



Federal Emergency Management Agency

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PT

APR - 6 2001

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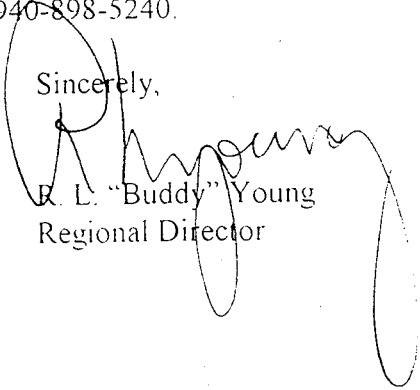
Dear Mr. Merschoff:

Enclosed is a copy of the final report for the October 13, 1999, off-site Radiological Emergency Preparedness (REP) Exercise at the Waterford 3 Steam Electric Station in Killona, Louisiana. FEMA Region VI prepared this report.

There were no Deficiencies and one Area Requiring Corrective Action (ARCA) identified during the drill. Based on the results of the October 13, 1999, REP Exercise, the off-site radiological emergency response plans and preparedness for the State of Louisiana and the affected local jurisdictions, site-specific to the Waterford 3 Steam Electric Station can be implemented. They are deemed to be adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency at the site. Therefore, the Title 44 CFR, Part 350 approval of the off-site radiological emergency response plans and preparedness for the State of Louisiana site-specific to the Waterford 3 Steam Electric Station will remain in effect.

Should you have any questions, please contact Mr. Larry Earp, Region VI Regional Assistance Committee Chairman, at 940-898-5240.

Sincerely,


R. L. "Buddy" Young
Regional Director

Enclosure
cc: NRC Headquarters



Final Exercise Report

WATERFORD 3 STEAM ELECTRIC STATION

Licensee Entergy Operations, Inc.

Exercise Date: October 13, 1999

Report Date March 31, 2000

FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VI

800 North Loop 288
Denton, Texas 76201-3699

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I. EXECUTIVE SUMMARY

On October 13, 1999, a full-scale biennial Radiological Emergency Preparedness (REP) exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Waterford 3 Steam Electric Station. The exercise was evaluated by the Federal Emergency Management Agency (FEMA), Region VI. The purpose was to assess the level of preparedness of the State and local responders to react to a simulated radiological emergency at the Waterford 3 plant. 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 FEMA Rule 44 CFR 350 requirements for Nuclear Regulatory Commission (NRC) licensing to operate the facility was conducted on February 8, 1984. Including the exercise on October 13, 1999, there have been 11 FEMA evaluated exercises plus several drills conducted since that time.

FEMA, Region VI wishes to acknowledge the dedication of the many individuals who participated in this exercise. 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 biennial exercise including the identification of any exercise issues and recommendations for corrective action where appropriate.

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

II. INTRODUCTION

On December 7, 1979, the President directed FEMA to assume the lead responsibility for all off-site nuclear power facility planning and response. The FEMA activities are conducted pursuant to 44 Code of Federal Regulations (CFR) 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.

FEMA Rule 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 Federal agencies with responsibilities in the radiological emergency planning process:
 - 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)

Representatives of these agencies serve on the FEMA Region VI Regional Assistance Committee (RAC) which is chaired by FEMA.

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 Waterford 3 plant that affected the off-

site populace. The Region VI RAC Chairman made the final classification of any issues identified and the Regional Director approved the report.

The criteria used in the evaluation process are contained in:

- NUREG-0654, FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (November 1980);
- FEMA-REP-14, "Radiological Emergency Preparedness Exercise Manual" (September 1991); and FEMA-REP-15, "Radiological Emergency Preparedness Exercise Evaluation Methodology (EEM)" (September 1991).

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

Section IV of this report, entitled "Exercise Evaluation and Results," presents basic information on the demonstration of applicable exercise objectives at each jurisdiction or functional entity evaluation 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 October 13, 1999, exercise to test the off-site response capabilities in the area surrounding the Waterford 3 nuclear power plant. This section of the report includes a description of the EPZ, a listing of all participating jurisdictions which were evaluated and a tabular presentation of the times of actual occurrence of key exercise events and activities.

A. EPZ Description

The area within 10 miles of Waterford 3 Steam Electric Station is entirely in the State of Louisiana. The most prominent natural feature in the EPZ is the Mississippi River running from west-northwest to east-southeast through the middle of the area. The Waterford 3 EPZ involves two parishes, St. John the Baptist Parish and St. Charles Parish.

There are several communities near the site within the 10-mile EPZ. These include Killona, Montz, Norco, Destrehan, Hahnville, Luling, and LaPlace. The 1990 census estimated the population of the EPZ to be 83,910 persons mainly concentrated in towns along the Mississippi River. There are two hospitals, two nursing homes, and two incarceration facilities in the EPZ.

Within the Waterford 3 EPZ, there are several large industrial facilities, including Waterford SES Units 1 and 2, and Little Gypsy SES Units 1, 2 and 3 (natural gas-fired electricity generating plants). IMC Agrico, a fertilizer manufacturer, and Occidental Chemical and Union Carbide, two large chemical plants, are located within 2 miles (southeast) of the Waterford 3 plant. Shell Norco manufacturing complex is also in the 10-mile EPZ. These facilities all have special notification devices.

The major highways include I-10, I-310, I-55, U.S. Highways 61, 51 and 90, and Louisiana Highways 18 and 3127. There are four railways in the EPZ, which are Illinois Central Gulf Railroad, Kansas City Southern Railroad, Louisiana and Arkansas Railroad, and Southern Pacific Railroad.

The Waterford 3 EPZ is divided into 16 Protective Action Sections for the purpose of emergency response and implementation of protective actions.

B. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Waterford 3 exercise on October 13, 1999, at the locations indicated:

State of Louisiana

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

Risk Jurisdictions

St. Charles Parish
St. John the Baptist Parish

Support Jurisdictions and Organizations

LaFourche Parish
LaFourche Monitoring/Decontamination Station
Nichols State University Reception Center
St. Charles Ambulance Service
Ochsner Foundation Hospital

C. Exercise Timeline

Table 1, on the following page, presents the times at which key events and activities occurred during the Waterford 3 exercise held on October 13, 1999

TABLE 1. EXERCISE TIMELINE

DATE AND SITE: October 13, 1999, Waterford 3

Emergency Classification Level or Event	Time Declared By Utility	Time That Notification Was Received Or Action Was Taken				
		Louisiana State EOC	LDEQ at Waterford 3 EOF	Emergency News Center	St. Charles EOC	St. John EOC
Unusual Event	8:23 am	8:36 am	8:34 am	8:36 am	8:33 am	8:34 am
Alert	8:38 am	8:52 am	8:52 am	9:02 am	8:52 am	8:52 am
Site Area Emergency	10:23 am	10:28 am	10:35 am	10:37 am	10:29 am	10:29 am
General Emergency	11:35 am	11:43 am	11:35 am	11:40 am	11:43 am	11:43 am
Rad. Release Started	11:35 am	11:59 am		11:40 am	11:43 am	11:43 am
Rad. Release Terminated	NA					
Facility Declared Operational		9:05 am	11:13 am	10:17 am	9:17 am	9:14 am
Declaration of State of Emergency		10:45 am	1:12 pm	NA	10:40 am	9:45 am
Exercise Terminated		1:45 pm	1:42 pm	1:50 pm	1:45 pm	1:45 pm
Early Precautionary Actions – Close parks, clear rivers within 5-mile radius, stop rail and air traffic						
1st Protective Action Decision Evacuate: A1, A2, B1, C1, C2, and D1						
Shelter: All other PAAs		NA	NA	NA	12:00 pm	12:00 pm
1 st Siren Activation		NA	NA	NA	12:10 pm	12:10 pm
1 st EAS Message		NA	NA	NA	12:11 pm	12:10 pm
2nd Protective Action Evacuate: A1, A2, B1, B2, C1, C2, and D1						
Shelter: All other PAAs		NA	NA	NA	12:28 pm	
2 nd Siren Activation		NA	NA	NA	12:50 pm	
2 nd EAS Message		NA	NA	NA	12:51 pm	
KI Administration Decision		NA	NA	NA	NA	NA

