

Exercise Report Grand Gulf Nuclear Station

Exercise Date: *September 17, 2003*

Report Date: *December 17, 2003*



FEMA

TABLE OF CONTENTS

	Page
I. EXECUTIVE SUMMARY	4
II. INTRODUCTION	5
III. EXERCISE OVERVIEW	7
A. Emergency Planning Zone Description	7
B. Exercise Participants	8
C. Exercise Timeline Louisiana	8
D. Exercise Timeline Mississippi	10
IV. EXERCISE EVALUATION AND RESULTS.....	11
A. Summary Results of Exercise Evaluation	11
B. Status of Jurisdictions Evaluated	13
1. STATE OF LOUISIANA	15
1.1 State Emergency Operations Center	15
1.2 LDEQ at Grand Gulf.....	16
1.3 State Field Monitoring Teams	21
1.4 Emergency News Center	22
2. RISK JURISDICTION	25
2.1 TENSAS PARISH	
2.1.1 Emergency Operations Center	25
3. SUPPORT ORGANIZATIONS.....	30
3.1 Tallulah Reception Care Center, Madison Parish	30
3.2 Madison Parish Congregate Care Center	32
3.3 KNOE Radio	33

List of Appendices

Appendix 1 - Acronyms and Abbreviations	35
Appendix 2 - Exercise Evaluators and Team Leaders	38

TABLE OF CONTENTS (CONT'D)

Appendix 3 - Exercise Evaluation Areas and Extent-Of-Play Agreement 39
Appendix 4 - Exercise Scenario and Timeline 51
Appendix 5 - Areas Recommended for Improvement 64

List of Tables

Table 1 - Exercise Timeline 9/10
Table 2 - Summary Results of Exercise Evaluation 11/12

I. EXECUTIVE SUMMARY

On September 17, 2003, 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 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 September 17, 2003, there have been 14 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 at the Tallulah 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 was one Deficiency and one Area Requiring Corrective Action (ARCA) identified during this exercise.

On Monday December 1, 2003, a FEMA Evaluator attended the re-demonstration of Evaluation Area 5.a.1 which had been identified as a deficiency in the September 17, 2003 Plume Exercise. The successful demonstration was begun at 10:08 a.m. using the Encoder II software and a pre-scripted weekly test message. The system performed as expected sending out a tone to over-ride the stations signal and reading the test message. The ARCA has also been cleared by the installation of the above mentioned Encoder II over-ride software.

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 Interim Radiological Emergency Preparedness Program Manual Exercise Evaluation Areas.

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 that 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 evaluation areas 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 that 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 Homeland Security and Emergency Preparedness (LHS/EP)
Louisiana Department of Health and Hospitals (LDHH)

Risk Jurisdictions

Tensas Parish

Support Jurisdictions and Organizations

Tallulah Reception/Care Center, Madison Parish
KONE Radio, Munroe, LA

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 September 17, 2003

TABLE 1. Exercise Timeline

DATE AND SITE: September 17, 2003, Grand Gulf Nuclear Station, Louisiana

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received Or Action Taken				
		LA State EOC	LEDQ@ GGEOF	ENC	Tensas EOC	EAS Station
Unusual Event	8:18	8:30	8:25		8:27	
Alert	9:19	9:25	9:21		9:25	
Site Area Emergency	10:45	11:10	10:45		11:30	
General Emergency	11:26	11:48	11:26		11:50	
Simulated Rad. Release Started	11:55		11:55		12:18	
Simulated Rad. Release Terminated	N/A		2:03			
Facility Declared Operational		9:45	10:49	10:20	10:55	
Declaration of State of Emergency		10:25			9:44	
Exercise Terminated			2:03		2:06	2:05
Early Precautionary Actions: (Newellton Schools)					11:20	
1st Protective Action Decision Shelter: 10, 11 Evacuate: 8, 9, 12					11:58	
1st Siren Activation					12:10	
1st EAS or EBS Message					12:10	12:10
2nd Protective Action Decision Shelter: Evacuate:						
2nd Siren Activation						
2nd EAS or EBS Message						
KI Administration Decision:		12:48	12:47		12:56	

DATE AND SITE: September 17, 2003 – Grand Gulf Nuclear Station - Mississippi

Emergency Classification Level or Event	Time Utility Declared	Time That Notification Was Received or Action Was Taken			
		SEOC	MDRH	ENMC	CLAIBORNE COUNTY
Unusual Event	0811	0835	0835		0835
Alert	0919	0937	0937	0937	0930
Site Area Emergency	1045	1108	1108	1104	1125
General Emergency	1126	1149	1149	1129	1152
Simulated Rad. Release Started	1155	1220	1220	1200	1215
Simulated Rad. Release Terminated	On-going	On-going	On-going	On-going	On-going
Facility Declared Operational		1026	1026	1020	0930
Declaration of State of Emergency		1105	1105	1139	1130
Exercise Terminated		1408	1408	1403	1410
Emergency Actions: Close Air Space and Mississippi River Relocate students and Specials needs population, establish TCPs		1126			1122
1 st Siren Activation					1143
Media Briefing					1150
1 st Protective Action Decision Evacuate PPAs: 2 mile radius, areas 1 & 7 to 5 miles Shelter PPAs: Rest of 10-mile EPZ		1147			1158
2nd Siren Activation		1200			1200
EAS Message		1205			1205
2 nd Protective Action Decision Evacuate PPAs: 1, 2a, 2b & 7 Shelter PPAs: Remaining 10-mile		1309			1312
3 rd Siren Activation		1315			1315
EAS Message		1315			1315
KI Decision: Emergency workers ingest			1225		1229

PPA – Protective Action Area

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 evaluation areas delineated in FEMA-REP Interim Program Manual. Detailed information on the exercise evaluation areas 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 criteria, which were scheduled for demonstration during this exercise at all participating jurisdictions and functional entities. Number lists exercise criteria and the demonstration status of those criteria 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)

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 evaluation areas demonstration status.

- **Met** - Listing of the demonstrated exercise evaluation areas 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 evaluation areas 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 evaluation areas 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 evaluation areas 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 that were resolved in this exercise and the corrective actions demonstrated.
- **Prior Issues - Unresolved** - Description of ARCAs assessed during prior exercises that 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 that are discussed in this report.

- A **Deficiency** is defined 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 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.
- **Evaluation area Number** - A two-digit number corresponding to the criterion numbers in FEMA-REP Program Manual.
- **Issue Classification Identifier** - (D = Deficiency, A = ARCA). Deficiencies and ARCAs are included in exercise reports as well as Areas Recommended For Improvement (ARFI).
- **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 Homeland Security and Emergency Preparedness (LHLS/EP) is located at 7667 Independence Blvd., Baton Rouge, Louisiana. Detailed plans and procedures for mobilization and operation during the exercise were available and utilized. Electronic display screens were utilized to project plant status, plume pathway EPZ map, and any other information as appropriate. Information was updated as each new notification message was received from Grand Gulf.

The primary communications system is commercial telephones. Backup systems are 800 MHz radios and satellite phones. A dedicated hotline telephone linked the utility, parish and LHLS/EP. During the exercise, the hotline malfunctioned and messages were received over regular telephone system. This created a delay of only a few minutes in receiving messages from the utility to the State Emergency Operations Center (EOC).

The EOC Operations Officer adequately demonstrated direction and control. The Operations Officer gave frequent briefings and obtained input from staff and state agencies. The Operations Officer also ensured all requests from Tensas Parish were addressed and that information flowed between the parish and the SEOC. The Executive Group consisting of the LHLS/EP Assistant Director and Louisiana Department of Environmental Quality (LDEQ) Liaison were updated by the EOC Operations Officer on EOC activities. The Executive Group discussed what steps would be needed if the situation escalated. The LDEQ Liaison was kept updated by LDEQ technical personnel who were gathering and analyzing the data. The decision to recommend ingestion of potassium iodide (KI) for emergency workers and institutionalized persons in the 10-mile EPZ was based on information received by the LDEQ Liaison, reported to the State Health Officer at the Louisiana Department of Health and Hospitals. The decision was agreed on and disseminated in a timely manner. The State of Louisiana does not recommend KI for the general public.

The Public Information Officer in the EOC prepared five news releases at the direction of the LHLS/EP Assistant Director. Each were reviewed and signed by the Assistant Director before being sent to the Joint Information Center (JIC) in Port Gibson, Mississippi for release to the media.

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

- a. **MET:** 1.a.1; 1.c.1; 1.d.1; 1.e.1; 2.a.1; 2.b.2; 5.b.1
- 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 LDEQ staff that would deploy to the GGNS Emergency Operations Facility (EOF) were pre-positioned at the Ameristar Hotel located in Vicksburg, MS. At 8:45 a.m. the Senior Emergency Operations Facility Liaison (SEOFL) was notified of the **Unusual Event** declaration at the GGNS. At 8:46 a.m., the SEOFL provided a briefing to the staff on current conditions at GGNS, made assignments and gave provided instructions. The Technical Logistic Coordinator (TLC) passed out the assignment list and contact numbers and assigned personnel to vehicles. The Accident Assessment Coordinator (AAC) also briefed the players included instructions to follow plans and procedures; drive safely and obey all traffic laws; 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. They were also supplied with a new contact phone list for players at the EOF. The 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. The SEOFL, and the AAC responded to the EOF while the Field Monitoring Teams (FMT) reviewed their procedures with the Field Monitoring Team Coordinator (FMTC) and performed equipment checks and loaded their trucks. They were supplied 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. The Field Teams were deployed to the Tensas Parish EOC and the FMTC, the Dose Assessment Coordinator (DAC) and the Technical Liaison (TL) then proceeded from Vicksburg to the EOF.

En-route to the EOF the SEOFL and the AAC at 9:40 a.m. received a notice of the escalation to an ALERT by Grand Gulf Nuclear Station at 9:19 a.m. They attempted to make radio contact with the FMTs, however they could not contact the field teams because they were out of range of the handheld radio. The SEOFL called the LDEQ HQ and requested them to relay notification message #2 to the field teams. The SEOFL and the AAC arrived at the EOF at 9:52 a.m., signed in and were briefed by the Utility Radiation Manager about current plant conditions. At 10:35 a.m. the rest of the LDEQ team including the FMTC, the DOC and the TL arrived and were briefed by the SEOFL. The SEOFL directed the LDEQ staff in their response functions, performed periodic briefings of the staff, and provided guidance to the LDEQ staff to ensure efficient use of resources and personnel. Throughout the exercise the SEOFL provided thorough, yet concise, briefings and Protective Action Recommendations from the utility

to LDEQ personnel at the State EOC, LDEQ Headquarters and the Technical Spokesperson at the Joint Information Center.

