EOF Response Team will pre-stage at the Hilltop RAMADA Inn in Natchez, MS. Communications with LDEQ HQ (in Baton Rouge), State EOC (if appropriate), State Field Monitoring Teams (FMT), and LDEQ Laboratory will be demonstrated at this location; this demonstration will continue while LDEQ EOF Response Team is en route to the GGNS EOF, and while at the EOF. Mon/Decon, Traffic Access Control, School Bus will be out of sequence. See objectives 16, 17, and 22

ARCA: **None**

OBJECTIVE 5: **EMERGENCY WORKER EXPOSURE CONTROL**

Demonstrate the capability to continuously monitor and control radiation exposure to emergency workers.

Locations: LDEQ Operations at GGNS EOF, LDEQ Field Monitoring Teams, LDEQ Laboratory (Baton Rouge), Tensas Parish {EOC (St. Joseph), Mon/Decon, Traffic Access Control, School Bus}, Winnsboro Reception / Care Center (Winnsboro)

Extent of Play: LDEQ Responders will use RADOS-50 direct reading Digital dosimeters with a range of 0.1 mR– 1000 R, or Canary II Digital dosimeters with a range off) .01 mR – 10 R. The other emergency workers will use the 0-20 R, 0-200 R and 0-200 mR direct reading dosimeters.
Tensas Parish Mon/Decon Center, Traffic Access Control, LDEQ Field Monitoring Teams, Winnsboro Reception / Care Center, school bus driver and escort officer are acceptable locations/activities for correction on the spot at the discretion of and concurrence between the evaluator and the controller. Parish EOCs are limited to areas outside the operations area, i.e., EW briefings and issue of dosimetry in other rooms.

ARCA: **None**

OBJECTIVE 6: **FIELD RADIOLOGICAL MONITORING – AMBIENT RADIATION MONITORING**

Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

Locations: LDEQ Field Monitoring Teams

Extent of Play: LDEQ Radiological Field Monitoring Teams (FMTs) {Two FMTs will be evaluated, a third FMT will be participating for training purposes} will be responding as directed by the LDEQ Accident Assessment Team. This will occur initially from LDEQ Staging location in Natchez MS, then on the way to the EOF, and finally from the EOF. LDEQ Radiological FMTs will perform ambient radiation monitoring and trace the plume as per plans and procedures. The Global Positioning System (GPS) will be used at the EOF and by the FMTs for training purposes only. LDEQ will not be graded on the use of the GPS and all GPS activities. This activity is to be considered for correction on the spot at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

OBJECTIVE 7: **PLUME DOSE PROJECTION**

Demonstrate the capability to develop dose projections and protective action recommendations regarding evacuation and sheltering.

Locations: LDEQ Operations at GGNS EOF

Extent of Play: The EOF controller will interject Data for the dose back calculations from the field measurements. If the scenario does not lead to High Thyroid dose that requires issuing Potassium Iodide, the calculations will be talked through to allow for the LDEQ Dose Assessment Team to try correcting the ARCA from RBS exercise.

ARCA: **70-01-07-A-01**

OBJECTIVE 8: **FIELD RADIOLOGICAL MONITORING – AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING**

Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} (0.0000001) micro-curies per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

Locations: LDEQ Field Monitoring Teams

Extent of Play: LDEQ Radiological Field Monitoring Teams (FMTs) will take air samples in simulated high radiation areas. Cartridges for Iodine will be processed (counted) in the field. Transfer of Cartridges and particulate filters to the LDEQ Laboratory will be simulated. Charcoal filters will be used during the drill. This activity is to be considered for correction on the spot at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

OBJECTIVE 9: **PLUME PROTECTIVE ACTION DECISION MAKING**

Demonstrate the capability to make timely and appropriate protective action decisions (PAD).

Locations: Louisiana State EOC (Baton Rouge), Tensas Parish EOC (St. Joseph)

Extent of Play: Protective Action Decision Making will be demonstrated at the Parish EOC as it would in an actual emergency. At the State EOC a decision on whether to administer KI or not will fulfill this objective.

ARCA: **None**

OBJECTIVE 10: **ALERT AND NOTIFICATION**

Demonstrate the capability to promptly alert and notify the public within the 10-mile plume pathway emergency planning zone (EPZ) and disseminate instructional messages to the public on the basis of decisions by appropriate State or local officials.

Locations: Tensas Parish EOC (St. Joseph)

Extent of Play: The State and local officials will agree upon evacuation sectors and alert system (siren) activation time.

ARCA: **None**

OBJECTIVE 11: **PUBLIC INSTRUCTIONS AND EMERGENCY INFORMATION**

Demonstrate the capability to coordinate the formulations and dissemination of accurate information and instructions to the public.