IV. EXERCISE EVALUATION AND RESULTS

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities which participated in the October 13, 1999, exercise to test the off-site emergency response capabilities of State and local governments in the 10-mile EPZ surrounding the Waterford 3 facility.

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

A. Summary Results of Exercise Evaluation

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

- M - Met (No Deficiency or ARCAs assessed and no unresolved ARCA/s from prior exercise)
- D - Deficiency assessed
- A - ARCA/s assessed or unresolved ARCA/s from previous exercise/s
- N - Not Demonstrated (Reason explained in subsection B)

TABLE 2. SUMMARY OF EXERCISE RESULTS

DATE AND SITE: November 5, 1997, Waterford 3

JURISDICTIONAL OR FUNCTIONAL ENTITY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STATE OF LOUISIANA																				
State EOC	M	M	M	M					M											
LRPD at Waterford 3 EOF	M	M	M	M	M		A						M							
Field Radiological Monitoring Teams	M			M	M	M		M												
Laboratory	M	M		M	M															
Emergency News Center	M	M		M								M	M							
RISK JURISDICTIONS																				
St. Charles Parish EOC	M	M	M	M	M				M	M	M				M					
Traffic/Access Control Point	M			M	M												M			
St. John The Baptist Parish EOC	M	M	M	M	M				M	M	M				M					
Traffic/Access Control Point	M			M	M												M			
School Bus Drill	M			M	M											M				
SUPPORT ORGANIZATIONS																				
LaFourche Parish EOC	M	M	M	M																
Nichols State University Reception Center	M			M	M													M	M	
LaFourche Mon/Decon Sta.	M			M	M															
St. Charles Ambulance	M			M	M															M
Ochsner Foundation Hospital	M			M	M															

LEGEND: M = Met (No Deficiencies or ARCAs Assessed)

A = ARCA Assessed

D = Deficiency Assessed

N = Not Demonstrated
Demonstration

Blank = Not scheduled for

B. Status of Jurisdictions Evaluated

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

- **Met** - Listing of the demonstrated exercise objectives under which no Deficiencies or ARCAs were assessed during this exercise and under which no ARCAs assessed during prior exercises remain unresolved.
- **Deficiency** - Listing of the demonstrated exercise objectives under which a Deficiency was assessed during this exercise. Included is a description of each Deficiency and the recommended corrective action.
- **Areas Requiring Corrective Action** - Listing of the demonstrated exercise objectives under which one or more ARCAs were assessed during the current exercise or ARCAs assessed during prior exercises that remain unresolved. Included is a description of the ARCAs assessed during this exercise and the recommended corrective action to be demonstrated before or during the next biennial exercise.
- **Not Demonstrated** - Listing of the exercise objectives which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.
- **Prior Issues - Resolved** - Description of ARCAs assessed during previous exercises which were resolved in this exercise and the corrective actions demonstrated.
- **Prior Issues - Unresolved** - Description of ARCAs assessed during prior exercises which were not resolved during this exercise. Included is the reason the ARCAs remain unresolved and the recommended corrective action to be demonstrated before or during the next biennial exercise.

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

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

FEMA has developed a standardized system for numbering exercise issues (Deficiencies and ARCAs). This system is used to achieve consistency in numbering exercise issues among FEMA Regions and site-specific exercise reports within each Region. It is also used to expedite tracking of 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 Code.
- **Exercise Year** – The last two digits of the year the exercise was conducted.
- **Objective Number** – A two-digit number corresponding to the objective numbers in FEMA –REP-14.
- **Issue Classification Identifier** – (D = Deficiency, A = ARCA). Only Deficiencies and ARCAs are included in exercise reports.
- **Exercise Issue Identification Number** – A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

1. STATE OF LOUISIANA

1.1 STATE EMERGENCY OPERATIONS CENTER

The Louisiana Office of Emergency Preparedness (LOEP) demonstrated the capability to alert and mobilize personnel for both emergency facilities and field operations. Immediately after being notified by Entergy (Utility) at 8:36 a.m. of a **NOTIFICATION OF UNUSUAL EVENT (NOUE)** at the Waterford 3 Nuclear Power Plant, the Communications Center notified the LOEP staff and members of other State agencies. At 8:52 a.m., the Emergency Classification Level (ECL) was escalated to **ALERT** and the LOEP staff was directed to report to the LOEP Emergency Operations Center (EOC). The key LOEP staff began assembling at 9:00 a.m. and the EOC was fully operational by 9:05 a.m. Calls and fax messages placed other State agency personnel on standby pending further developments. When the ECL escalated to **SITE AREA EMERGENCY (SAE)** at 10:28 a.m., all required State agencies were mobilized to the EOC. This action was simulated for most State agencies.

Facilities, equipment, displays, and other materials to support emergency operations were satisfactory at the EOC. Displays and status boards were prominent and promptly posted within 10 minutes of changes in ECLs and status.

Taskings and messages were logged on a computer using software entitled EM 2000. Additionally, incoming facsimiles and LOEP-produced documents were distributed to appropriate staff members. LOEP staff controlled access to the EOC. During major events, representatives of the Louisiana National Guard would control access to the EOC. However, this activity was simulated due to the limited play by the LOEP staff. Plans, procedures, and checklists were available and were frequently referenced by participants. An Executive Room immediately adjacent to the EOC provided decision makers with both visual and audio input to all activities.

The Assistant Director, the Operations Officer, and the Assistant Operations Officer adequately demonstrated the direction and control function. Periodic briefings to the LOEP staff were necessary to keep them updated on current exercise conditions as the events increased in severity.

The LOEP staff, based upon their area of expertise, was continually consulted and involved in decision making.

The LOEP staff successfully demonstrated the capability to communicate with all appropriate emergency personnel at different facilities and with field personnel. The EOC is equipped with multiple redundancies in both telephone and radio communications. Both primary and backup systems were demonstrated throughout the exercise. Adequate backup and reserve power were provided by three auxiliary generators. Both the telephone and radio systems had battery-powered backup. All systems functioned without delays or breakdowns during this exercise.