The LDEQ personnel at the EOF had the following communications systems available: radio and telephone for contact and direction of FMTs and the SEOC. Radios were the primary means of communications with FMTs who also had cellular telephones as backups. No communications failures were noted; however, FMTs occasionally encountered radio frequency "dead zones" and had to rely on cellular telephones. No complete communications failures occurred during the exercise. All LDEQ communications were fully functional during the exercise.

Facilities at the EOF were sufficient to support emergency operations. There was adequate space and supplies. The EOF had adequate furnishings, lighting, restrooms, ventilation and back up power to support operations. The ventilation system could be placed in a filtered re-circulation flow path to prevent the introduction of radioactive contaminants if a plume were to pass overhead. Telephones were available at each station for the LDEQ team to use. There was a dedicated Dose Assessment Computer and printer set up with the latest version of REDAM, "Radiological Emergency Dose Assessment Model" Ver. 2.1 dated 07/99. During the exercise the printed results of REDAM were compared to the Utility and the State of Mississippi Dose Assessment results for the same periods of time and all three matched closely. 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 turn back values given to the FMTs. Status boards were generally updated in a timely manner, however after the start of the radioactive release at 11:55 a.m. the new calculated turn-back values for Emergency Workers was not recorded on the status board until 12:42 p.m.. The EOC and the Field Monitoring teams were notified of the changes in the turn-back values, the status board was slow to be updated in that one area. The licensee controlled access to the facility. The EOF was set up and operated in accordance with the plan.

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 by the Technical Logistics Coordinator and results recorded every 30 minutes. The DRD's were calibrated on April 14, 2003 and due for calibration on April 14, 2004. The KI had an expiration date of February 2005. During deployment and while performing duties within the EOF, the TLC used an electronic timer to remind the LDEQ EOF staff to read their DRD's 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.

The Senior EOF Liaison ensured that his staff completed Accident Assessment, Dose Assessment, Field Monitoring Team control and personnel exposure control. At 10:32 the JIC Technical Spokesperson called to obtain information for the 10:45 a.m. press release. 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 Offsite Emergency Coordinator and the Radiological Manager. He frequently coordinated with the LDEQ Secretary Designee located in the SEOC, the Tensas Parish Emergency Director, 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 a professional job of maintaining detailed, legible logs on all conversations between the SEOFL, the LDEQ Secretary Designee, the Tensas Parish Emergency Manager, the JIC Technical Spokesperson and others. In addition, the SEOFL attended and actively participated in EOF Briefings with the Licensee Offsite 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 a questioning attitude, during briefings he asked technical questions concerning the status of plant systems. At 10:45 a.m. a **Site Area Emergency (SAE)** was declared by the utility based on an un-isolable Main Steam Line break, the AAC immediately inquired about a radioactive release and was told by the utility Radiological Manager that a release was in progress. The AAC consulted with the Dose Assessment Coordinator to determine offsite dose rates downwind. The LDEQ EOF DAC had the responsibility for developing LDEQ 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 information received from the utility dose assessment personnel the DAC ran REDAM and the resulting numbers indicated less than 1 mrem at the utility site boundary. The AAC took those results back to the Radiological Manager who retracted his earlier statement about a radioactive release in progress, due to dose rates not being greater than 1 mrem at the site boundary (criteria for release). He indicated that at that time the clad boundary was still intact so there was still containment of radioactive gas and particles inside the fuel rod. The Radiological Manager declared that the water level inside the reactor would have to drop below the Top of Active Fuel (TAF) to cause cladding failure.

At 10:49 a.m. the LDEQ EOF was declared operational by the SEOFL and this was reported to LDEQ HQ, the LDEQ Lab, the Joint Information Center (JIC), and the LDEQ Secretary's Designee along with an update of plant status. At 10:59 a.m. a conversation was held with the Offsite Emergency Coordinator about evacuating non-essential personnel from the EOF. The SEOFL responded that all his personnel were essential and would remain in the EOF. At 11:08 a.m. the SEOFL called the Tensas

Parish Emergency Director and gave a briefing on plant conditions. The Director reported he had not heard of the SAE declaration over the hotline from the utility. This was reported to GGNS personnel who reported that the hotline was down. Personnel were making notification phone calls over a regular phone line and had to call each point of contact individually. They were attempting to get more communicators.

The SEOFL made timely protective action recommendations (PARs) to the LDEQ Secretary Designee who was responsible for finalizing the recommendations to the Tensas Parish Emergency Director. When the **GENERAL EMERGENCY (GE)** was declared at 11:26 a.m., the SEOFL discussed the use of the default PARs with the Radiological Emergency Manager and the State of Mississippi staff. They all agreed and the SEOFL recommended the default PARs to the LDEQ Secretary Designee at 11:33 a.m.. The default PAR would be for a complete 2 mile evacuation around GGNS, evacuate sectors downwind out to 5 miles (sectors Q, R, A) and shelter the remaining 10 mile Emergency Planning Zone. At that time the wind was out of the South-Southeast blowing towards Louisiana.

At 11:39 a.m. the SEOFL was contacted by the JIC Spokesperson about getting information for a press release covering the General Emergency, the SEOFL supplied the necessary information. At 12:08 p.m. the Tensas Parish Emergency Director contacted the SEOFL to inform him that the PARs were expanded to include evacuation of sections 12, 8, and 9, and shelter downwind sections 10 and 11. Initial discussions between the SEOFL and the Licensee Radiological Emergency Manager concerning the issue of KI occurred at 11:27 a.m. The SEOFL and the AAC reviewed the current Dose Assessment Report and checked on the status and location of the two state FMTs and concluded that there was no need to order ingestion of KI because Louisiana Emergency Workers were over three miles from the plant and radioiodine levels were less than EPA Protective Action Guides. At 12:13 p.m. the Licensee Radiological Emergency Manager informed the SEOFL and the AAC that utility Field monitoring teams within two miles of the plant had been ordered to don respirators with charcoal canisters. At 12:30 p.m., the wind starts to shift to out of the south-southwest turning the plume away from Louisiana and into Mississippi. With the plume now changing direction away from Louisiana, the PADs were not expanded any further to include other sections.

At 12:40 p.m., after reviewing the latest Dose Assessment printout the AAC recommended to the SEOFL that KI be issued to Louisiana EW. The SEOFL contacted the LDEQ Secretary Designee and recommends KI for EW and individuals that could not be evacuated. At 12:47 p.m., the Department of Health and Hospitals (DHH) Officer authorized the use of KI for all Ews individuals that could not be evacuated. FMTs were notified at 12:49 p.m. to take KI and sign the consent form. At 1:15 p.m., the FMTC polled the FMTs about taking KI, they all responded that they had simulated taking KI and signed the forms.

Based on source term estimates and meteorological data provided by GGNS, the DAC successfully calculated turn back values for Emergency Workers using the multiplier for EW's. 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 between all three.

The DAC also had access to TEDE, CDE thyroid, and EW Multipliers (EW Multipliers are used to calculate an EW's TEDE from DRD readings) located on page 2 of the Dose Assessment Printout. By interview, the DAC and AAC correctly explained that the Dose Assessment printout contains a multiplier for EW DRD readings. This gives the appropriate turn-back value based upon Total Effective Dose Equivalent and Committed Dose Equivalent. The evaluator noted that in LDEQ Operating Procedure 6 "Technical Logistics Coordinator" Page 2, Calculation of Emergency Worker's return values corrected for TEDE at GGNS are in Enclosure 1. Enclosure 1 references a graph that is no longer used. The multiplier factor is now included on the Dose Assessment printout.

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. All activities associated with direction and control were performed based on the plans and procedures and completed as they would have been in an actual emergency except as noted in the extent of play agreement.

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

- a. **MET:** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1 3.a.1, 3.b.1, 4.a.2,
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- c. **NOT DEMONSTRATED:** NONE
- d. **PRIOR ISSUES- RESOLVED:** NONE
- e. **PRIOR ISSUES-UNRESOLVED:** NONE
- f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.3 LDEQ FIELD MONITORING TEAMS

Two LDEQ Field Monitoring Teams (FMTs) were demonstrated. The FMTs had been pre-deployed to Vicksburg as per the EOP. The FMTs received pre-deployment briefings that addressed the current plant emergency status, meteorological conditions, dosimetry and communications as though they were deploying from LDEQ Headquarters in Baton Rouge. The teams normal stage for GGNS by their procedure, "Nuclear Power Plant/Radiological Emergency Response Operating Procedure 5" (OP-5) at the Tensas Parish Emergency Preparedness Building. Upon completion of their briefing, the teams were directed by the FMTC to complete their equipment checks (including response source checks). All of the equipment and supplies were in good working order, and they had all of the material required by OP-5. When the FMTs completed their inventory and equipment checks they were deployed by the FMTC to the staging area at Tensas Parish. The FMTC considered the current wind conditions and routes of travel when deploying the teams so as to prevent having them drive through a plume if a release occurred while they were en route to the staging area.

While en route to the staging area the teams monitored ambient radiation levels and communicated both radiation levels and dosimeter readings to the FMTC located at the GGNS EOF. On arrival at the staging area, the teams both re-checked their equipment as required by OP-5. When the equipment checks had been completed, the FMTC deployed them to specific locations for plume edge monitoring. Communications were maintained at various times by radio or cellular telephones. Radiation levels were monitored and dosimeter readings were updated at regular intervals. The teams also received updated exposure turn-back values from the FMTC as the LDEQ dose assessment staff at the EOF updated the values.

Each of the teams followed their procedures in tracking and monitoring the plume edge. Air samples were taken and radiation levels were monitored throughout the sampling process. The teams worked well together, and at one point, coordinated a rendezvous so that one of the teams could use the other teams counting equipment.