Locations: Tensas Parish EOC (St. Joseph), Radio Station KNOE

Extent of Play: As the public will not be involved in the exercise, there will not be an actual broadcast of emergency information to the public. KNOE personnel will demonstrate the ability to receive information from the Parish EOC and to broadcast appropriate protective action messages to the public within 15 minutes of the decision. The messages will not, however, be broadcast. Tensas Parish EOC and KNOE will follow plans and procedures in demonstrating this objective. KNOE will talk through their procedures of putting the message out to the public.

ARCA: **None**

OBJECTIVE 12: **EMERGENCY INFORMATION - MEDIA**

Demonstrate the capability to coordinate the development and dissemination of clear, accurate, and timely information to the news media.

Locations: Emergency News Media Center (ENMC in Port Gibson)

Extent of Play: All activities will be completed as specified in the plan and procedures as they would in a real emergency. The interaction with reporters will be demonstrated using designated participants to simulate the role of reporters asking questions during briefings.

ARCA: **None**

OBJECTIVE 13: **EMERGENCY INFORMATION - RUMOR CONTROL**

Demonstrate the capability to establish and operate rumor control in a coordinated and timely manner.

Locations: Emergency News Media Center (ENMC in Port Gibson)

Extent of Play: All "Rumor Control" demonstration by Tensas Parish should be evaluated at the Emergency News Media Center (ENMC), although communication on "Rumor Control" will be maintained between the Parish Public Information Officer (PIO) located at the Parish EOC and the Parish Media Representative located at the ENMC.

ARCA: **28-99-13-A-01**

OBJECTIVE 14: **IMPLEMENTATION OF PROTECTIVE ACTIONS - USE OF KI FOR EMERGENCY WORKERS, INSTITUTIONALIZED INDIVIDUALS, AND THE GENERAL PUBLIC***

Demonstrate the capability and resources to implement potassium iodide (KI) protective actions for emergency workers, institutionalized individuals, and, if the State plan specifies, the general public.

Locations: LDEQ Operations at GGNS EOF, LDEQ Field Monitoring Teams, State EOC, and Tensas Parish EOC (St. Joseph)

Extent of Play: This is a "Scenario-dependent" objective, and will be demonstrated as "Talk-through" if the scenario does not warrant it.

ARCA: **None**

OBJECTIVE 15: **IMPLEMENTATION OF PROTECTIVE ACTIONS - SPECIAL POPULATIONS**

Demonstrate the capability and resources necessary to implement appropriate protective actions for special populations.

Locations: Tensas Parish EOC (St. Joseph)

Extent of Play: This objective will be demonstrated through discussion in the Parish EOC and through communications as necessary and appropriate for the scenario.

ARCA: **None**

OBJECTIVE 16: **IMPLEMENTATION OF PROTECTIVE ACTIONS – SCHOOLS**

Demonstrate the capability and resources necessary to implement protective actions for school children within the plume pathway emergency planning zone (EPZ).

Out-of-sequence around 11:00 AM Tuesday September 18, 2001

Locations: Tensas Parish, Newellton High school

Extent of Play: The school officials will demonstrate the implementation of protective actions at the school by describing to evaluators the procedures that would be followed. Teacher or student activity will not be interrupted by exercise activity and protective actions will be simulated. One bus from the parish will be mobilized for demonstration. A school bus driver will be dispatched to the participating school, escorted with a deputy in a unit. The bus driver will demonstrate mobilization, communications, and radiological exposure control methods. The bus driver will be able to identify the route to the assigned reception center but travel to the reception center will not be demonstrated. This activity is to be considered for correction on the spot at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

OBJECTIVE 17: **TRAFFIC AND ACCESS CONTROL**

Demonstrate the organizational capability and resources necessary to control evacuation traffic and to control access to evacuated and sheltered areas.
Out-of-sequence around 1:00 PM Tuesday September 18, 2001

Locations: Tensas Parish EOC, Traffic Access Point

Extent of Play: Tensas Parish will demonstrate this objective fully out of sequence. One traffic control officer will participate. After the briefing of the officer on radiation control, the officer will talk through the procedures in the area in front of Tensas Parish EOC. No actual interference with traffic will take place. This activity is to be considered for correction on the spot at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

OBJECTIVE 18: **RECEPTION CENTER - MONITORING, DECONTAMINATION, AND REGISTRATION**

Demonstrate the adequacy of procedures, facilities, equipment, and personnel for the radiological monitoring, decontamination, and registration of evacuees.
Out-of-sequence around 5:00 PM Tuesday September 18, 2001

Locations: Winnsboro Reception / Care Center (Winnsboro)

Extent of Play: One monitoring station on the male side will be set up in accordance with procedures. Six individuals per shift will be registered and monitored, but only one will be found contaminated. All decontamination procedures will be simulated by walkthrough of the procedure and facility.
One of the two vehicle monitoring stations will be set up and two vehicles per shift will be monitored, one of which will be found contaminated. All decontamination procedures will be simulated by talk through of the procedure. This activity is to be considered for correction on the spot at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

OBJECTIVE 19: **CONGREGATE CARE**

Demonstrate the adequacy of facilities, equipment, supplies, personnel, and procedures for congregate care of evacuees.