At 12:33 p.m., the LOEP staff discussed the need to ingest potassium iodide (KI) by emergency workers and institutionalized individuals. Because the Thyroid Dose Commitment was low (3489

mRem) at 2 miles, LOEP decided not to recommend ingesting KI. This issue was discussed again at 1:37 p.m. with the same decision of not to ingest KI. If LOEP had decided to recommend ingesting KI, this would have been relayed to the involved parishes, which would have relayed the information to the appropriate field personnel.

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

- a. **MET:** Objectives 1, 2, 3, 4, and 9
- 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 EMERGENCY OPERATIONS FACILITY

The capability to alert and fully mobilize personnel and to activate and staff emergency facilities was demonstrated by the LDEQ staff. The initial notification of the emergency was received from the Communicator at the Waterford 3 Steam Electric Station. This notification was transmitted at 8:34 a.m. over the dedicated telephone system and was received by a communicator from the Radiological Emergency Planning and Response (REP&R) section of LDEQ. The communicator delivered the message to the REP&R Response Coordinating Officer who made all appropriate notifications in accordance with his interim use procedure. Most of the LDEQ staff were present at their normal work location in the LDEQ office in Baton Rouge, Louisiana.

The LDEQ Senior Officer assembled key staff for both the first and second shift, conducted a briefing, assigned LDEQ shift coverage for the State Emergency Operations Center (SEOC), the Emergency News Center (ENC), and the utility Emergency Operations Facility (EOF). The REP&R staff received the notification of the **ALERT** classification at 8:52 a.m. which was included in the briefings. The first-shift LDEQ SEOC representative was dispatched at 9:00 a.m. The LDEQ ENC representative deployed at 9:22 a.m. after planning a route to that facility that would avoid the projected plume trajectory. The LDEQ EOF response team deployed at 9:37 a.m. While in transit, the LDEQ Senior Officer received the **SITE AREA EMERGENCY** declaration from the utility. He transmitted this information to the LDEQ EOF team and field monitoring teams via radio at 10:39 a.m.

The LDEQ EOF team arrived at the EOF at 10:45 a.m. The utility EOF staff briefed the LDEQ personnel on the rapidly changing plant conditions. The LDEQ Senior EOF Liaison briefed the LDEQ SEOC representative and the LDEQ Headquarters Senior Officer via commercial phone on the plant conditions. The LDEQ EOF assumed control of the LDEQ response at 11:13 a.m.

LDEQ emergency response staff were co-located in the Waterford 3 Steam Electric Station's EOF. The LDEQ staff, located in the EOF and the LDEQ Dose Assessment room, had adequate working space, facilities, equipment, and displays to support their emergency operations according to their plans and procedures. In addition, the organization's plans and procedures were available. Utility security personnel controlled access to the EOF and the LDEQ Dose Assessment room.

Telephones, radios, maps, status boards, computers, copy machines, and facsimile machines were operational and available to both the LDEQ and utility staffs.

The utility provided wall mounted maps and status boards in the EOF that included:

- Maps with 22.5 degree sectors, one mile arcs, and the planning zones identified
- Administration/Logistics Coordinator's EOF Activation Checklist
- Protective Actions/Radiological Assessment Status Board
- Major Events Status Board
- Off-site Notification Status Board
- Sign-in Organization Chart (utility)
- Sign-in "Other EOF Personnel" (LDEQ) Board
- EOF Floor Plan and Equipment Locations
- Plant Parameter Trends
- NRC to Waterford 3 Position Interface Board

The LDEQ staff used these status boards to display the Emergency Classification Level, Protective Action Recommendations, radiological release information, plant status, and meteorological data. The maps identified population distribution, emergency planning zones, evacuation routes, reception centers, traffic and access control points, and field monitoring locations. The LDEQ and Utility staffs utilized these displays to ensure consistency and concurrence on the field monitoring data, dose projections, and the protective action recommendations.

The LDEQ Dose Assessment room was equipped with a computer, telephones, radio, maps and status board displays. The maps and status board were used to display and assess the radioactive plume's location, impacted sectors, and the field monitoring data and locations.

The capability to direct and control emergency operations was demonstrated by a succession of LDEQ staff. During the initial notification phase of the emergency, the LDEQ REP&R Response Coordinating Officer was in charge of the LDEQ activities. He efficiently implemented notifications to other LDEQ staff and federal agencies (simulated). He transferred control to the LDEQ Senior Officer as soon as that individual was up-to-speed with the current information. The LDEQ Senior Officer demonstrated excellent direction and control in his handling of the shift assignments, discussions of communication protocols, and overall management approach. While the LDEQ EOF and field monitoring teams were in transit, the Senior Officer provided excellent situation updates via radio. All LDEQ staff were aware of the changing conditions as they traveled to the EOF.

The LDEQ Senior EOF Liaison assumed control of the LDEQ response only after obtaining an excellent briefing from the utility EOF Director and his staff on the current plant status and assuring that the rest of the LDEQ EOF staff were

prepared to implement their responsibilities. Before taking control, the Senior Liaison contacted LDEQ SEOC and Headquarters representatives with proactive recommendations on the best estimate of future recommendations.

The Senior Liaison made excellent use of his staff, in particular, the Accident Assessment Coordinator. They discussed potential recommendations based on what-if dose projections. He interfaced well with the utility EOF Director who provided excellent and timely information and interpretations of plant status. When utility protective action recommendations (PARs) were being considered, the Senior Liaison gave heads-up calls to the SEOC and the ENC. He provided his concurrence with the utility recommendation quickly. The Senior Liaison maintained a careful watch over potential issues such as the use of KI for emergency workers and expansion of the existing PARs.

The second-shift Senior Liaison was equally effective in controlling the LDEQ response. He too made effective use of his staff. He maintained contacts with the SEOC and the ENC. After discussions with his staff, he recommended closing several State controlled roads to limit access to the potentially impacted areas. He reviewed dose projections and verified that additional PARs were not warranted. He continued to monitor the situation with regard to KI use. The second-shift Senior Liaison also maintained an excellent working relationship with the utility EOF Director.

LDEQ staff demonstrated the capability to communicate with all appropriate emergency personnel. The LDEQ staff used commercial telephones, dedicated telephone systems, and facsimile machines to communicate primarily with the LDEQ staff located in the SEOC, ENC, and LDEQ Headquarters. Commercial phones were used to contact the risk parishes. The two-way radios located in the Dose Assessment room were the primary communications link with the LDEQ field monitoring teams. During the exercise, all communication systems operated without failure or delay.

The capability to continuously monitor and control radiation exposure to emergency workers was demonstrated by the LDEQ staff assigned to the EOF. During the mobilization process in the LDEQ headquarters in Baton Rouge, each person assigned to the EOF team received two direct-reading dosimeters (DRDs), a 0-20R and a 0-200R. These DRDs were labeled with a calibration date within the last year. The team members had a TLD that was part of their normal occupational equipment. In addition, two of the LDEQ EOF responders had their own 0-200 mR DRDs. Each person had a card on which periodic readings were recorded. Staff read their DRDs at approximate 30-minute intervals. On arrival in the EOF, the utility issued additional dosimetry including a 0-200 mR DRD. As the emergency progressed, the LDEQ Dose Assessment staff calculated a revised DRD factor to convert external exposure as read by the DRDs to Total Effective Dose Equivalent (TEDE). This new factor resulted in revised reporting and turn

back readings on the DRDs of 0.5 R and 2.5 R respectively. The utility maintained a facility habitability monitoring program that resulted in essentially no probability of significant exposures after arriving in the EOF

LDEQ emergency response staff successfully demonstrated the capability to develop dose projections and PARs for the evacuation and sheltering of the public. Within the LDEQ staff, the Dose Assessment Coordinator (DAC) had the responsibility to develop the LDEQ's dose projections.