Both teams were very thorough and professional. They followed their procedures, and they worked well together with direction from the FMTC.

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

- a. **MET:** 1.d.1, 1.e.1, 3.a.1, 3.b.1, 4.a.1, 4.a.2, and 4.a.3
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE

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

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

1.4. EMERGENCY NEWS MEDIA CENTER

The Emergency News Media Center (ENMC) is a fixed facility co-located with the Claiborne County Civil Defense (CCCD) in Port Gibson, MS. The ENMC portion of the facility is self-contained and ingress and egress to the CCCD area is restricted to a single door. As a fixed facility, tables, chairs, workstations, permanent phone lines, telephone instruments, televisions, and other support equipment is in-place, and activation is a relatively easy operation. The ENMC has its own designated restrooms and shares the use of kitchen facilities with the CCCD. A 105 KW Generac Diesel generator provides the entire complex with back-up power. The generator is programmed to automatically engage on a weekly basis (each Thursday it automatically activates for a 30-minute period) and is serviced by a technician monthly.

The ENMC portion of the complex has limited, but sufficient space to accommodate the utility and government staffs. The staffs are physically separate which can have an adverse affect on coordination as the distinct staffs get caught up in functional concerns. If the ENMC is ever relocated, consideration should be given to obtaining a facility with sufficient space for utility, state, and county/parish personnel to be co-located in a single room. This arrangement is used it has proven to more efficiently support interoperability and coordination between those interfacing with the media.

The media briefing area can easily accommodate 150 people. The media briefing room has adequate sound system, good acoustics, and is well lit. Adjacent to the media briefing area are rooms dedicated to the Emergency Information Center (EIC) which handles rumor control and public inquiries and a room providing workspace for the media.

The GGNSstanding operating procedures (SOPs) are proscribed in the Mississippi Emergency Public Information Comprehensive Plan.

The ENMC is a joint operation, incorporating the utility, the States of Mississippi and Louisiana, and the county/parish of Claiborne and Tensas. While the separate and distinct entities carry out functional responsibilities independently, the Utility Spokesperson orchestrates joint activities. Department of Health and Department of Transportation PIOs who augmented the Mississippi Emergency Management Agency (MEMA) PIO staff, ably demonstrated the MEMA PIO function.

During the course of the exercise, the Utility Spokesperson visited the state and local area frequently providing updates on the plant status and obtaining state and local information to share with the utility staff. This precluded the need for

representatives of both states and local jurisdictions to visit the confined utility spaces to provide updates.

The utility provided administrative support and the internal flow of information (e.g., copies of news releases, plant status reports) to Utility, government, and EIC staffs was timely. Similarly, these utility staff members ensured the media representatives received copies of pertinent information (news releases).

Communications equipment available to support internal and external activities, monitor the media, and respond to public inquiries includes:

- (1) Utility:
 - a. Incoming and outgoing facsimile machines (supports government also)
 - b. Copy machine
 - c. EOF hotline
 - d. Seven commercial telephone lines
 - e. Four televisions (tuned to ABC, CBS, CNN and NBC)
 - f. Radio with taping capability
- (2) Government:
 - a. Multi-function copy/facsimile machine
 - b. Seven commercial telephone lines
 - c. Four televisions (tuned to ABC, CBS, CNN and NBC)
- (3) Rumor Control
 - a. One commercial line for Coordinator
 - b. Seven instruments on a rollover 1-800 line
- (4) Media Room:
 - a. Five commercial telephone lines

Although the State of Mississippi uses the EM 2000 system, the representatives in the ENMC did not have access to this system. This did not affect the coordination between the ENMC and the SEOC.

There are maps, charts and status boards available in the ENMC to support operations. The MEMA PIO used a white board to post/track key events. (Once again it was noted that the populations reflected on the EPZ maps is from 1992, and it may be prudent to have updated data added to the maps.)

Although ENMC staff members are not considered emergency workers, the CCCD complex in which they work is located in the 10-mile EPZ. The CCCD monitors radiation levels and maintains KI to issue to its personnel if required. This does not include ENMC staff. Plans call for the ENMC staff to relocate to Jackson if the CCCD site is threatened by a radioactive release.

The ENMC conducted three news conferences, with the first conducted within 25 minutes of the activation of the ENMC. The Utility Spokesperson convened media briefings on the basis of changing conditions at the plant and took into consideration the

time needed for State and local decision makers to assess the situation and act upon the PARs. ENMC panelists at the media briefings included the following representatives:

- Utility Spokesperson
- Utility Technical Specialist
- MEMA PIO
- Mississippi Department of Health
- Louisiana Office of Homeland Security and Emergency Preparedness
- Louisiana Department of Environmental Quality
- Claiborne Count, Mississippi
- Tensas Parish, Louisiana

The media briefs provided each representative an opportunity to make appropriate comments on plant conditions and/or ongoing/planned governmental actions. The Utility Spokesperson then moderated a question and answer period. The information presented was consistent with news releases, however responses sometimes lacked depth and questions deferred to allow gathering of more information were not subsequently surfaced.

Rumor control at the ENMC is a utility responsibility. The EIC Coordinator and four person staff was augmented by a MEMA liaison who added to the effectiveness of the EIC. Over 400 phone calls were received and acted upon in the 3 ½ hour duration of the exercise. It was notable that the staff returned calls to individuals whose questions were not answered in the initial call. The EIC was well prepared to execute its role, it was in a secure area, and personnel had access to current information to assist them in the execution of their responsibilities. The EIC identified distinct trends and specific erroneous media releases and passed these on to the Utility Spokesperson who addressed each at the next media briefing. A key recommendation by the EIC staff was that guidance news releases (e.g., what should be taken when evacuating, etc.) should be released prior to the actual evacuation message or declaration.

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

- a. **MET:** 1.a.1, 1.b.1, 1.d.1, 1.e.1, 3.a.1, 5.b.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES- RESOLVED:** NONE
- f. **PRIOR ISSUES-UNRESOLVED:** NONE

2. RISK JURISDICTIONS

2.1. TENSAS PARISH

2.1.1. EMERGENCY OPERATIONS CENTER

The Tensas Parish EOC is located in the Parish Police Jury room in the governmental building housing the Sheriff's Department and Dispatch Center as well as the Homeland Security/Office of Emergency Preparedness (OEP) at 205 Hancock in St. Joseph, LA. This facility is adequate for supporting emergency operations. The Coordinator fully mobilized the EOC staff following the **Alert** notification at 9:25 a.m., and he declared the facility operational at 10:55 a.m. A State of Emergency was declared at 9:44 a.m. and faxed to LHS/EP. The **Site Area Emergency** (SAE) was received at 11:30 a.m. and the **General Emergency** (GE) at 11:50 a.m.

The Tensas Parish Police Jury President (PJP) is responsible for overall direction and control of emergency operations. The Emergency Preparedness Director prepares recommendations for the PJP and coordinates all actions executed by the organization.

Functions performed by the Radiological Defense Officer (RDO) were critical to the success of the EOC operation. He distributed dosimetry kits and survey instruments to the emergency workers, thoroughly briefing them prior to deployment. He provided timely and informative briefings to the EOC staff, explaining the radiological monitoring occurring in the EOC, and the KI order when the State Health Officer issued it.

Shortly after the Alert notification, the licensee experienced problems with the hotline; this situation continued for most of the exercise. The EOC staff attempted to report the problems and coordinate backup communications with the licensee for over an hour, but had no success. At 11:15 a.m., the Coordinator was finally able to contact the EOF to check on the plant condition. He was trying to coordinate reliable backup communication when the EOF (possibly inadvertently) hung up on him. He relayed his frustration and concern to the PJP and stated that he had no confidence in the plant's ability to notify him of ECL changes and was not even sure of the current plant condition. He recommended a precautionary evacuation of Newellton schools located in the sectors of the EPZ that were downwind of the site. The PJP concurred and the evacuation was ordered at 11:20 a.m.

At 11:50 a.m., the Coordinator was finally able to talk with the decision maker at the EOF and was told that a General Emergency (GE) had been declared at 11:26 a.m. Message notification #6 was released at 11:40 a.m. and received by fax in the EOC at 11:50 a.m. Once again, there was no other direct notification to Tensas Parish from the licensee. The plant status had deteriorated and release of radiation was expected to affect EPZ sectors in Tensas Parish. The licensee PAR was for evacuation of the 2-mile radius of the plant; evacuation of sectors Q, R, and A; and sheltering of the

remainder of the 10-mile EPZ. The Director determined that no one lived in the 2-mile radius in Tensas Parish but that there was a remote possibility that someone might be in the hunting camps in sub-zone 12 that would have to be checked. With parts of sections 8, 9, and 12 affected by the evacuation PAR, the Coordinator recommended to the PJP that all of these areas be evacuated to avoid any confusion by the public. Parts of sections 10 and 11 were affected by the protective actions, so sheltering was recommended for the all of these sections. The PJP concurred and the PAD was effective at 11:58 a.m.

The Coordinator ordered the siren sounding at 12:10 p.m. followed by broadcast of the EAS message. At 12:13 p.m., he had finished the PAD, siren, and EAS. The licensee had not attempted a conference call with the OROs or conducted a PAD discussion.

The EAS message was sent in a timely manner; however, the staff did not confirm that the information was complete or was received in its entirety at radio station, KNOE. The station is unmanned between 11:00 p.m. and 6:00 a.m. so the capability to broadcast an EAS message to residents 24-hours per day does not currently exist. Even though Tensas Parish advised Claiborne County, MS of their protective action decisions and recommendations and the planned time for the siren sounding, there was no multi-jurisdictional attempt to coordinate sirens and EAS messages for the all of the public in all of the EPZ.

The EOC Coordinator and staff effectively demonstrated the ability to notify special facilities and identify special populations that would need assistance to implement protective actions during the exercise. A satisfactory interview was conducted with representative school officials. A school principal and bus driver demonstrated the use of dosimetry, accountability methods for students, police escort, communications, and knowledge of reception center routes and locations. Evaluators also conducted a Traffic/Access Control Point (TACP) interview and emergency workers demonstrated adequate knowledge of dosimetry use, establishment of control points, and removal of traffic impediments.