Locations: Winnsboro Reception / Care Center (Winnsboro)

Extent of Play: This is a "Scenario-dependent" objective, and will be demonstrated as "Talk-through" if the scenario does not warrant it.

ARCA: **None**

OBJECTIVE 22: **EMERGENCY WORKERS, EQUIPMENT AND VEHICLES – MONITORING AND DECONTAMINATION**

Demonstrate the adequacy of procedures for the monitoring and decontamination of emergency workers, equipment and vehicles.

Out-of-sequence around 1:00 PM Tuesday September 18, 2001

Locations: Tensas Parish Mon/Decon Center

Extent of Play: The facility set up, equipment and procedure use will be demonstrated, as it would be in an actual emergency. An individual (Deputy) will simulate an emergency worker returning from a field assignment and will arrive in a vehicle simulated to have come from a contaminated area. Decontamination of the individual and vehicle will be simulated by walk-through of the facility and procedure. Commercial telephone and radios are available for communications. The use of the facility for decontamination of female emergency workers will be discussed. This activity is to be considered for correction on the spot at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

OBJECTIVE 23: **SUPPLEMENTARY ASSISTANCE (FEDERAL/OTHER)**

Demonstrate the capability to identify the need for external assistance and to request such assistance from Federal or other support agencies.

Locations: Tensas Parish EOC

Extent of Play: All activities will be carried out as specified in the plans and procedures.

ARCA: **None**

OBJECTIVE 25: **LABORATORY OPERATIONS**

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

Locations: LDEQ Laboratory (Baton Rouge)

Extent of Play: The demonstration of this objective will be done out-of-sequence, and will be limited to receiving of air sample cartridge and the particulate filter, analyzing them, and transmitting results of analysis to the appropriate State recipients located at the LDEQ HQ, State EOC, or GGNS EOF. No other media samples (soil, water, vegetation, etc.) will be received and analyzed by the laboratory

ARCA: **None**

OBJECTIVE 30: **CONTINUOUS, 24-HOUR STAFFING**

Demonstrate the capability to maintain staffing on a continuous, 24-hour basis through an actual shift change.

Locations: Winnsboro Reception / Care Center, (Winnsboro)

Extent of Play: Winnsboro Reception Center Manager (1), Office of Family Support (1 registration desk position), Red Cross (1 position), Officer in Charge (1), vehicle monitor (1), initial Personnel Monitor (1), initial Recorder (1), personnel decontamination station (1), secondary Monitor (1), secondary Recorder (1), a total 10 positions per shift.
This activity is to be considered for correction on the spot, only for shift change briefing and discussions, at the discretion of and concurrence between the evaluator and the controller.

ARCA: **None**

GENERAL EXTENT-OF-PLAY (EOP):

With regard to last minute additions or changes to any previously approved Extent-of-Play, all suggested changes must be forwarded to the RAC Chair for approval.

The goal of all offsite response organizations (ORO) is to protect the health and safety of the public. This goal is achieved through the execution of appropriate plans and procedures. It is recognized that situations may arise that could limit the organizations in the exact execution of these plans and procedures.

In the event of an unanticipated situation, OROs are permitted to exercise flexibility in the implementation of their plans and procedures in order to successfully achieve the objective of protection of public health and safety and protection of the environment.

As a statement of fact, no ORO will deliberately deviate from its plans and procedures with the intent of avoiding responsibility.

As indicated in the Extent-of-Play Agreement, the State of Louisiana requests the option to correct issues immediately as defined in FEMA Policy Paper, Strategic Review Steering Committee, Initiative 1.5, correct Issues Immediately, effective March 31, 2000, signed by Kay C. Goss, CEM, Associate Director for Preparedness, Training and Exercises. Acceptable activities for on the spot correction are clearly indicated in the extent-of-play portion under each objective.