The initial PARs, which were to evacuate for 360 degrees for a distance of 2 miles, evacuate downwind sectors R, A, and B for a distance of 5 miles, and shelter the remainder of the 10 mile Emergency Planning Zone, were based on plant status and confirmed by dose projections using utility provided source term and meteorological data. The evacuated areas were translated into the planning zones A1, B1, C1, D1, A2, B2, and C2. These PARs were developed and provided to the LDEQ representative in the SEOC at 11:42 a.m. The PARs were documented on wall mounted display boards located in the EOF. Although the PARs were not plotted on a map, this did not create any confusion because of the display boards. Everyone was aware of the areas evacuated and sheltered.

Prior to the availability of a source term, the DAC calculated dose projections based on hypothetical data to provide an estimate of the off-site impact resulting from varying radioactive release conditions.

The Dose Assessment Coordinator used a computer to calculate the dose projections. As a backup, the DAC had documented procedures for calculating dose projections using a hand calculator. He displayed and explained the equations, tables, and charts he had available that would allow him to manually perform the dose projection calculations.

Comparison of dose projections and exposure rate projections developed independently by the utility and the DAC compared favorably. Near to the plant site, they compared within a factor of approximately 3. As the distance from the site increased, the differences decreased. Beyond several miles, they compared within a factor of approximately 1.5. As explained in an interview, LDEQ's computer model produces dose estimates that compare closely with the NRC's Radiological Assessment System for Consequence Analysis (RASCAL) computerized atmospheric dispersion, transport, and deposition model.

The LDEQ staff and the utility's staff functioned as an integrated team. The LDEQ Field Monitoring Coordinator and the utility Field Monitoring Coordinator worked closely together in developing monitoring strategies and managing both the LDEQ and the utility field monitoring teams. This provided optimal use of the combined field monitoring assets. All field monitoring data were jointly shared.

The field monitoring teams identified the edges and the centerline of the radioactive plume. Both LDEQ and utility field monitoring teams traversed the plume. The first plume exposure rate measurements acquired by a LDEQ field monitoring team were made at 1:13 p.m. and quickly made available to the Dose Assessment Coordinator. On the basis of the field monitoring data and the utility meteorological data, the LDEQ Technical Logistics Coordinator was able to identify on a map the plume location and direction of travel. The existing PARs were consistent with the dose projections that were based on the field monitoring data. Therefore, no additional PARs were developed.

In addition, exposure rate measurements and particulate and radioiodine atmospheric samples were collected in the plume. An effort was made to collect these samples when an exposure rate of 100 mR/hr was found. If this exposure rate could not be located, the samples were collected on the plume centerline. The first particulate and radioiodine atmospheric samples were collected at 1:27 p.m. The resulting radioiodine concentrations were also consistent with existing PARs.

As field monitoring data became available, dose assessments were performed and, in each case, the existing PARs were consistent with the dose assessments. Because of a wind shift, the existing PARs were modified to include the planning zone B2 in the areas recommended for evacuation. This revised PAR was transmitted to the LDEQ representative located in the state EOC at 12:09 p.m.

The computer model in use provided the ability to calculate a conversion factor to translate the gamma exposure rate measurements from the plume into corresponding radioiodine concentrations.

Direction and control of the LDEQ field monitoring teams was demonstrated by the Field Team Coordinator. He effectively managed the field monitoring teams to acquire the data necessary to define the location of the plume and perform appropriate dose projections. However, the field monitoring teams were not provided information that a radioactive plume release was in progress nor were they informed that the SAE classification level had changed to a **GENERAL EMERGENCY (GE)**.

The LDEQ staff assigned to the utility EOF demonstrated the capability to implement KI protective actions for emergency workers had the decision been made to do so. The emergency kits issued to each staff member in the LDEQ headquarters at Baton Rouge contained a bottle of KI that was within its expiration date. The staff were all aware that the decision to ingest KI would come from the Secretary of LDEQ, or designee, after a recommendation from the Senior EOF Liaison. The need to ingest KI was monitored continuously by the Senior Liaison and his staff. Based on the existing conditions and the locations of the emergency workers with respect to the projected plume trajectory, no recommendation was made to the SEOC for a Secretary decision.

Continuous 24-hour operation was demonstrated by a shift change of key LDEQ staff in the EOF. In accordance with the pre-exercise agreement, the shift change included Senior EOF Liaison, Accident Assessment Coordinator, and Dose Assessment Coordinator. The Logistics Coordinator was not slated for a shift change. Each outgoing staff member briefed his or her replacement effectively and efficiently. All previous actions were discussed and areas that might become problems in the future were highlighted. The outgoing staff remained available until the incoming staff were comfortable in their roles.

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

- a. **MET:** Objectives 1, 2, 3, 4, 5, 14 and 30
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** Objective 7

Issue No.: 70-99-07-A-01

Description: The LDEQ field monitoring teams were not informed that a radioactive release was in progress nor were they informed when the Emergency Classification Level of SAE was escalated to a GE.

Recommendation: Provide additional training to the Field Team Coordinator to assure significant emergency response related information is communicated to the deployed field monitoring teams.

- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES – RESOLVED:** NONE
- f. **PRIOR ISSUES – UNRESOLVED:** NONE

1.3 FIELD MONITORING TEAMS

Staff from LDEQ demonstrated the capability to alert and fully mobilize personnel for both emergency facilities and field operations. The alert and mobilization activities took place at the LDEQ headquarters in Baton Rouge, Louisiana. The **NOUE** was received by LDEQ at 8:34 a.m. via a dedicated telephone system from the Waterford 3 communicator. The **NOUE** was verified at 8:40 a.m. and it was determined that it had been declared at 8:23 a.m. The LDEQ headquarters staff formed an initial reaction team to monitor the Waterford 3 event and to take action if the event worsened.

At the request of the LDEQ exercise controller, the LDEQ field teams began their pre-deployment equipment kit inventory and operational checks of the radiological survey instruments during the **NOUE** classification level rather than waiting for the **ALERT** emergency classification level. Following completion of the equipment kit inventory and instrument operational checks, all field monitoring team members assembled in a conference room at 9:06 a.m. and received a pre-deployment briefing from the Field Team Coordinator. The field teams were briefed on communications protocols, use of dosimetry, exposure limits and turnback values, procedures for determining the plume edge, contamination control for instruments used in plume measurements, use of chain-of-custody forms for environmental samples, shift assignments and staging areas for each field team. During the **ALERT** declaration, the field teams deployed for the staging areas at 10:19 a.m. and arrived at the Waterford 3 Training Center at 11:19 a.m.

The LDEQ field teams demonstrated the capability to communicate with all appropriate emergency personnel at facilities and in the field. The field teams conducted communication checks with both radio and cellular telephone during deployment from the LDEQ headquarters. The primary communication system was the 800 MHz vehicle-mounted radio and cellular telephone was the backup communications system.