Tensas Parish personnel demonstrated an out-of-sequence Emergency Worker Monitoring and Decontamination Station which was activated in a portable building located adjacent to the EOC. Adequate space was available for monitoring and decontamination of emergency workers and vehicles. The RDO issued dosimetry kits and supervised instrument checks. Workers demonstrated appropriate vehicle and personnel monitoring and decontamination activities.

In summary, the status of FEMA Evaluation Areas for this location is as follows:

- a. **MET:** 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.c.2, 3.d.1, 3.d.2, 6.a.1, 6.b.1.
- b. **DEFECIENCY:** 5a1

Issue Number: 28-03-5.a.1-01

Issue: The capability to broadcast an EAS message to Tensas Parish residents 24-hours per day does not currently exist.

Condition: The hotline, fax and EAS messaging equipment are located in the FM studio of radio station, KNOE, in Monroe, LA. This studio is unmanned between 11:00 p.m. and 6:00 a.m.

Possible Cause: Tensas Parish officials, in conjunction with the licensee, have not adequately prepared for 24-hour EAS broadcast capability.

Reference: NUREG-0654, E.5:

State and local governments organizations shall establish a system for disseminating to the public appropriate information contained in initial and follow-up messages received from the licensee including the appropriate notification to appropriate broadcast media, e.g., the Emergency Broadcast System (EBS).

NUREG-0654, E.6:

Each organization shall establish administrative and physical means, and the time required for notifying and providing prompt instructions to the public within the plume exposure pathway Emergency Planning Zone. It shall be the licensee's responsibility to demonstrate that such means exist, regardless of who implements this requirement. It shall be the responsibility of the State and local governments to activate such a system.

Effect: If an EAS message were sent from Tensas Parish to the station between 11:00 p.m. and 6:00 a.m., parish officials could not guarantee broadcast of emergency information to the public for completion of the alert and notification process.

Recommendation: Tensas Parish officials must develop and implement procedures to ensure 24-hour EAS message broadcast capability.

Remedial Action Demonstrated:

On Monday December 1, 2003, a FEMA Evaluator attended the re-demonstration of Evaluation Area 5.a.1 which had been identified as a deficiency in the September 17, 2003 Plume Exercise. Also in attendance were the Tensas Parish Emergency Director, Saint Joseph Fire Chief, Louisiana Office of Homeland Security and Emergency Preparedness, Grand Gulf Nuclear Station Emergency Manager, and two representatives from Louisiana Department of Environmental Quality.

It had been agreed on that the remedy to the deficiency would be to install a system to allow for the Tensas Parish Emergency Director to over-ride KNOE radio with pre-scripted and live audio Protective Action Decision messages. The equipment, a

dedicated computer, landline and software, had been installed and tested prior to the re-demonstration date. The software, Encoder II, has drop down menus, which lists the pre-scripted messages for a quick pick emergency dependent message.

The successful demonstration was begun at 10:08 a.m. using the Encoder II software and a pre-scripted weekly test message. The system performed as expected sending out a tone to over-ride the stations signal and reading the test message. The printout at KNOE radio was faxed to Tensas Parish to confirm the broadcast. The evaluator also went to KNOE radio in Monroe, LA to retrieve the original printout. Tensas Parish also tested their Tone Alert Radios (TAR) in the special population areas and performed a live siren test. Tensas Parish then contacted Cleburne County Mississippi to sound their sirens, which tested the capability for each side of the Mississippi River to set off the other if required in an emergency. All of these tests will be conducted weekly on Wednesdays to coincide with the weekly hotline test to ensure all systems remain in working order.

c. AREAS REQUIRING CORRECTIVE ACTION: 5b1

Issue Number: 28-03-5.b.1-02

Issue: Tensas Parish officials issued incomplete emergency information.

Condition: The radio station did not receive page 2 of the EAS message that identified the section boundaries. The message lacked ECL information and identification of the Reception Center for evacuees. Additionally, there was no information issued about the evacuation of the Newellton school children.

Possible Cause: Parish officials did not verify the accuracy and completeness of the emergency information.

Reference: NUREG-0654, E. 5:

State and local governments organizations shall establish a system for disseminating to the public appropriate information contained in initial and follow-up messages received from the licensee including the appropriate notification to appropriate broadcast media, e.g., the Emergency Broadcast System (EBS).

NUREG-0654, E. 7:

Each organization shall provide written messages intended for the public, consistent with the licensee's classification scheme. In particular, draft messages to the public giving instructions with regard to specific protective actions to be taken by occupants of affected areas shall be prepared and included as part of the state and local plans. Such messages should include the appropriate aspects of sheltering, ad hoc respiratory protection, e.g., handkerchief over mouth, thyroid blocking or evacuation....

Effect: The public lacked appropriate information for response.

The initial message lacked page 2; this page described the sections by landmarks and boundaries appropriate for the evacuation or shelter recommendation. Only if citizens knew their section number would they be aware that the broadcast information applied to them.

The EAS message did not identify the Reception Center that was activated for monitoring and decontamination of evacuees. Therefore, the evacuees did not know where to report. The message did not identify the Emergency Classification Level (ECL) at Grand Gulf. The ECL or description of the emergency at the plant explains why parish officials have ordered the actions outlined in the EAS message.

Newellton school children were evacuated following the Alert, but parents/guardians were never informed about this action including where to pick up the children. This situation was compounded when no Reception Center was identified.

Recommendation: Parish officials need to ensure completeness of emergency instructions by improving pre-scripted messages and the transmittal/verification procedure with the EAS station.

Remedial Action Demonstrated:

This ARCA has been cleared by the installation of the above mentioned Encoder II over-ride software that utilizes improved pre-scripted messages.

- d. **NOT DEMONSTRATED:** N/A
- e. **PRIOR ACRA_s - RESOLVED:** N/A
- f. **PRIOR ARCA_s - UNRESOLVED:** N/A

3. SUPPORT ORGANIZATIONS

3.1. TALLULAH RECEPTION CENTER, MADISON PARISH

The Tallulah Reception Center is located at the Tallulah High School in Tallulah, Louisiana. Evacuees reporting to the reception center are routed into the main parking lot for vehicle monitoring and then into the gymnasium for personnel monitoring, decontamination, and registration. Each of these areas were demonstrated and evaluated. This reception center is staffed primarily with volunteer workers with some assistance from the police and fire departments.

Vehicle Monitoring: Two vehicle survey teams participated in the drill. The teams utilized equipment and signs that were stored at the high school (including permanent record TLDs and DRDs). Each team demonstrated the ability to monitor vehicles using CD V-700 survey meters. Vehicles would enter into the vehicle monitoring area and passengers from the vehicle were escorted to the reception center personnel monitoring area. The driver stayed with the vehicle while it was being surveyed. When contamination was detected on the vehicle, the driver was directed to move the vehicle to a pre-designated decontamination area. They then provided shoe covers to the driver and escorted him to the personnel monitoring area. The monitoring teams used good survey technique and contamination control work practices throughout.

Personnel Monitoring: The monitoring was accomplished in an efficient manner. Ample time was utilized for monitoring each mock victim. When the controller injected information simulating contamination on one of the mock evacuees, the monitoring personnel completed their evaluation and documented the contaminated areas. The information was placed into a plastic envelope and given to the mock victim. The contaminated person was then instructed to proceed to the decontamination area. One of the monitoring team members accompanied the mock victim to the decontamination area. Dosimeters were read every 30 minutes. The monitoring was adequately supervised and well-controlled.

Decontamination: Only one of the decontamination areas was established as per the extent of play agreement. The Tallulah Reception Center utilizes the male and female shower facilities within the gymnasium for decontamination. The area leading to the decontamination showers is isolated with barrier rope and stanchions to isolate the potentially contaminated area from the unrestricted areas. The decontamination area was well-supplied with bags, tape, anti-contamination clothing, soap, towels, and step-off pad materials. The team was able to demonstrate the steps necessary to complete decontamination and monitoring (actual decontamination was simulated). When decontamination was completed, the evacuee was re-monitored and the form that was initiated in the monitoring area was updated to show that the decontamination was completed. The evacuee was then escorted through the rear entrance of the shower area and back into the gymnasium for registration. Personnel working within the decontamination area were well prepared to execute this function should the need arise.

Registration: Various positions were located within the registration area. Functional areas within the registration area are detailed in the table below. Each of the areas were staffed by fully trained volunteers or agency staff. The assistant to the Reception Center Manager was responsible for all desk operations and had prepared operational packets for each area that contained section specific procedures, checklists, and contact numbers. Sufficient communication devices were available through the use of land lines and cell phones so that links with Tensas Parish EOC could be maintained. Although the staff was comprised primarily of volunteers, they were all well prepared and trained for their respective duties.

RECEPTION OPERATION AREA	AGENCY REPRESENTED
Registration Area	Madison Parish Volunteers
Family Services	Office of Family Services
Special Population/Services	Madison Parish Caring on Aging
Shelter Operations	American Red Cross
First Aid Operations	Northeast Louisiana Ambulance Services (observer) Madison Parish Health Unit
Director of Operations	Tallulah Police Department (Director of Emergency Management)
Exit Desk	Madison Parish Volunteers

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

- a. **MET:** 1.e.1, 3.a.1, 6.a.1
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES- RESOLVED:** NONE
- f. **PRIOR ISSUES-UNRESOLVED:** NONE

3.2 MADISON CONGREGATE CARE CENTER

A walk-through of the Congregate Care Center for Madison Parish was conducted on Tuesday evening, September 16, 2003, following the Reception Center drill. The Tallulah Community Center serves as the Congregate Care Center for evacuees from Tensas Parish. The center is activated by the Police Chief who serves as the American Red Cross (ARC) Coordinator for Madison Parish. The ARC would set up and manage the center in accordance with their guidelines, providing Crisis Counseling and First Aid as needed. The local chapter currently has 30 volunteers who could be supplemented by personnel from the Monroe chapter. This facility could accommodate 300-400 evacuees and has adequate space, parking, restrooms including handicap facilities, kitchen, and separate rooms for housing infants and the elderly. Cots are stored offsite and brought to the center as needed. Pets are discouraged but accepted if they are small and on a leash. There are mutual aid agreements in place for the school district to provide cooks for the kitchen and transportation drivers as needed. The Police Department provides security.