Update of Extent-of-Play for LDEQ Field Monitoring Teams for Objectives: 1, 4, 5, 6 and 8

Due to scenario difficulties the LDEQ Field Monitoring Teams (FMTs) will be following two different Scenarios during the GGNS graded exercise activities. The FMTs activities will be as Two separate scenarios as follows:

> Scenario 1: To demonstrate activation and Mobilization, Headquarters Procedures and activities (Objective 1), Communication (Objective 4), Coordination, and procedures for determining the plume footprint. These activities will follow with GGNS Scenario.
>
> Scenario 2: To demonstrate procedures, communication, and familiarity with the EPZ map (Objectives 4, 5, 6and 8). This will be a separate Scenario from the GGNS activities.
>
> FMTs will start mobilization activities at Ramada Inn with the GGNS Scenario (Scenario # 1) and will be dispatched to their staging location at St. Joseph. Communication during this time will be based on activities in Scenario number 1.
>
> Upon arrival to the staging location the FMTs will follow the procedures for the staging location. When the FMTs report their readiness to continue the activities, a controller will halt activities with scenario 1 and will start activities with scenario 2.

After demonstrating the procedures using scenario 2, The FMTs will rejoin the EOF Team in scenario one activities.

The State controllers at the EOF will insure that information of scenario 2 will not be disclosed to the EOF team.

The FMTs' controllers will assure that the information received by the FMTs is the right information needed to follow the scenario they are involved in.

APPENDIX 4

EXERCISE SCENARIO AND TIMELINE

7.0 EXERCISE SCENARIO

INITIAL CONDITIONS

The plant is operating at 100% power 15 months into the current 18 month operating cycle. The weather is sunny with moderate 3 to 7 mph winds from the northeast. A mild cold front from the east is expected to reach the area later today.

A Div. I workweek is in progress

LPCS System in tagged out with the suction and discharge valves tagged closed for pump shaft inspection. High vibration was experienced during the Quarterly pump surveillance on 3/6/2002. The system was declared inop at 1700 yesterday, 3/6/2002. The motor supply breaker 152-1506 is tagged out and the electrical leads have been disconnected. The pump impeller has been pulled and is in the hot machine shop for inspection.

There is a small steam leak on the steam supply line from the equalizing header to the steam jet air ejector. Furmanite injection repair is scheduled for this weekend.

Reactor Engineering, Operations, Heath Physics and support personnel are cutting up control rod blades removed from service during RF11. Disassembled control rods are being stored in open under water containers in the cask storage pool.

NARRATIVE SUMMARY

The EXERCISE begins at approximately 0800.

At 0810 the control room receives an alarm indicating that the 'A' D/W Chilled Water pump has tripped. The control room operators should verify that the standby pump auto starts or manually start the standby pump. The auxiliary building operator that is dispatched to investigate the cause of the pump trip will report a burned insulation smell in the area. Electrical supply breaker 1BP4203 has a trip indication.

At 0825 the control room receives an alarm on the ARM for the CRD Repair Room. When the operator checks the ARM indicator on the back panel he discovers that it is offscale high. If HP is requested to perform a survey of the area, at 0835 they will report that readings in the room near the ARM are in excess of 5R/hr and that readings in the center of the room are in excess of 20 R/hr.

Plant Services and HP personnel are in the process of moving a cask filled with disassembled control rods in the cask storage area. Several pieces of boron material from a disassembled control rod were spilled when the cask was being moved. They are in the process of cleaning the cask storage pool area at this time.

The Shift Manager should turn over the control and command function to the Control Room Supervisor .

Shift Manager should determine the proper EAL and announce that he is the Emergency Director.

An **ALERT** should be declared before 0850 based on "Verification of area rad monitor reading >1000 times setpoint" (within 15 min. of verification of rad level by RP).

RP should perform surveys of the areas surrounding the CRD repair room and restrict access in high radiation areas.

Access to areas 9 and 10 of Aux Building 185, 166 and 139 ft elevation may be restricted.

By approximately 0935 the TSC, EOF and OSC, must be manned and control of the emergency transferred to the TSC or the EOF. (45 min from declaration of Alert) (When calculating the actual amount of time taken for the TSC to become operational, consideration should be given to the fact that an average of 6 minutes is required for the Emergency Director to travel from the admin building to the simulator and back to the admin building. This does not include turnover time. Under actual emergency conditions, the Emergency Director would travel directly from the admin building to the TSC and not detour to the simulator. Therefore, during drills or exercises, 6 minutes should be subtracted from the total time taken for the TSC to declare itself operational.)

At 0945 a grid perturbation occurs causing the main generator to trip. The reactor fails to scram on turbine/control valve fast closure, however the reactor high flux and high pressure trip actuate to scram the reactor. Due to the flux transient, fuel damage occurs. Rad levels on the MSL monitors will gradually increase. Offgas pretreatment radiation levels will increase to 55 mr/hr before leveling off.

At 1025 LCC 15BA3 trips and lockouts when a fault occurs in supply breaker 52-15301, LCC 15BA3 supply breaker from 15AA. The problem occurs due to failure of the solid state trip device. There is no damage to the bus and LCC 15BA3 is recoverable after replacement of the solid state trip device.