En route to Waterford 3, the LDEQ headquarters team provided updates on the Waterford 3 events. At 10:35 a.m., the field teams were informed via radio that a **SAE** had been declared at Waterford 3. However, there was no release of radioactive materials and no protective actions were taken. After arrival at Waterford 3, the field team communications switched over to the Field Team Coordinator located in the Waterford 3 EOF.

Additional communications equipment included 800 MHz hand-held radios and a pager code system, where the LDEQ pagers could be used to provide information to the field teams. Radio and cellular telephone communication systems were demonstrated. Both systems operated without incident throughout the exercise.

The capability to continuously monitor and control radiation exposure was demonstrated by the LDEQ field teams. At LDEQ headquarters a dosimetry packet was issued to each team member, which included a CDV-742 (0-200 R) and a CDV-730 (0-20 R) DRD, a simulated

thermoluminescent dosimeter (TLD), two exposure control cards, a KI consent card, and a radiation worker response identification card. In addition, each field team member used his/her occupational TLD and 0-200 mR DRD to monitor and record exposure. The field team members zeroed each DRD and filled out emergency worker exposure records before leaving LDEQ headquarters. As instructed by the Field Team Coordinator (FTC), the field team members read their DRDs at 30-minute time intervals, recorded the readings on their exposure-record card, and promptly reported the readings to the FTC.

During the FTC's briefing at LDEQ headquarters, the field team members were advised that their authorized exposure limits were 150 mR for reporting and 750 mR for turnback as read on their DRDs. Later, at 11:41 a.m., the field teams were advised by the FTC that the reporting limit had been changed to 500 mR and the turnback value had changed to 2.5 R. These exposure limits were used to ensure that total TEDE limits of 1 rem and 5 rem were not exceeded by the field team members.

Each field team had a supply of KI that was within the expiration date of October 2001 and instructions concerning the correct use and possible side effects of KI. The DRDs were labeled with calibration or inspection dates and all dates were current. The field team members indicated that dosimetry and exposure-record cards would be collected at LDEQ headquarters at the end of their mission or the end of the emergency.

The LDEQ field teams demonstrated the appropriate use of equipment and procedures for determining field radiation measurements. Each field team had appropriate low-range and high-range survey instruments. The low-range instrument was a Ludlum Model 14C with both pancake and side window types of GM detectors. The high-range instrument was a CDV-715 ion chamber. At the LDEQ headquarters, the field teams inventoried their equipment kits and appropriately battery checked and source checked their survey instruments. All of the instruments responded within the range of readings posted on the instruments. In accordance with the procedure, the CDV-715 instrument only has a circuit response check. All instruments were within the current calibration period.

Each field team kit had a 10-mile EPZ grid map for the Waterford 3 EPZ. The field teams were able to effectively demonstrate the use of the grid number system for identification of field monitoring locations. Field team #1, however, experienced some initial difficulty in locating their staging area location. This was due in part to the EPZ grid maps only showing the road network within the 10-mile EPZ. Since one of the two bridges that cross over the Mississippi River is outside of the 10-mile EPZ, the bridge was not shown on the map. This caused some confusion when field team #1 left the Waterford 3 Training Center parking lot. The field team members correctly identified the staging area grid location coordinates, but they assumed that the river crossing shown on the map (a ferry crossing) was the bridge. As a result, field team #1 turned the wrong direction on Highway 61, going away from, rather than towards, the staging area location.

The FTC provided an excellent pre-deployment briefing at LDEQ headquarters. The briefing covered a review of procedures for determining the plume edge and air sampling, communication protocols, staging area locations with assigned grid numbers, current plant conditions, current meteorological conditions and exposure control procedures. However, once the field teams arrived at their assigned staging areas or field monitoring locations, the quality of information received by the field teams decreased. The field teams were not informed of changes in meteorological conditions, changes in plant status or that a release was in progress.

The field teams had vehicles that were appropriate for the anticipated field conditions. However, one field team found that the vehicle hood would not open when they got to their staging area. This was not detected at LDEQ headquarters because in the interest of time, the exercise controller directed the field teams to wait until they got to their staging areas before checking the operability of the air sample pumps.

The field team members demonstrated appropriate monitoring techniques for making open- and closed-window survey measurements at ground level and waist height. The field teams were directed by the FTC to use 1 mR/h and a significant difference between the open- and closed-window instrument readings as a basis for determining the plume edge. Field team #1 made a complete plume traverse while making plume surveys to determine the appropriate location for collecting their air sample. All survey measurements were promptly reported to the FTC by each field team's communicator. Instruments used for the plume surveys were protected from contamination by use of plastic coverings on the instrument detectors.

The LDEQ field teams demonstrated the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} microcuries per cubic centimeter in the presence of noble gases and obtained samples of particulate activity in the airborne plume.

Each field team was equipped with calibrated air sample pumps and appropriate silver zeolite adsorbent filter cartridges. For exercise purposes, charcoal cartridges were used to simulate the silver zeolite. The field teams also had calibrated Ludlum 2000 ratemeters/scalers with NaI detectors for counting the radioiodine cartridges.

The FTC briefed the field teams that air samples should be collected at locations where the exposure rate measurements reached 100 mR/h. During the course of the exercise, LDEQ field teams measurements never exceeded the 100 mR/h criteria, so the field teams collected their air samples at the location where the maximum exposure rate was found. The second shift teams collected air samples at specific locations as directed by the FTC.

All air samples were collected for sufficient time to obtain a volume of 10 cubic feet. During air sample collection, open- and closed-window survey measurements were made at the beginning, middle and end of the sample collection. This demonstrated use of open-

and closed-window instrument surveys during the collection of the air sample corrected issue 70-97-08-A-01 from a previous exercise.

Following completion of the air sample collection, the field team moved to a location that was determined to be background. At this location, the air sampler was disassembled and the simulated silver zeolite cartridge and particulate filter were placed in separate, labeled bags. Caution was used while placing the potentially contaminated sampling material in the sample bags. The air samples were also double bagged. Gloves were changed as appropriate during the air sample counting preparation process. This attention to contamination control corrected issue 70-97-08-A-02 from a previous exercise.

The simulated silver zeolite cartridge was counted, the sample measurement information was appropriately recorded on the sample data sheet and the information was promptly transmitted to the FTC in the EOF. The FTC then directed the field teams to take their air samples to the Waterford 3 parking lot, which was the staging area for the sample courier. At the sample courier staging area, the air samples were turned over to the sample courier using a clean sample transfer technique, where the samples and associated paper work were placed in a clean bag for transport to the laboratory. Appropriate chain-of-custody forms were completed to finalize the sample transfer process.

The capability to maintain staffing on a continuous 24-hour basis was demonstrated by mobilizing four field teams. The use of four teams was in accordance with the pre-exercise extent-of-play, which allowed all four teams to more fully participate during the exercise. Near the termination of the exercise, the field teams demonstrated a shift turnover briefing. During this demonstration, field team #1 briefed field team #3 and field team #2 briefed field team #4. All pertinent information was provided by the first shift field teams to the second shift field teams.