Entry to the center requires that an evacuee present a completed registration form issued by the Reception Center. This process verifies that evacuees have been through monitoring and decontamination, if necessary, at the Reception Center. Evacuees without the form are directed to the Reception Center.

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

- a. MET:** 1.b.1, 6.c.1
- b. DEFICIENCY:** NONE
- c. AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. NOT DEMONSTRATED:** NONE
- e. PRIOR ISSUES- RESOLVED:** NONE
- f. PRIOR ISSUES-UNRESOLVED:** NONE

3.3 KNOE RADIO STATION

During the exercise performed on September 17, 2003 the prompt alerting of the public was not successfully demonstrated. Radio station KNOE-FM in Monroe, La, is the primary warning point for Louisiana residents in the EPZ. The station is equipped with a dedicated phone and fax to the Tensas Parish EOC, where population protection decisions are made.

KNOE, is the area NBC affiliate and is situated in a large building with AM/FM and TV all located in the same complex. The facility is adequate for the Primary Warning Point in that all technical assistance, transmitter and backup power are present, and readily available to support 24-hour operations. However, it was noted that the FM station is in a separate area of the broadcast complex and the FM Station is unmanned and broadcasts unassisted, automated programming from 11:00 p.m. through 6:00 a.m. This is inadequate as the dedicated phone and fax from the EOC are located in the FM studio, not in the AM or TV stations which are staffed on a 24-hour basis and cannot be heard outside of the FM area.

At 12:01 p.m., station personnel received the first fax message from the Tensas Parrish EOC. The telephone verification with the EOC was made simultaneously and the message was a simulated broadcast at 12:10 p.m. The message requested the sheltering of residents in two zones and evacuation in a third zone.

The EAS tone-alerting signal was never simulated or discussed by station staff, nor do station procedures manuals, identified by staff, require the activation of the EAS signals with relation to an event at Grand Gulf Nuclear Station. The ability to set off the tones exists, as the equipment is available in the studio. When interviewed station staff indicated an awareness of EAS responsibility.

The simulated message did not contain the plant condition status. Also the EAS message did not contain information to guide evacuees to the proper reception center, by landmark or name. Additional discrepancy's included; no fax cover page indicating how many pages were in the total message, the received message differed from the prepared message in that the received message was page one of the previously prepared two page message and station staff were unaware of the error for over 50 minutes. The evaluator pointed out to the station operator the message discrepancy and the operator notified Tensas Parish EOC of the error at 12:59 PM.

At 1:07 p.m. in response to KNOE-FM's call at 12:59 for clarification, Tensas Parish re-faxed the incorrectly filled out page one and an incomplete page two of the pre-scripted message.

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

a. **MET:** NONE

b. DEFICIENCY: 5.a.1 See Tensas Parish for description and re-demonstration

c. AREAS REQUIRING CORRECTIVE ACTION: NONE

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
A/N	Alert and Notification
Anti-C	Anti-Contamination
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARFI	Area Recommended for Improvement
CFR	Code of Federal Regulations
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
FMTC	Field Monitoring Team Coordinator
GE	General Emergency
GGNS	Grand Gulf Nuclear Station
GM	Guidance Memorandum
HHS	Health and Human Services
KI	Potassium Iodide
LDHH	Louisiana Department of Health and Hospitals
LOEP	Louisiana Office of Emergency Preparedness
LDEQ	Louisiana Department of Environmental Quality
MEMA	Mississippi Emergency Management Agency
M/D	Monitoring/Decontamination
Mon/Decon	Monitoring/Decontamination
MS/DSR	Mississippi Radiological Officer
NOUE	Notification of Unusual Event
NRC	Nuclear Regulatory Commission
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
REDAM	Radiological Emergency Dose Assessment Model
REP	Radiological Emergency Preparedness
RO	Radiological Officer
SAE	Site Area Emergency
SOEF	State Emergency Operations Facility
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

<u>LOCATION</u>	<u>EVALUATOR</u>	<u>AGENCY</u>
RAC Chair	Lisa Hammond	FEMA
Exercise Coordinator	Russ Bookser	FEMA
Co-Coordinator	Joe Howard	FEMA
State EOC, Baton Rouge	Rosemary Samsel	ICF
LDEQ at GGNS EOF	Kevin Keyes	FEMA
	Edward Wojnas	ICF
State Field Team 1	Scott Flowerday	FEMA
State Field Team 2	Stan Maingi	ICF
Emergency News Media Center	Nitja McGrane	FEMA
	Bill Larrabee	FEMA
	Robert Perdue	FEMA
Tensas Parish EOC	Marilyn Boots	FEMA
	Chad Johnston	FEMA
	Eddie Fuente	ICF
	Brett Kriger	ICF
Tallulah Reception Center	Scott Flowerday	FEMA
	Marilyn Boots	FEMA
	Jack Daniels	FEMA
	Chad Johnston	FEMA
EAS Station KNOE	Jack Daniels	FEMA

APPENDIX 3

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

OUT OF SEQUENCE DEMONSTRATION –Tallulah Reception Care Center (Tallulah High School), Madison Parish, on Tuesday September 16, 2003, at 5:00 pm. **Note:** Will be pre-staged at Tallulah High School Reception Care Center.

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.a – Mobilization

Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. (NUREG-0654, A.4, D.3, 4, E.1, 2, H.4)

Locations

State EOC (State Emergency Operation Center), LDEQ (Louisiana Department of Environmental Quality), JIC (Joint Information Center), TPOEP (Tensas Parish Office of Emergency Preparedness)

Extent of Play

LOEP (Louisiana Office of Emergency Preparedness), LDEQ, Louisiana Department of Health and Hospitals (LDHH) and Louisiana Department of Public Safety (LDPS) will participate at the State EOC.

ARCAs: None

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.b - Facilities

Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H)

Locations

LDEQ EOF, Tensas Parish EOC

Extent of Play

ARCAs: None

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c - Direction and Control

Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible. (NUREG-0654, A.1.d., 2.a., b.)

Locations

State EOC, LDEQ Operations, Tensas Parish EOC

Extent of Play

ARCAs: None

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.d – Communications Equipment

Criterion 1.d.1: At least two communication systems are available, at least one operates properly, and communication links are established and maintained with appropriate locations. Communications capabilities are managed in support of emergency operations. (NUREG-0654, F.1., 2.)

Locations

State EOC, LDEQ Operations, Tensas Parish EOC , Field Monitoring Teams

Extent of Play A cell phone, a VHF radio and regular phones will be available.

ARCAs: None

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.e – Equipment and Supplies to Support Operations

Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H., J.10.a.b.e.f.j.k., 11, K.3.a.)

Locations

State EOC, LDEQ Operations, Joint Information Center (JIC), Tensas Parish EOC, Tallulah Reception Care Center (Tallulah High School), Madison Parish, Louisiana Field Monitoring Teams (FMT)

Extent of Play

Demonstration of the availability of KI, dosimetry and radiological monitoring equipment will be the completion of the RADEF Officer's (Radiological Officer) checklist at the Tensas Parish EOC. The ability to store and maintain KI inventory in sufficient amounts will be demonstrated at Tensas Parish EOC.

Note: Traffic Access Control Points- On Wednesday September 17, 2003 FEMA evaluator(s) will conduct interviews when informed by the EOC Director of lull in play.

ARCAs: None

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.a – Emergency Worker Exposure Control

Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4.)

Locations:

State EOC, LDEQ Operations, Tensas Parish EOC

Extent of Play:

LDEQ will discuss the decision-making process concerning emergency workers (EW) exposure control, including the authorization to exceed pre-established administrative exposure levels, and to administer KI. If the scenario does not warrant a discussion on either of the above items, the evaluation areas will be accomplished through an interview with the evaluator.

ARCAs: None

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.b. - Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions. (NUREG-0654, I.8., 10., 11. and Supplement 3.)

Locations

LDEQ Operations

Extent of Play

ARCAs: None

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.b. - Radiological Assessment and Protective Action Recommendations and Decisions for the Plume Phase of the Emergency

Criterion 2.b.2: A decision-making process involving consideration of appropriate factors and necessary coordination is used to make protective action decisions (PADs) for the general public (including the recommendation for the use of KI, if ORO policy). (NUREG-0654, J.9., 10.m)

Locations:

State EOC, Tensas Parish EOC.

Extent of Play:

ARCA: None

EVALUATION AREA 2: PROTECTIVE ACTION DECISION-MAKING

Sub-element 2.c - Protective Action Decisions Consideration for the Protection of Special Populations

Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups. (NUREG-0654, J.9., 10.c.d.e.g.)

Locations

Tensas Parish EOC.

Extent of Play

ARCAs: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.a – Implementation of Emergency Worker Exposure Control

Criterion 3.a.1: The OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers in accordance with the plans and procedures. Emergency workers periodically and at the end of each mission read their dosimeters and record the readings on the appropriate exposure record or chart. (NUREG-0654, K.3.)

Locations

LDEQ Operations (FMT and EOF staff), Tensas Parish EOC, Tallulah Reception Care Center (Tallulah High School). Joint Information Center

Note: LDEQ EOF, LDEQ Field Monitoring Teams will pre-stage at Ameristar Casino Hotel, Vicksburg , Mississippi.

Extent of Play

If the scenario does not cause administrative limits to be reached, then the demonstration will be accomplished through an interview with the evaluator.

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area, i.e., emergency worker briefings and issue of dosimetry in other rooms.

ARCAs: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.b – Implementation of KI Decision

Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained. (NUREG-0654, E. 7., J. 10. e., f.)

Locations

LDEQ Operations, Tensas Parish EOC

Extent of Play

The capability to make KI available to emergency workers and institutionalized individuals as well as the capability to accomplish distribution of KI consistent with decisions made will be demonstrated; however, actual distribution of KI will not be demonstrated. Emergency workers will be able to discuss with the evaluator their procedure on the use of KI, and appropriate record-keeping process.

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area, i.e., emergency worker briefings and issue of dosimetry in other rooms.

ARCAs: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.c – Implementation of Protective Actions for Special Populations

Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions. (NUREG-0654, E.7., J.9., 10.c.d.e.g.)