Auxiliary building isolation valves will loose power and the Div. I air operated isolation valves will fail closed. Instrument air will be lost to the auxiliary building. Makeup air to the MSIV air accumulators is lost. The shift should manually close the MSIV's prior to their drifting closed on loss of air. If the MSIV's are not manually closed, they will begin to drift closed approximately 5 minutes after loss of power. The shift should control reactor pressure with SRV operation.

EP attachment 7 may be called for to install a bottled gas supply to the SRV accumulators to allow for continued operation.

RHR 'B' should be placed in suppression pool cooling mode. Due to the loss of power to E12-F024A (MCC 15B31), RHR 'A' suppression pool cooling is not available without manually operating E12-F024A.

Injection through RHR 'A' valve 1E12-F042A(LPCI mode) is not available due to loss of power to the valve actuator. 1E12-F042A power supply is from (MCC 15B31) breaker 52-153136. The location of F042A is 135' elevation in the containment.

1E12-F053A(SDC injection valve) is powered from MCC 15B31. Until MCC 15B31is re-energized, reactor vessel makeup through F053A is by manual operation only. If manual operation is attempted, the clutch on the actuator will not engage to allow manual opening of the valve. 1E12-F053A is located in RHR 'A' pump room, area 7 on the 119' elevation.

(1030) When the MSIV's close, the "B" feedwater line ruptures in the Drywell. When an attempt is made to isolate the feedwater line, isolation valves B21-F065 A/B fail to close due to a loss of power to their actuators (B21-F065A/B feed from MCC 15B31). Rupture is such that HPCS injection can maintain reactor level greater than –167". Condensate/Feedwater injection through the 'A" and 'B' feedwater lines and RCIC should be secured.

At 1035 a RCIC steam line break occurs in the RCIC room and the isolation valves fail to isolate. E51-F064 fails to close due loss of power to 15B31. E51-F063 fails to close completely due to the shearing of the key way in the collar that connects the actuator motor to the drive gear. The actuator will operate but the valve disk has no movement. When the RCIC steam line ruptures,

live steam enters the room. Excessive pressure in the room causes the blowout panels to lift to relive the pressure to the atmosphere outside of the secondary containment boundary. Indication of an unmonitored release begins. Security notifies the control room that they have indication that the RCIC room blowout panels have lifted and that steam is emitting from the top of the auxiliary building. Fire alarms on panel 1H22-P282 are actuated and the fire computer in the control room (Simulated) will indicate zone "F DET ZN 2-04 ALARM, E. EL. PEN RMS SM DET" in alarm.

HPCS, SLC and CRD are the only operable high pressure injection systems available for injection. RHR 'B' and RHR 'C' are available for injection if reactor depressurization occurs. Level is maintained greater than –167".

When reactor pressure decreases to below 475 psig (the high reactor pressure opening interlock for the low pressure ECCS injection systems) RHR 'C' pump breaker will trip and lockout due to an internal fault in the pump motor winding. RHR 'C' is not recoverable.

RHR'B' injection valve E12-F042B will not open due to the stem/disc separation. Injection through 1E12-F053B (EP Attachment 12) is not available due to the 'B' FW line break.

At 1035-1050 a **SITE AREA EMERGENCY** should be declared based on "RCIC steam line break outside of the containment with a failure to isolate".

A **SITE EVACUATION** should be ordered and personnel accountability should be complete within 30 minutes from the declaration of the SAE or Site Evacuation, whichever occurred first.

Once personnel accountability is complete and search and rescue is initiated for any unaccounted for personnel, an announcement will be made directing that access back into the protected area is now allowed.

At 1110 the HPCS pump trips which trips the breaker trip coil (52/TC) in such a way that prevents breaker reclosure....this leads to two actions which must occur.(1) trip coil and/or breaker must be replaced (2) Over current relay (51-1/INST) has to be replaced.

CRD 'A' and 'B' pumps are not capable of maintaining or increasing reactor water level.

CRD backwash suction strainer plugging occurs and both CRD pumps trip. Pumps can be recovered if suction strainer is cleaned but will foul again within approximately 10 minutes.

Vessel makeup via Standby Service Water 'B' crosstie to RHR 'B' is unavailable due to failure of E12-F042B to open. 'B' feedwater line break prevents injection through E12-F053B.

A discretionary classification of General Emergency (EAL 18.4.1) may be made following the loss of HPCS and CRD due to having a breach of the primary containment and no makeup systems available that are capable of restoring and maintaining reactor water level above the top

of active fuel. Core damage may be predicted to occur within 2 hours due to the lack of adequate core cooling.

At 1125 reactor water level falls to less than –167".

EP attachment 26 (Fire Water Injection) should be called for. Injection pathways #2,3,and5 are available for use.

SLC injection should be ordered.