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

- a. **MET:** Objectives 1, 4, 5, 6, 8 and 30
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES—RESOLVED:** 70-97-08-A-01

Description: LRPD Operating Procedure OP-5, Section III, Step K (p.19) directs the team to "Take area surveys at the beginning, middle and end of the sample to

ensure that you are in the plume during the whole sample." Step K of the procedure was not followed by FMT #2, thus, there was no way to determine that the entire air sample was taken in the plume. (NUREG-0654, I.9.)

Corrective Action Demonstrated: All four field monitoring teams demonstrated the proper area surveys, with measurements made at the beginning, middle and end of the air sample.

RESOLVED: 70-97-08-A-02

Description: After removing the cartridge from the sampler head with gloved hands, the team member did not remove and discard his potentially contaminated gloves as directed in LRPD Operating Procedure OP-5, Attachment 5, Section III, Step T (p.19). With potentially contaminated gloves, the team member touched the Ludlum model 2000 scaler, the jig used to hold the cartridge for counting, and the form used to record the sample cartridge count. The team member also touched the inside and outside of a second plastic bag that was used to double bag the particulate filter and charcoal cartridge. (NUREG-0654, I.9.)

Corrective Action Demonstrated: All field monitoring teams demonstrated proper contamination control by removing and disposing of potentially contaminated gloves as necessary during the preparation of the air sample for counting. Proper contamination control was exercised during the bagging of the air sample components.

f. **PRIOR ISSUES—UNRESOLVED:** NONE

1.4 LRPD LABORATORY

The laboratory received notification of a NOUE via telephone at 8:30 a.m. No other notification was received by the laboratory during the exercise because the laboratory demonstration was out-of-sequence. The laboratory duty officer notifies other staff members by telephone. A current roster was available. The NOUE occurred during working hours so alerting was not demonstrated.

The laboratory was equipped with commercial telephones and a fax machine. This was sufficient to meet communication needs. All communications worked without delays or interruptions.

The staff adequately demonstrated emergency worker exposure control. They are located in Baton Rouge and are not in the EPZ nor do they have an assignment in the EPZ. The staff used their day-to-day dosimetry consisting of one TLD and one 0-200 mR direct-reading dosimeter.

The staff was well trained and highly professional in the performance of their duties. They demonstrated one air sample analysis (cartridge and filter paper) during the exercise. Contamination control and logging procedures were good. Upon completion of the analysis, a copy was transmitted to the EOF followed by a telephone call to verify that the analysis was received.

Samples that showed measurable gamma exposure are stored in a location away from the detection equipment to avoid buildup in background radiation level in the work area. Quality Assurance procedures include a daily energy check for the gamma detection equipment. Since the last exercise, the laboratory has contracted with Analytic to furnish them with National Bureau of Standards traceable standards.

A shift change was adequately demonstrated. The second-shift personnel demonstrated their ability to perform the appropriate sample analysis. There was no loss of continuity in the work that had to be performed.

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

- a. **MET:** Objectives 1, 2, 4, 5, 25, and 30
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES - RESOLVED:** NONE
- f. **PRIOR ISSUES - UNRESOLVED:** NONE

1.5 EMERGENCY NEWS CENTER

The ENC is located in a utility-owned facility on the seventh floor of the Entergy Plaza building located at 639 Loyola Avenue, New Orleans, Louisiana. The Public Information Officers (PIOs) work area, Media Monitoring, Media Briefing Room, and Media Workroom were all located on the seventh floor. This was an improvement from previous years when two floors and cubicles in various locations were used for the ENC operation. A security guard was located at the entrance of the Entergy Plaza Building. Procedures are in place to have a security guard at the entrance to the seventh floor if needed; however, additional security was not utilized during this exercise. All ENC participants were required to sign in and were issued badges or armbands. Drill signs were appropriately posted in all exercise areas. The ENC had ample space, equipment, displays, restrooms and backup power which is tested monthly.

At 9:02 a.m., activation and staffing of the ENC began with receipt of the **ALERT ECL** which was declared at 8:38 a.m. Staff was notified either by pager or by telephone using an up-to-date call-down list. The two parishes (St. John and St. Charles) representatives arrived at 9:55 a.m. and 10:10 a.m. Setup of the ENC was very efficient and was declared activated and operational at 10:17 a.m. Since they had to drive from Baton Rouge, Louisiana, staff from LOEP and LDEQ did not arrive until 10:40 a.m. and 11:15 a.m. The ENC received notification of the **SITE AREA EMERGENCY ECL** at 10:37 a.m. and the **GENERAL EMERGENCY ECL** at 11:40 a.m. Procedure manuals were placed at each ENC worker's station, which had appropriate agency name plaques. Two large red digital clocks were set up in the ENC for easy viewing. All messages received were promptly copied, distributed and posted for easy viewing and tracking. The ENC Director held good staff briefings and involved all agencies in status updates.

The primary communication system was by commercial telephone with cellular phone, facsimile and e-mail as backup communication. There were no breakdowns in the system, but there were some delays in receiving some facsimile messages since they were using only one incoming fax and one outgoing fax machine. According to procedure, the ENC was waiting for the fax of the official EAS message before releasing information, which was slow coming from the parishes. What was sent to the ENC were other official documents, (Emergency Declaration and Evacuation Order), that were not the expected documents. This procedure will be re-evaluated for the future. The ENC released their Initial Notification Message at 10:15 a.m., which was very prompt, but it contained a time error that was corrected at 10:30 a.m. E-mail was used to keep Rumor Control updated on all current events. Other than getting off to a slow start, the procedure worked well. In addition, the Technical Spokesperson Assistant was in telephone contact with the utility to stay updated on current events. Both parish and State liaison representatives stayed in contact with their EOCs for current information.

The Media Monitoring room was adjacent to the main ENC workroom. It was staffed by a supervisor and five workers. They were set up to monitor the two local cable TV stations, NBC and CBS. The Emergency Alert System (EAS) stations WWL-870 AM/WLMG-101.9 FM, which is the EAS station, and WADU-94.9 FM were also monitored. Three of their staff worked

the phones and received calls from the media. The use of logs this year was an improvement that worked well.

A shift change was made per the extent-of-play agreement for the LDEQ representative, with St. Charles Parish also representing St. John on the second shift. The incoming staff was briefed by the outgoing staff on the current status of the emergency. Both shifts demonstrated knowledge of their emergency response roles and functions. The shift change was accomplished in a manner that facilitated continuous uninterrupted operations.

The Media Briefing Room was adequate for the exercise. It was held on the seventh floor of the Entergy Building. For a large media event, an agreement has been made with the Hyatt Hotel, located next door, to use space in their facility for all press conferences. Media press packets were distributed to each media reporter. The packets contained a Safety Information Brochure with a section map showing:

- Evacuation routes
- Pick-up points
- Reception centers for adults and school children
- EAS stations
- A Waterford 3 Fact Sheet
- A full color diagram of the Waterford Unit No. 3
- All News Bulletins released
- Brochures with radiation and technical information.

All news conferences were filmed and viewed live in the ENC operations room and the Media Monitoring Room. The capability to view briefings on every floor of the building was available. The Rumor Control received only audio of the press briefings as they were located across the river.