Locations

Tensas Parish EOC

Extent of Play

The EOC will demonstrate the capability to alert and notify special population facilities, special populations and individuals according to plans and procedures, as applicable, and it will be accomplished through a discussion. Contact with the special facility and reception center will be simulated. (Alert monitors will not be activated).

The Transportation Coordinator or designee will contact one transportation provider for the special facility. The transportation provider will report to the Tensas Parish EOC

ARCAs: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.c – Implementation of Protective Actions for Special Populations

Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools. (NUREG-0654, J.10.c., d., g.)

Locations

Tensas Parish EOC,

Extent of Play

The EOC will discuss with evaluator the capability to alert and notify all schools according to plans and procedures, as applicable. (Alert monitors will not be activated). (For the exercise, one school, as determined by the EOC, will be notified by telephone to demonstrate this evaluation areas).

The school official will report to the EOC and demonstrate the implementation of protective actions for the school population by describing to the evaluator the procedures that would be followed. Location of school will be determined.

Using the method specified in procedures, one transportation provider for the school will be contacted. The transportation provider will report to the EOC. Implementation of transportation for schools will be demonstrated through a discussion. The transportation provider will not drive the route to the reception center.

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area, i.e., emergency worker briefings and issue of dosimetry in other rooms.

ARCAs: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d. – Implementation of Traffic and Access Control

Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel. (NUREG-0654, J.10.g., j., k.)

Locations

Tensas Parish EOC.

Extent of Play

One traffic and access control staff will demonstrate knowledge of their roles and responsibility by interview with the evaluator. Travel to the traffic and access control point will not be demonstrated.

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area, i.e., emergency worker briefings and issue of dosimetry in other rooms.

ARCAs: None

EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

Sub-element 3.d. – Implementation of Traffic and Access Control

Criterion 3.d.2: Impediments to evacuation are identified and resolved. (NUREG-0654, J.10., K.)

Locations Tensas Parish EOC

Extent of Play

ARCAs: None

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSES

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground shine) and to sample airborne radioiodine and particulate. (NUREG-0654, H.10, I.7, 8, 9)

Locations LDEQ Field Monitoring Teams (FMTs)

Extent of Play

ARCAs: None

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSES

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure. NUREG-0654, I.8, 11; J.10.a; H.12)

Locations LDEQ EOF, LDEQ Field Monitoring Teams (FMTs)

Extent of Play

ARCAs None

EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSES

Sub-element 4.a – Plume Phase Field Measurement and Analyses

Criterion 4.a.3: Ambient radiation measurement are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media.

Locations LDEQ Field Monitoring Teams (FMTs)

Extent of Play Will not use silver zeolite, only charcoal cartridges.

ARCAs

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.a – Activation of the Prompt Alert and Notification System

Criterion 5.a.1: Activities associated with primary alerting and notification of the public are completed in a timely manner following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. The initial instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E & NUREG-0654, E. 1., 4., 5., 6., 7.)

Locations
Tensas Parish EOC, KNOE Radio station.

Extent of Play

Following the decision to activate the alert and notification system, activation procedure will be demonstrated up to the point of activation. The siren activation will be simulated.

The decision for the content of the initial EAS (Emergency Alert System) message will be made in the conference call that is initiated from the GGNS EOF immediately following Protective Action Recommendation to the Parishes. Upon concurrence from the affected Parish(s), the Tensas Parish EOC will disseminate the EAS message for the public; for this purpose, the Tensas Parish EOC will use (KNOE radio station) as their primary notification outlet. The Tensas Parish EOC will fax the EAS message to the KNOE radio station, State EOC and JIC. **Upon receipt of the message, the radio**

station official will demonstrate, the procedure to broadcast the message. The message will be read to the evaluator, but will not be broadcast.

ARCAs: None

EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

Sub-element 5.b – Emergency Information and Instructions for the Public and the Media

Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner. (NUREG-0654, E. 5.,7., G.3.a., G.4,a.,b.,c.)

Locations

Joint Information Center (JIC), State EOC, Tensas Parish EOC.

Note: (5.a.3 Exception Areas do not apply to these locations).

Extent of Play

The interaction with the news media will be demonstrated with Tensas Parish spokesperson at the JIC, a local counter part PIO at Tensas Parish EOC will be available. Personnel will simulate the role of reporters asking questions during briefings.

ARCAs: None

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.a – Monitoring and Decontamination of Evacuees and Emergency Workers, and Registration of Evacuees

Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h.; K.5.b.)

Locations

Tensas Parish EOC, Tallulah Reception Care Center (Tallulah High School)

Extent of Play

Radiological monitoring, decontamination, and registration facilities for emergency workers will be set up and demonstrated in accordance with plans and procedures as they would in an actual emergency. One vehicle and two emergency workers will be monitored for contamination. A controller will interject data for a simulated

contamination level for one emergency worker. The monitor will demonstrate decontamination by discussion.

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted.

ARCAs: None

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.b- Monitoring and Decontamination of Emergency Worker Equipment

Criterion 6.b.1: The facility/ORO has adequate procedures and resources for the accomplishing of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG-0654, K.5.b)

Locations Tensas Parish EOC

Extent of Play

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted

ARCAs: None

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.c – Temporary Care of Evacuees

Criterion 6.c.1: Managers of congregate care facilities demonstrate that the centers have resources to provide services and accommodations consistent with American Red Cross planning guidelines (found in MASS CARE – Preparedness Operations ARC 3031). Managers demonstrate the procedures to assure that evacuees have been monitored for contamination and have been decontaminated as appropriate prior to entering congregate care facilities. (NUREG – 0654, J.10.h., 12.)

Locations Tallulah Community Center (Congregate Care Center)

Extent of Play

A walk through of the center, by evaluator, to determine, through observation and inquires, the services and accommodations of the care center are consistent with ARC

3031, will be conducted on Tuesday September 16, 2003, at 5:00 pm at Tallulah Community Center (Congregate Care Center).

Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted.

ARCAs: 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.

3. 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 evaluation areas of protection of public health and safety and protection of the environment.

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

References:

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 locations/activities for on the spot correction are clearly indicated in the extent of play portion under each criterion.

7.0 EXERCISE SCENARIO

INITIAL CONDITIONS

The plant is operating at 100% power 12 months into the current 18 month operating cycle. The weather is cool with generally overcast skies and moderate 10 to 20 mph winds.

A Div. II workweek is in progress.

CRD Pump 'B' is tagged out for PM's. Water was discovered in the last oil sample and mechanical maintenance is leak checking the oil cooler and replacing the oil.

A tag out was hung on mid night shift to allow I&C to work in the back of panel P870 section 7A. The tag out inops several sections of annunciators on the P870, P807, P845, P844, P680 and P854 panels. Work should be complete and the tag out should be cleared by 0930 today. Compensatory Action Plan is in place.

Maintenance on "D" Demin is in progress. Limit switches on 1N22F055D are being returned to service after replacement.

Turbine Building rollup door is open. Radwaste Building rollup door is open. Auxiliary Building rollup door is shut.

Current Homeland Security Advisory Threat Level is: Yellow (Significant Risk of Terrorist Attacks)

- Severe = Red
- High = Orange
- Elevated = Yellow
- Guarded = Blue
- Low = Green



NARRATIVE SUMMARY

The DRILL begins at approximately 0800.

At 0805 unidentified leakage at approximately 8 gpm causes alarm 1H13P60122AF1 “Drywell Sump Discharge Rate High” to initiate. Leakage is due to a crack in the “B” feedwater line in the Drywell. Leakage is from the downstream weld on the valve body of N21F011B. Drywell leakage will be slowly increasing until LOCA occurs.

0805-0820 an **UNUSUAL EVENT** should be declared on EAL 2.1, “Exceeding Primary Coolant System Leak Rate >5 gpm in Modes 1, 2, or 3”. The Shift Manager should turn over the control and command function to the Shift Supervisor and announce that he is the Emergency Director.

At 0915 the “A” APRM will fail upscale causing a rod block and a reactor ½ scram. The annunciators for control room panels P680, P601 and P870 will not be operable. The operators should notice the upscale APRM, absence of the associated alarms, the flashing power loss alarms (no audible alarm), and respond to the reactor ½ scram condition.

The control room should investigate the annunciator problem and determine that a complete loss of annunciators on the P680, P870 and P601 panels has occurred.

0915-0930 an **ALERT** should be declared on EAL 17.2, “Loss Of All Annunciators”.

By approximately 1000 to 1015 (45 minutes after Alert declared) the TSC, EOF, and the OSC must be manned and control of the emergency transferred to the TSC or the EOF.

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 1020, the problem with the control room annunciators is corrected and the annunciators are returned to service.

At 1025 a malfunction in the condensate pump min flow circuit causes a trip of all of the running condensate pumps, condensate booster pumps and reactor feed pumps. “P171 Panel Trouble” alarm comes in on the P680 panel. All six of the min flow indicating lights come on and stay on until the flow card is replaced. Condensate can not be restored until the card is replaced.

When the reactor scrams, the “B” feedwater line ruptures in the Drywell. Rupture is such that HPCS injection can maintain reactor level greater than –167”. Condensate/Feedwater injection through the ‘B’ feedwater line and RCIC should be secured.

At 1030 Div II Bus 16AB trips and lockouts when a fault occurs in breaker 152-1606, RHR ‘B’ pump supply breaker. The fault occurs due to the misalignment of the breaker stabs to the bus bar connection. Damage to the bus bars has occurred and the 16 Bus is not recoverable.

The TSC will lose power to the hallway lights, one half of the TSC work area lights, the Communicator cubicle lights, Communicator computer, wireless PA system, Engineering Intercom, Engineering computer, and the HP instruments in the supply cabinet.

Inverter 1Y92 will supply power to the Dose Calculator Computer, the radio, SPDS computer, PDS Computer located on the cabinet in the Engineering Area, and the TSC communication system. Inverter 1Y92 (supplies power to TSC loads) will lose its alternate power supply and will be carried on the 11DL battery bank. This DC supply should last approximately 4 hours. Both battery chargers for 11DL battery will be lost due to being fed from Div II AC power supplies.

HPCS, CRD A, and SLC A are the only operable high pressure injection systems. LPCS and RHR ‘A’ are available for injection if reactor depressurization occurs. Level is maintained greater than –167”.