At 1125-1140 a **GENERAL EMERGENCY** should be declared based on "Loss of 2 out of 3 fission product barriers with a potential loss of the third".

Reactor depressurization is required per EP-2 due not being able to maintain reactor water level above –192" without depressurization or per EP-4 due to declaring a General Emergency and having a system discharging outside the primary containment which can not be isolated.

Severe Accident Procedures are entered.

At 1135 due to inadequate core cooling, additional fuel failure occurs in the fuel pins damaged during the flux transient and indications of an offsite release are seen.

At 1230 a wind shift occurs and takes the plume into sector M, with sectors L, M & N now affected. The OSC is located in sector Q. If a decision is made to be conservative and evacuate the OSC, controllers will inform facility lead personnel that ERF facility evacuation will not be demonstrated.

SBGT 'A' operation is impaired due loss of power to 'A' Enclosure Building Recirc Fan. SBGT 'B' functions properly.

Repair teams should be dispatched to recover /repair injection systems, isolation valves and electrical buses.

At 1315, the HPCS pump trip coil and the O/C relay (51-1/INST) replacement is complete HPCS is available for injection.

At 1325 the solid state trip device for breaker 52-15301 is replaced and power to MCC 15B31 is restored. Reactor water level can be raised using RHR 'A' injection through E12-F042A or F053A or by closing Feedwater isolation valve B21-F065B and injecting condensate through the 'A' FW line.

At 1335 the injection systems which have been restored will begin to raise reactor water level and level will begin to come on scale.

At 1335, RCIC isolation valve E51-F064 is closed, reactor coolant system leakage from the primary containment to the Offsite is terminated.

At 1340 reactor vessel level should be restored and maintained above TAF.

By 1415, facilities should be into discussions of a re-entry and recovery plan.

At 1500 the exercise will be terminated .

0800	00:00	Exercise begins
0810	00:10	'A' D/W Chilled Water pump trip
0825	00:25	Control room receives alarm on CRD Repair Room ARM.
0828	00:28	CR operator checks back panel and reports CRD repair room ARM indicating upscale. >1 R/hr.
0835	00:35	HP sent to investigate high rad reports >5.1R/hr at CRD repair room door.
0835-0850	00:35-00:50	An **ALERT** should be declared due to EAL 12.1.1 "Verification of area rad monitor reading >1000 times setpoint" (ARM setpoint at 2.5 Mr/hr) **Performance Indicator:** Initiator Time: _____ Classification Time: _____ Classification w/in 15 minutes? Yes No Classification Accurate EAL? Yes No **Performance Indicator:** Notification Time: _____ Notification w/in 15 minutes of Classification? Yes No Notification Accurate? Yes No Access restricted in area 9 and 10 of Aux Building 185, 166, and 139 ft elevation.
0920-0935	01:20-01:35	TSC, EOF and OSC operational, control of emergency transferred to TSC.
0945	01:45	Grid perturbation causes generator trip. Reactor fails to scram on TCV/TSV fast closure however, power spike causes reactor to scram on high flux or high reactor pressure. Fuel failure begins. Off gas pretreat radiation levels of at 55 mr/Hr.
1025	02:25	Breaker 52-15301, feeder to LCC 15BA3 faults and causes LCC 15BA3 to trip which de-energizes MCC 15B31

1030	02:30	MSIV'S close on loss of air or shift manually closes MSIV's in anticipation of closure on loss of air. "B" F/W line break in D/W. RHR 'A' inop due to loss of power to (15B31) F042A, F024A, and F053A. B21 F065A/B fail to close due to loss of power to 15B31. Feedwater and RCIC must be secured.
1035	02:35	RCIC Steam line break in RCIC room, failure to isolate
1035-1050	02:35-02:50	**SITE AREA EMERGENCY** declared due to " RCIC steam line break outside of the containment with a failure to isolate". Within 15 minutes of notification of RCIC failure to isolate **Performance Indicator:** Initiator Time: _____ Classification Time: _____ Classification w/in 15 minutes? Yes No Classification Accurate EAL? Yes No **Performance Indicator:** Notification Time: _____ Notification w/in 15 minutes of Classification? Yes No Notification Accurate? Yes No **Site Evacuation** ordered RHR 'C' pump beaker trips due to internal fault in motor winding. Not recoverable. 1E12-F042B fails to open (not recoverable)
1110	03:10	HPCS pump trip. CRD pumps 'A' and 'B' trip on low suction pressure due to backwash suction strainer plugging. SSW 'B' crosstie to RHR'B' unavailable due to failure of RHR'B' injection valve F042B to open.
1105-1120	03:05-03:20	Site evacuation and personnel accountability complete. Within 30 minutes of declaration of SAE or Site Evacuation, whichever was declared first.