The Emergency News Director and the Technical spokesperson held the first news briefing at 11:15 a.m. The briefing lasted 9 minutes announcing that due to a gaseous release, a SAE was declared at 10:23 a.m., and the evacuation of non-essential plant personnel was underway. This news briefing should have been scheduled sooner after the SAE was known. No time was set for the next media briefing. The briefings could have been enhanced by use of the large reactor diagram that was available. The ENC Director did a nice job of clearly restating all questions so the Rumor Control and other viewers would know what had been asked. However, the mock media asked few questions.

The second news briefing was at 12:42 p.m. after the GE had been declared at 11:35 a.m. and an evacuation 2 miles from the plant was underway. The LDEQ, LOEP, and St. Charles Parish (also spoke for St. John the Baptist Parish) were represented at this briefing. The parish representative used overhead visuals at this briefing. However, there was a glare on the visual as a screen was not used and the print was too small and dense to

be effective. Although the Technical Spokesperson was in attendance, he was not on the podium. Again, this was a short briefing as there were an insufficient number of questions asked.

The third and final news briefing at 1:35 p.m. was after the shift change. This briefing lasted 12 minutes and had an increase in questions over the two previous briefings. Phone numbers for the public to call were referred to as being in the information packets, but were not stated or visually shown to the audience or on camera.

The Rumor Control function was demonstrated at Entergy's Customer Service Telephone Center located at 142 Delaronde Street, New Orleans. Personnel accustomed to answering questions from the public staff this facility. As the exercise was conducted during normal business hours, no mobilization of personnel was observed.

The Rumor Control staff consisted of 61 telephone operators, 2 runners and 2 phone center supervisors. Operators worked from individual cubicles and were equipped with telephones, computer terminals and printers. In addition, the facility was equipped with fax machines, radio and television to monitor news broadcasts, and a local area network for distributing electronic copies of information sent from the Emergency News Center via e-mail.

When an operator received a call pertaining to exercise play, they would complete a form detailing the nature of the inquiry. The form was picked up by a runner and given to a phone center supervisor. The supervisor read the form to check for trends that may have required action by public affairs officials. No rumor trends were identified during the exercise. The form used by the operators did not designate a space for the operator to record the information given to the caller. Although many of the operators did write down their answers to the callers' questions, some did not. Therefore, it was not always possible to determine if callers were being given accurate and timely information. The form could be improved if it designated a space for the operator to record information given. Also, the form should clearly specify that the name, address and phone number requested at the bottom of the form refers to that of the caller. In some cases the operators put their name in this space.

Record forms for 33 calls were obtained during the exercise. The phone bank reported making 39 calls. The extent-of-play stated that at least 18 calls per hour were to be placed during the **SITE AREA EMERGENCY** and **GENERAL EMERGENCY** classifications. This was a period just under 3 ½ hours and should have resulted in about 60 calls to the phone center. The actual figure was just over half of the required amount and involved less than one call per operator.

Communication between the Emergency News Center and the Rumor Control facility was very good. The PIO at the ENC promptly informed the phone center supervisor each time an ECL change occurred. The supervisor, via a telephone line dedicated to this purpose, was able to hear all of the press briefings. After some initial delay, news releases generated at the ENC were forwarded to the Rumor Control facility by e-mail with hard copy follow-up by fax. The supervisor then forwarded electronic copies to all operators. This proved to be an excellent method to ensure operators had the most recent information on the emergency to respond to

caller questions. Each operator also had a binder that contained detailed information on each emergency evacuation zone including boundary designations, population figures, evacuation routes, reception center locations, and any special facilities in that zone.

The exercise terminated at 1:50 p.m. at the ENC.

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

- a. **MET:** Objectives 1, 2, 4, 12, 13, and 30
- 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. ST. CHARLES PARISH

St. Charles Parish participated in the plume exercise at the Emergency Operations Center and with field workers. A traffic/access control point (T/ACP) was established to assist with the evacuation of non-essential on-site personnel and evaluate the simulated evacuation of the public.

2.1.1 EMERGENCY OPERATIONS CENTER

The St. Charles Parish EOC is a 24-hour manned facility located in the lower level of the Courthouse in Hahnville, Louisiana. An ALERT ECL was received from the utility at 8:52 a.m., and the staff already on duty immediately began activating the rest of the EOC personnel by the automated telephone dial system and pager system. A quick response by EOC personnel was accomplished and the EOC was fully staffed at all positions, plus support workers at 9:17 a.m. The first briefing was conducted and held at 9:18 a.m. with the first status board entry at 9:20 a.m. At 9:17 a.m., the EOC was fully operational as staff prepared to receive other ECL changes, PARs or plant information.

The personnel roster of all staff members was up-to-date including other agencies that may need to be contacted. The St. Charles Parish EOC staff was activated and fully staffed and mobilized in a short period of time.

Two Parish Police Officers controlled access to the EOC at the upper level entrance. The EOC is very adequate to support extended emergency operations with adequate space, furnishings, lighting, restrooms, ventilation, backup power (diesel generator with fuel for 7 days), telephone, computers, copiers, and two fax machines with a computer fax available as backup.

Excellent maps and displays were posted and labeled to aid in EOC operations. These included EPZ maps, reception center locations, population by sectors, traffic/access points, weather information, evacuation routes, schools and other information. An excellent status board was posted and kept updated promptly with pertinent information and changes. The traffic flow and pattern were excellent. The entire facility was outstanding.

The Director of Emergency Preparedness was excellent throughout the exercise in applying his knowledge, experience and leadership skills in guiding and directing the Parish EOC staff. The entire EOC staff was well trained, thoroughly organized and experienced. The Director conducted periodic briefings for the EOC staff on matters to keep the EOC staff informed and also to receive their input on decisions that were to be made. The Director ensured that messages, logs and information were properly and quickly distributed, copied and filed. He also made sure that checklists and the plan were followed at all EOC positions. The EOC Director (and his second shift replacement) were very resourceful in being prepared to anticipate and act on any event which made for a very good EOC operation.

The St. Charles Parish EOC was equipped with a number of communication systems. These included a dedicated telephone hot line (with conferencing capability), commercial telephone lines, parish emergency radio and other radio systems, computer links and fax capability. The EOC communicated with the various agencies and the EAS radio station throughout the exercise, and all systems were demonstrated and worked well at all times without breakdowns or delays. Several experienced operators were on line in the communications center handling and monitoring the systems. National Weather Service displays and information were also received and displayed, and the parish cable-television channel was demonstrated. The siren-sounding control system was demonstrated by the St. Charles Parish EOC communications staff. The St. Charles Parish EOC had excellent communication capability and technical know how as demonstrated by the staff participating in the exercise.

The Radiological Officer (RO) was responsible for monitoring and instructing emergency workers on radiological exposure control. The EOC was monitored by hanging dosimeters in the center of the EOC, rather than issue them to every responder in the EOC. The RO read the dosimeters on a regular interval, approximately every 30 minutes. The security table at the entrance to the EOC was manned by two deputies who monitored anyone entering the EOC with an appropriate survey meter after the release began to prevent any contamination into the EOC. If clean, people entering the EOC were also given a simulated dosimeter and dose-record card. All emergency workers being deployed to the field were issued 0-20R and 0-200R dosimeters and a simulated TLD. The dosimeters were zeroed and an initial reading was recorded. The RO briefed departing workers on the use of dosimetry, when to read and record the results, and what their turnback dose was. Upon return from the field, the emergency workers gave the dosimetry and dose-record cards to the RO whose responsibility was to verify if they had received any dose. TLDs were sent to a laboratory (simulated) for processing.