At approximately 1037-1038, or when the MSIV’s close on loss of instrument air, a steam line break occurs on the “D” Main steam line in the Auxiliary Building Steam Tunnel, upstream of the B21-F028D. The inboard MSIV B21-F022D fails to close completely and the leak can not be isolated. Hi Main Steam Tunnel temperature and Hi Main Steam Tunnel Delta T alarms occur. Fire Alarm Zones FZ0243 and FZ0244 come in, indicating that the Aux Steam Tunnel blowout panels have lifted. The shift should verify that the MSIV’s, MSL drain valves and RWCU Systems isolate as required.

At 1037-1052 a **SITE AREA EMERGENCY** should be declared on EAL 4.3, “Main Steam Line Break Outside Of Containment Which Can Not Be Isolated”. Actual time will depend on the time of the MSIV’s drifting shut on loss of air.

A **SITE EVACUATION** should be ordered and personnel accountability initiated.

Personnel accountability should be complete before about 1122 (within 30 minutes from declaration of SAE).

Reactor water level should be maintained above TAF utilizing HPCS.

At 1110 ESF Bus 15AA trips and a bus lock out occurs due to a bus ground overcurrent. An insulator failure resulted in a bus ground causing the lockout. The insulator and a small section of bus must be replaced before 15AA can be restored.

Announcement should be made that personnel accountability is complete and personnel may enter the protected area.

At 1115 the HPCS pump trips due to a fault in the motor windings and the OVERCURRENT TRIP CIRCUIT is actuated for breaker 152-1702. HPCS system is not recoverable.

After the HPCS pump trips, a **GENERAL EMERGENCY** may be declared based on discretionary EAL 18.3, "Conditions Exist That Make The Release Of Large Amounts Of Radioactivity In A Short Time Period Possible". No feed sources will be available to maintain reactor water level above -167".

1125 reactor water level drops to below -167" and cannot be recovered. Reactor water level continues to go down.

1125-1140 **GENERAL EMERGENCY** should be declared on EAL 3.4 "(Loss Of 2 Out Of 3 Fission Product Barriers With A Potential Loss Of The Third" when reactor water level goes below -167" (if a discretionary GE was not previously declared).

Initial wind direction will be into Sectors Q, R and A. These sectors include the EOF and OSC. Activation of the Backup EOF and OSC will not be demonstrated. Radiological conditions are provided that account for EOF shielding factors. The plume will be simulated to rise over the OSC and touchdown outside the Protected Area due to building wake and turbulence affects. If the participants discuss relocating to the backup facilities, Controllers will interject that the backup facilities will not be activated.

1135 Reactor water level goes below -192" and can not be restored.

Emergency depressurization is required.

Severe Accident Procedures are entered.

Radiological Assessment changes to Core Damage Mix.

1140 damage to the fuel cladding begins, indications of an offsite release are seen.

1145 overheating core damage begins and offsite releases increase dramatically.

In the event the Radiological Assessment Staff calculates conditions that would necessitate issuing PARs outside of the 10 mile EPZ, PAR development and PAR notification opportunities for these conditions will not contribute to the NRC Performance Indicators.

Installation of attachment 26 for fire water injection should be requested and lineup commenced

1230-1300 the wind shifts from 150 degrees (sectors Q,R,A) to 225 degrees (sectors B,C,D).

At 1300 the bus bar for bus 15AA is replaced, bus 15AA red tag can be cleared and power can be restored to the bus.

At 1310, the flow card in the condensate pump min flow circuit is replaced and condensate pumps are available for injection.

At 1320 the red tag for bus 15AA is cleared. Div I ECCS systems are available for injection.

At 1325 the injection systems which have been restored will begin to raise reactor water level and level will come on scale.

Reactor pressure will gradually fall to zero psig and the release will cease at 1345.

By 1345 facilities should be into discussions of a re-entry and recovery plan.

At 1400 the drill will be terminated.

0800	00:00	Drill begins.
0805	00:05	H13-P680-8-A1-D7 "Drywell Floor Drain Sump Temperature HI" due to unidentified leakage >5 gpm.
0805-0820	00:05-00:20	UNUSUAL EVENT on EAL 2.1, Exceeding Primary Coolant System Leak Rate >5 gpm in Modes 1, 2, or 3. PI Opportunity. Record time of alarm, time of declaration, and time of notification.
0915	01:15	"A" APRM fails upscale, alarms do not annunciate. Loss of all annunciators on 1H13-P680,P870, and P601. Breakers 72-11E68 and 72-11E74 trip.
0915-0930	01:15-01:30	ALERT on EAL 17.2, Loss Of All Annunciators. PI Opportunity. Record time APRM fails upscale, time of declaration, and time of notification.
1000	02:00	72-11E68 and 72-11E74 reset and closed, annunciation partially restored.
1000-1015	02:00-02:15	TSC,OSC,EOF operational.
1020	02:20	72-11D51 tag cleared, breaker closed, annunciation restored.

1025	02:25	<p>Condensate pump min flow failure. Reactor scram. Turbine trip. Feedwater line break in D/W.</p>
1030	02:30	<p>16AB Bus lockout due to bus bar damage from 152-1606 breaker fault.</p> <p>The TSC will lose power to the hallway lights, the computer terminal on the engineers' desk, and the HP instruments in the supply cabinet. One half of the lights in the TSC work area will be lost in addition to the hallway lights.</p> <p>Inverter 1Y92 will supply power to the Dose Calculator Computer, the radio, PDS Computer located on the cabinet in the Engineering Area, and the TSC communication system. Inverter 1Y92 (supplies power to TSC loads) will lose its alternate power supply and will be carried on the 11DL battery bank. This DC supply should last approximately 4 hours. Both battery chargers for 11DL battery will be lost due to being feed from Div II AC power supplies.</p>
1037-1038	02:37-02:38	<p>'D' main steam line break in Aux Bldg Steam Tunnel.</p> <p>B21-F022D fails to isolate.</p> <p>Hi Main Steam Tunnel temperature and Hi Main Steam Tunnel Delta T alarms.</p> <p>Fire Alarm Zones FZ0243 and FZ0244 on Aux Steam Tunnel Blowout Shafts.</p>
1037-1052	02:37-02:52	<p>SITE AREA EMERGENCY on EAL 4.3 "Main steam line break outside of containment which can not be isolated".</p> <p>SITE EVACUATION and personnel accountability should be ordered.</p> <p>PI Opportunity. Record time of break, time of declaration, and time of notification.</p>
1107-1122	03:07-03:22	<p>Personnel accountability complete (30 min. from declaration of SAE).</p> <p>Announce personnel accountability is complete.</p>

1110	03:10	15AA bus lockout.
1115	03:15	<p>HPCS pump trip, no high pressure systems available for reactor water makeup.</p> <p>After the HPCS pump trips, a GENERAL EMERGENCY may be declared based on discretionary EAL 18.3 “Conditions exist that make the release of large amounts of radioactivity in a short time period possible”.</p> <p>If Discretionary GE declared, record indications available to the participant that would support the determination of GE.</p> <p>PI Opportunity. Record time of HPCS pump trip, time of declaration, vessel level and trend, and notification time. Verify Steam Cycle Mix used for Dose Projections. Verify PARs include appropriate sectors and distances for the Dose Projection calculations.</p>
1125	03:25	Reactor water level drops below –167”.
1125-1140	03:25-03:40	<p>GENERAL EMERGENCY declared due to “Loss of 2 of 3 fission product barriers with a potential loss of the third barrier”.</p> <p>PI Opportunity. Record time of HPCS pump trip, time of declaration, vessel level and trend, and notification time. Verify Steam Cycle Mix used for Dose Projections. Verify PARs include appropriate sectors and distances for the Dose Projection calculations.</p>
1135	03:35	<p>Reactor water level drops to below –192”.</p> <p>Emergency Depressurization required.</p> <p>Severe Accident Procedures entered.</p> <p>Radiological Assessment changes to Core Damage Mix.</p>
1140	03:40	<p>Clad damage begins.</p> <p>Offsite release begins.</p>

1145	03:45	Overheating core damage begins. Offsite release rates increase dramatically. Activation of the Backup EOF and OSC will not be demonstrated. Initial wind direction will be into Sectors Q,R, and A. These sectors include the EOF and OSC. Activation of the Backup EOF and OSC will not be demonstrated. Radiological conditions are provided that account for EOF shielding factors. The plume will be simulated to rise over the OSC and touchdown outside the Protected Area due to building wake and turbulence affects. If the participants discuss relocating to the backup facilities, Controllers will interject that the backup facilities will not be activated.
1230-1300	04:30-05:00	Wind shifts from Sectors QRA to Sectors BCD. PI Opportunity. Record time that <u>each</u> new sector becomes affected. Record time that <u>each</u> new PAR developed (REM initialing ENF), and time of notification. Several opportunities may exist, depending on the speed of the shift and the timing of each new sector becoming affected.
1300	05:00	15AA bus bar repaired, red tag being cleared.
1310	05:10	Flow card for condensate min flow circuit replaced, condensate available for injection.
1320	05:20	Red tag on 15AA cleared, 15AA energized, Div I ECCS available for injection.
1325	05:25	Reactor water level increasing, level on scale.
1345	05:45	Reactor pressure reduced to zero psig. Release terminated.
1345	05:45	Re-entry and recovery plan development begins.
1400	06:00	Drill terminated.

2.0 SCOPE AND OBJECTIVES

2.1 SCOPE

The scope of this drill, with some exceptions, will endeavor to demonstrate by actual performance a number of primary emergency preparedness functions. At no time will the drill be permitted to interfere with safe operations, and plant management may, at their discretion, suspend the drill for any period of time necessary to assure this goal.

The drill will include the appropriate notifications to Federal, State, Local and plant emergency personnel. The states of Mississippi and Louisiana, Claiborne County and Tensas Parish participation will be limited to their needs.

2.2 GENERAL OBJECTIVES

The Grand Gulf Nuclear Station Emergency Preparedness Exercise and Drill program objectives are based on the Nuclear Regulatory Commission requirements delineated in 10CFR50.47 and 10CFR50 Appendix E. Additional guidance is provided in NUREG-0654 , FEMA, REP-1, REV. 1.