		A discretionary classification of General Emergency (EAL 18.4.1) may be made following the loss of HPCS and CRD due to having a breach of the primary containment and no makeup systems available that are capable of restoring and maintaining reactor water level above the top of active fuel. Core damage may be predicted to occur within 2 hours due to the lack of adequate core cooling.
1125	03:25	Reactor water level drops below –167" (TAF) Severe Accident Procedures entered.
1125-1140	03:25-03:40	**GENERAL EMERGENCY** declared based on "loss of 2 out of 3 fission product barriers with a potential loss of the third". Reactor depressurization required **Performance Indicator:** Initiator Time: _____ Classification Time: _____ Classification w/in 15 minutes? Yes No Classification Accurate EAL? Yes No **Performance Indicator:** Notification Time: _____ Notification w/in 15 minutes of Classification? Yes No Notification Accurate? Yes No **Performance Indicator:** PAR Correct? Yes No
1135	03:35	Fuel failure begins due to inadequate core cooling

1230	04:30	Wind shifts, PAR required **Performance Indicator:** Initiator Time: _____ Time PAR developed by REM: _____ PAR Accurate? Yes No Notification Time: _____ Notification w/in 15 minutes of development by REM? Yes No Notification Accurate? Yes No
1315	05:15	HPCS pump trip circuit repaired, HPCS pump recoverable.
1325	05:20	1E12-F053A Manually opened
1325	05:25	Power to MCC 15B31 restored, RHR 'A' available for level recovery, power to F/W isolation valves B21-F065A and B restored, F/W line break in D/W can be isolated and condensate used for level recovery.
1335	05:35	Injection systems raise water level on scale
1335	05:35	RCIC isolation valve E51-F064 power restored, Isolation valve closed, release path terminated.
1340	05:40	Level restored to above TAF
1415	06:15	Facilities should be in recovery discussions
1500	07:00	Exercise Terminated.

APPENDIX 5

PLANNING ISSUES/

AREAS RECOMMENDED FOR IMPROVEMENT

ENMC

Planning Issue

Description: Inadequate Data Connection Telephone Lines for OROs and Difficulty Establishing Data Connections for Network Computers. Both Louisiana and Mississippi use laptop computers with TCP modems for network connection to their respective State EOCs for logging, action tasking/tracking, coordination of draft News Releases, EAS messages, etc. Louisiana used an undesignated phone wire coiled on the floor, but the only other line not in use was the dedicated phone line for the FEMA representative. There is a desktop computer and monitor in the ORO workroom with a State of Mississippi property tag on it, but the Mississippi PIO did not know if it was working. Additionally, the FEMA line had a unique dialing sequence for long distance connections, and Mississippi was unable to establish a connection for over an hour.

Impact: Delay in Coordination of News & EAS Message Release. Both States use their laptop computers' continuous network connection to their State EOC as the primary method for coordination with their respective EOC. The software in use by both States has become the primary method of logging, tasking, tracking, coordinating, and maintaining "display" of status. Inability of either State to have access to a data connection causes problems to arise in effectively coordinating and reviewing status of ongoing operations. There is only one phone line available for data connection. With all positions staffed, there would not be a data line available for one State.

Reference: Objective 4, POR 4.1, NUREG F.1.2.

Recommendation: Each ORO must establish data connection requirements and the dedicated data lines must be installed and maintained. The OROs must establish and practice procedures for coordinating status and action tracking information maintained in the computers.

Area Recommended For Improvement

Description: Failure to Maintain Displays. Upon arrival at the ENMC, Mississippi State and county representatives immediately began working issues without setting up the room (hanging and posting charts stored in the room), establishing an official log, or preparing an action plan. The Louisiana team kept a log on their laptop after their arrival. This resulted in the ENMC not using status boards to track key events and not posting the current emergency classification level

(ECL) within the government work room; additionally the ECL was not posted in the media briefing room. There may have been a tendency to rely on information on the EM 2000 computer systems being posted by the SEOC and available to all users on that network. That information, however, is only available to the person operating the computer.

The principal effect during the exercise was one of inefficiency in not being able to rapidly refer to specific times of actions taken in the States and county/parish, and not being able to use as a ready reference for telephonic and face-to-face coordination. This effect on efficiency was compounded since recurring update briefings were not held in the government room, nor did Mississippi maintain a log. The use of the EM 2000 is not a reliable status or display method because the information was not available to everyone in the room. If there were a loss of data link, EM 2000 connectivity would be lost, and there would be no readily available status display, PAR/PAD condition, or chronological record of actions taken.