The primary objective of this Emergency Preparedness Site Training Drill is to evaluate the adequacy of the emergency response organization during a simulated accident occurring during normal working hours. The scope of the drill is sufficient to test the following emergency response capabilities:

1. The ability of Emergency Response Organization to classify actual or simulated emergencies through the recognition of emergency action levels (EAL) and initiating conditions.
2. The ability of Emergency Response Organization to activate the station emergency plan and procedures.
3. The ability of Emergency Response Organization to respond to an emergency, make proper and timely notifications through each emergency classification as appropriate (Notification of Unusual Event, Alert, Site Area Emergency, General Emergency), and activate the emergency response facilities in an efficient and timely manner.
4. The adequacy, effectiveness, and proper utilization of emergency response facilities and their emergency response equipment (Control Room, OSC, TSC, EOF, ENMC).

5. The ability of Emergency Response Organization to formulate and make protective action recommendations to protect station personnel and the general public based on plant parameters, in-plant and onsite field surveys, and/or offsite field monitoring information.
6. The ability of Emergency Response Organization to evaluate the source term and make dose projections based on plant parameters and field surveys.

2.3 SPECIFIC OBJECTIVES

The following specific objectives are broken down by emergency response facility or function. These objectives were used to develop an drill scenario sufficient to realize the general objectives and provide an aid to observers evaluating the drill.

1. Control Room (Simulator)
 - a. Demonstrate the capability of the Control Room staff to classify emergencies in accordance with emergency action levels and initiating conditions until the TSC or EOF is operational.
 - b. Demonstrate the capability of the Control Room staff to notify the Federal, State and Local agencies in accordance with approved procedures. (Operational Hot Line (OHL), NRC Emergency Notification System (ENS))
 - c. Demonstrate the capability of the Control Room staff to activate the station emergency plan and make appropriate notifications to activate emergency response personnel during an emergency.
 - d. Demonstrate the capability of the Control Room staff to communicate technical information to the Operations Support Center, Technical Support Center, Emergency Operation Facility, and the NRC.
 - e. Demonstrate the ability of the Control Room staff to recognize operational symptoms and parameters indicative of degrading plant conditions.
 - f. Demonstrate the ability of the Shift Manager, Control Room Supervisor and/or the Shift Supervisor to make timely and effective decisions to mitigate the consequences of the event and clearly demonstrate control of the response effort. Demonstrate the ability of the Control Room staff to adequately turn over control of the event upon activation of the Technical Support Center (TSC)

2. Operations Support Center (OSC)

Demonstrate the capability of the appropriate staff to activate the OSC at the Alert emergency classification and be fully operational within approximately 45 minutes after declaration of the emergency.

- b. Demonstrate the capability of the OSC coordinator to make timely and effective decisions and demonstrate clear, effective command and control of the OSC and response teams.

Demonstrate the capability of the OSC coordinator and OSC team leaders to organize, brief, and dispatch repair and corrective action teams in a timely manner.

Demonstrate the capability of the Radiation Protection organization to maintain appropriate radiological controls throughout the course of the event.

Demonstrate the ability of the OSC staff to communicate technical information with the Control Room, TSC, EOF and in-plant and onsite field teams.

3. Technical Support Center (TSC)

a. Demonstrate the capability of the appropriate staff to activate the TSC at the Alert emergency classification and be fully operational within approximately 45 minutes after declaration of the emergency.

b. Demonstrate the capability of the Emergency Director to make timely and effective decisions and demonstrate clearly, effective command and control of the TSC response effort.

c. Demonstrate the ability of the TSC staff to communicate technical information with the Control Room, OSC, EOF, ENMC and NRC.

d. Demonstrate the ability of the TSC staff to notify the Federal, State and Local agencies in accordance with established protocols (OHL, ENS)

Demonstrate the ability of the TSC staff to evaluate the source term and make dose projections based on plant parameters, meteorological data, or other simulated information made available by the exercise controllers.

4. Emergency Operations Facility (EOF)

a. Demonstrate the capability of the appropriate staff to activate the EOF at the ALERT classification or sooner and be fully operational within approximately 45 minutes after declaration of the emergency.

b. Demonstrate the ability of the Offsite Emergency Coordinator to assume control of the event from the TSC staff, make timely decisions, and demonstrate clear, effective command and control of the emergency response effort.

c. Demonstrate the ability of the EOF staff to notify the Federal, State and Local levels of government in accordance with established protocols (OHL, ENS)

d. Demonstrate the ability of the EOF staff to communicate technical information with the Control Room, OSC, TSC, NRC and offsite agencies.

e. Demonstrate the ability of the EOF staff to evaluate the source term and make dose projections based on plant parameters, onsite/offsite field survey

information, meteorological data, or other simulated information made available by the exercise controllers.

f. Demonstrate the ability of the EOF staff to make appropriate protective action recommendations to protect station personnel and the general public based on plant parameters, in-plant and onsite field surveys and/or offsite monitoring information.

5. Offsite Monitoring Teams (OMT)

Demonstrate the ability to mobilize Offsite Monitoring Teams within the required time limits of the GGNS Emergency Plan, Table 5-1.

Demonstrate the ability of the Offsite Monitoring Teams to obtain direct radiation data.

Demonstrate the ability of the Offsite Monitoring Teams to collect potentially radioactive contaminated air samples and determine Iodine concentration.

Demonstrate the ability of the Offsite Monitoring Teams to communicate location and radiological field data to the EOF.

Demonstrate the ability of the Offsite Monitoring Teams to accurately and legibly keep records of radiological sampling.

6. Security

a. Demonstrate the ability of the security force to control site access and the protected area evacuation as directed by the Emergency Director.

Demonstrate the ability of the security force to complete the accountability process within 30 minutes from the declaration of a Site Evacuation, Site Area Emergency or General Emergency, which ever is declared first.

7. Emergency News Media Center (ENMC)

a. Demonstrate the capability of the appropriate staff to activate the ENMC at the ALERT classification or sooner and be fully operational within 90 minutes after declaration of the emergency.

b. Demonstrate the ability of the ENMC staff to communicate with the TSC.

c. Demonstrate the ability of the ENMC to coordinate and assemble timely and accurate information at the ENMC.

d. Demonstrate the capability of the ENMC to disseminate emergency information to the media and/or public (briefings, written statements) in a timely manner.

e. Demonstrate the ability of the ENMC to respond to technical inquires during media briefings.

8. Emergency Information Center (EIC)

a. Demonstrate the capability of the EIC to respond directly to questions from the media and/or public concerning real or rumored events at GGNS.

b. Demonstrate the capability of the EIC to identify rumors and correct false information concerning events at GGNS.

Activities not Demonstrated

a. Actual PASS samples will not be drawn.¹

b. ERF's will not be evacuated.

c. Backup ERFs will not be activated.

Corrective action teams will not manipulate any plant systems or components.

e. Actual decontamination of vehicles and personnel will not be demonstrated.

f. SCBA's will be worn but will not be utilized.

g. Medical team response and transportation will not be demonstrated.¹

Shift turnover will not be demonstrated.

Activities that will be conducted, and credit taken for, during this Drill:

Activity	Procedure Preference
Monthly Communications Drill	01-S-10-4 Att II 1.1
Quarterly Communications Drill	01-S-10-4 Att II 2.1
Semi Annual Health Physics Drill	01-S-10-4 Att II 3.1
Annual Emergency Repair Team Drill	01-S-10-4 Att II 4.2
Biennial Exercise	01-S-10-4 Att II 4.6
6 Year ENMC/EIC Activation	01-S-10-4 Att II 6.4
Periodic Radiation Emergency Drill	01-S-10-4 Att II 7.0
Quarterly Test of Operational Hotline	01-S-10-5 6.3.1.I
Quarterly Test of VIP-2000	01-S-10-5 6.3.1.J

¹ Requirement demonstrated through separate exercises.

APPENDIX 5

AREAS RECOMMENDED FOR IMPROVEMENT

LDEQ at the EOF

Description: LDEQ Operating Procedure 6 “Technical Logistics Coordinator” Page 2, Section III step E. Calculation of Emergency Worker’s return values (dosimeter readings) corrected for TEDE. Return values for Waterford-3 and Grand Gulf Nuclear Station (GGNS) are in Enclosure 1. Enclosure 1 contains a Table, “GGNS Accident Based Return Values” that references a graph that is no longer used. The multiplier factor is now calculated by REDAM and included on the Dose Assessment printout.

Recommendation: Review Operating Procedures and correct reference to Enclosure 1 and Graph that is no longer used.

Tensas Parish EOC

Description: While the monitoring process was technically accurate and very precise at the Tensas Parish Monitoring and Decontamination Station, the following suggestions are offered for a “real world” response where efficiency, safety, and timeliness would be at a premium. These suggestions are not procedural requirements but should just be considered for usefulness to the parish.

Recommendations:

- o There would be a significant time savings if a “Hot” vehicle was designated as contaminated and moved to the isolation area as soon as the first hot spot was identified. Continuing to survey the entire vehicle does not significantly add to the safety since the vehicle will be decontaminated and re-surveyed later. In fact, the monitoring technician may be exposed to additional accumulation of radiation (even at a low level) by continuing to survey a vehicle that already has at least one known hot spot.
- o The driver and passenger of the vehicle are not familiar with the process to be followed and would benefit from signs large enough to be read while approaching the monitoring area. With the engine running, air conditioning on, and windows up, they might have difficulty hearing instruction and inadvertently step out of the vehicle after arriving near the survey point.
- o The surveying process takes approximately 20 minutes per vehicle. Providing a place for the driver and passenger to sit in the shade away from the vehicle (following their monitoring) would be more comfortable and ensure that they did not inadvertently come in contact with the exterior of the vehicle.

- If adequate personnel are available, it would be safer and speed the driver/passenger monitoring process to have a parish emergency worker drive the vehicle to the isolation area following monitoring.
- The vehicle monitoring process would create congestion in the approach area if several vehicles came at the same time. It is also tiring and hard on knees for one person to survey an entire vehicle alone (average time 20 minutes). Having the ability to conduct the vehicle survey with two to four monitor technicians would make the process more efficient and save wear and tear on the workers.