Impact: Inaccurate/Unclear Information Concerning Protective Actions in an EAS Message Related News Release. Both States use their laptop computers' continuous network connection to their State EOC as the primary method for coordination with their respective EOC. The software in use by both States has become the primary method of logging, tasking, tracking, coordinating, and maintaining display of status. The Mississippi Lead PIO participates in the PAD conference call but does not use the laptop computer to record information for coordination and display. A PAD extending the Shelter-In-Place recommendation out to a 10-mile radius was released with conflicting and confusing information. The Claiborne County spokesperson intervened during a news conference to supply the correct information after becoming aware of the potential for public confusion as the MLPIO briefed the PAD. The inability for other OROs to see the PAD information that the Mississippi PIO had obtained in a conference call made coordination and cross check of the information difficult. The news release was printed, copied, and distributed just prior to the news conference but it had not been reviewed by the other OROs.

Reference: Objective 2, POR 2.3, NUREG H.3, J10.a, b.,11.
POR 2.4 (a), NUREG H.

Recommendations: Displays must be used and maintained in a timely manner to ensure all staff has reference to the critical information regarding current ECL/declaration time, utility status, PAR/PAD information, and ongoing tasks/actions. Procedures to train and better utilize staff assigned or the addition of staff are required to ensure this critical activity is provided.

WINNSBORO RECEPTION CENTER

Areas Recommended For Improvement

Description: Failure to report complete information. The plan reference below states that Reception center managers will be responsible for reporting the following information to the Parish EOC at 2-hour intervals following the commencement of surveying: the number of persons surveyed; the number of

persons determined to be contaminated; the number of persons decontaminated at the reception center; the number of persons sent to a medical facility for further decontamination procedures; the highest reading above 0.1 mR/hour for each contaminated individual; and any contamination disposal needs. Only number of evacuees, number of vehicles, number of contaminated evacuees and levels of contamination were reported.

Impact: Parishes will not have complete or accurate data to report to the State EOC which could cause delays in providing required resources. Incomplete information could possibly distort the true impact of the incident.

Reference: The Louisiana State Emergency Operations Plan, Supplement II., Chapter 9, Section IV., B. 5.

Recommendations: Report complete data in accordance with current plans and procedures. Review procedures/check-lists to insure all required information is included.

Description: In the Decontamination Station, the confiscated items were noted on the evacuee's Survey Report form and the items bagged. The bags were labeled and marked with radiation caution signs, however the labels were not completed to match the item to the owner.

Impact: Personal items may not be returned to the correct individuals.

Reference: Franklin Parish Reception Center Procedures, Attachment 2, Initial Personnel Monitoring Operations, C. 2.

Recommendation: Label items in accordance with the procedure: "The baggie should be pre-labeled with a strip of tape. Write the individual's name and address on the tape, along with a list of articles in the baggie. Hold the personal items until the individual is decontaminated. Return the personal articles to the individual after the articles have been monitored and decontaminated, if necessary".

APPENDIX 6

EAS STATION OBSERVATIONS

The ability to receive, understand, and broadcast, an EAS message was demonstrated by the staff at KNOE-FM 101.9 in Monroe, Louisiana. A facsimile and telephone are the communication links between KNOE and the Tensas Parish Emergency Operations Center (EOC) in St. Joseph, Louisiana. The telephone and fax machine are located within easy reach of the station announcer. Caller ID identifies the caller for the station announcer.

The test fax received by KNOE at 8:51 a.m. provided a contact name and telephone number at the Tensas Parish EOC. A call from the station announcer to the Assistant Director at the Tensas Parish EOC followed immediately after receiving the fax. At 11:25 a.m., the Director of Tensas Parish EOC called the station announcer to inform her that an EAS message was forthcoming. An evacuation EAS message was received by fax at 11:52 a.m. At 11:58 a.m., the Director of Tensas Parish EOC called the station announcer to confirm that the EAS message had been received and set the time of broadcast at 12:10 p.m. At 12:05 p.m. the Director of the Tensas Parish EOC called the station announcer to add the following statement to the evacuation message: "The school children in St. Joseph have already been evacuated and are at the Ferriday High School Reception Center in Ferriday, Louisiana." At the established time of 12:10 p.m., the message was read by the announcer in a simulated over-the-air broadcast. The Director of Tensas Parish EOC called at 12:11 p.m. to confirm with the station announcer that the station could have actually broadcast the message at the established time.

The station announcer was aware of the need to read the entire message and the addendum at the time indicated and that it would be necessary to repeat the text. The station announcers observed were well trained. The General Manager and all KNOE personnel were enthusiastic in their support of the EAS program.

In summary, the status of the FEMA exercise objective for this location is as follows:

a. **MET:** Objective 11

b. **DEFICIENCY:** NONE

c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE

d. **NOT DEMONSTRATED:** NONE

e. **PRIOR ISSUES-RESOLVED:** NONE

f. **PRIOR ISSUES-UNRESOLVED:** NONE