St. Charles Parish EOC received notification of the change in ECL to SAE at 10:29 a.m. When the event escalated to GE at 11:43 p.m., the EOC Director and his staff consulted on what protective action decision should be made, if any. This action followed the receipt of a PAR from the EOF. At 12:00 p.m., after consulting with St. John the Baptist Parish EOC, the decision was made to order evacuation of sections A1, B1, C1, D1, A2, and C2 and shelter remaining response sections. The acting Parish President signed the evacuation order at 12:00 noon. At 12:10 p.m., the sirens were sounded and shortly afterwards the EAS message was read by the PIO over the phone. The message was read from the EOC and broadcast over the EAS station and parish cable network. The message was repeated every 15 minutes. A pre-scripted message form was used with the pertinent and necessary information. It took the PIO 8 minutes to read the message over the telephone.

At 12:17 p.m., the parish received a second PAR from the EOF. This PAR added the area B2 to the original message. The sequence of actions was as before with the second-shift St. Charles EOC Director consulting with the St. John the Baptist EOC Director. St. John EOC concurred with the recommendation and again the decision was made at 12:28 p.m. at the St. Charles EOC

to broadcast an updated message coinciding with the sounding of the sirens in area B2 only. This updated EAS message was then repeated every 15 minutes over the EAS station and the parish cable network. Both EAS messages contained information on who should evacuate, who should shelter, evacuation routes and descriptions, instructions for sheltering, what evacuees should take with them and instructions concerning school children. A telephone number was provided for people to use to obtain assistance. Throughout the exercise, the PIO maintained communications with the ENC.

The entire staff was involved in plume protective action decision making and were prepared to implement any necessary actions.

The EOC Health Medical Services Officer, using parish Emergency Medical Services (EMS) data, identified individuals with special needs. The resources at the St. Charles Parish EMS, Fire Services and Transportation were assigned to provide for evacuation of all identified special needs individuals.

Law enforcement representatives did a commendable job in deciding where and when to establish T/ACPs. The demonstration of the T/ACP that was actually established is described in the following section of this report.

Following the initial staffing of St. Charles EOC, the facility communicator notified second shift personnel. The first member of the second shift arrived at the EOC at 11:24 a.m. By 12:27 p.m., all of the facility positions were filled by the second shift staff. EOC members performed turnover without interruption of facility operations.

At 11:43 a.m., the EOC received notification from Waterford 3 of the evacuation of non-essential personnel on-site. The St. Charles EOC staff provided traffic and access control support for on-site personnel evacuating to the licensee employee assembly area.

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

- a. **MET:** Objectives 1, 2, 3, 4, 5, 9, 10, 11, 15, 30 and 31
- b. **DEFICIENCIES:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES - RESOLVED:** NONE
- f. **PRIOR ISSUES - UNRESOLVED:** NONE

2.1.2 ST. CHARLES PARISH TRAFFIC/ACCESS CONTROL POINT

At 8:52 a.m., St. Charles EOC received a telephone call from Waterford 3 SES issuing an **ALERT**. A subsequent call at 10:29 p.m. upgraded the status to **SITE AREA EMERGENCY**. Following that notice, the EOC initiated emergency evacuation procedures including activation of the traffic and access control point.

The RO briefed the Deputy Sheriff on the use of the exposure measuring devices. The deputy was informed that his turnback exposure limit was 0.5R. He was issued dosimetry and a TLD. The Deputy Sheriff was dispatched from the EOC to the designated T/ACP at the intersection of State Highway 18 and Sugarhouse Road. The travel time was approximately 8 minutes.

Approximately 10 minutes later, two Public Work's employees arrived at the T/ACP. They were dispatched from the EOC after receiving their briefings. The Public Works staff demonstrated how the barricades and traffic cones would be used at the intersection. They were knowledgeable and well briefed on the procedures necessary to accomplish their tasks.

Emergency worker exposure control was demonstrated effectively. All three individuals at the designated control point had a CDV-730, CDV-742 and a TLD. They were aware of their exposure limit of 0.5R, monitored their dosimetry every 15 minutes, and called the EOC every 30 minutes.

Site communications consisted of a primary two-way radio and a backup cell phone. Each system provided adequate communications between the T/ACP personnel and the EOC staff. The traffic and access control exercise was accomplished successfully.

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

- a. **MET:** Objectives 1, 4, 5 and 17
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES - RESOLVED:** NONE
- f. **PRIOR ISSUES - UNRESOLVED:** NONE

2.2 ST. JOHN THE BAPTIST PARISH

St. John the Baptist Parish authorities mobilized personnel for the EOC, T/ACPs, and a demonstration of the evacuation of school children.

2.2.1 EMERGENCY OPERATIONS CENTER

St. John the Baptist EOC is located in the parish Courthouse Annex in LaPlace, Louisiana. Facilities at the EOC are excellent. In the operations room, tables are arranged in a U-shape with 15 telephones available for use by the designated staff. Maps and displays are posted on every wall illustrating the 10-mile EPZ with sectors and zones, evacuations routes, directions to reception centers, special facilities, schools, and T/ACPs. Also available for use are detailed ECL status boards, a staff status board, a large emergency notification checklist, an excellent aerial map of the area, and copies of the emergency plans and procedures. During the exercise, the utility liaison used a plant schematic to visually clarify for the EOC staff the locations of the problems inside the plant.

All status boards were promptly posted. Red signs were posted in the main room and the communications area citing the current ECL. A separate workroom with copier and fax machines, a large kitchen/break room, and spacious restrooms were available to the staff. Two generators were available to provide backup power to the EOC.

A glass wall separated the communications area from the operations room of the EOC. The area contained workstations dedicated to communicating with specific sites such as schools, hospitals, or law enforcement. In addition, this area duplicated the 24-hour warning point in the 911 Center. It was equipped as follows:

- * Motorola Centracom Series II Plus CRT containing 24 emergency communications frequencies with Motorola 911 call control software. This software allows for highlighting one or more video screen icons, recording a message, and simultaneously voice paging all required personnel. If necessary, the 24 frequencies can be controlled at three 8-station consoles adjacent to the main console.
- * Multiple commercial telephone lines
- * Dedicated operational hotline for communications between Waterford 3 and State and local emergency managers
- * Eight television receivers to monitor weather radar, local and network broadcasts
- * Amateur Radio Emergency Service (ARES) radio
- * Stand-alone personal computers, with printers, for word processing
- * Multi-channel scanner to monitor radio networks
- * Whelen siren activation box for the alerting system
- * Recording and display system tied to the EOC overhead Barcovich projector
- * New, all-digital recording system
- * New, 800 MHz Smartnet state radio (not in Centracom)

* New, Skytel digital cell phone.

The operations room contained a new utility hotline that dispensed with the distracting "beep" that plagued the last exercise. The staff communicated with all appropriate emergency personnel at St. Charles Parish, the EOF, the ENC, and the State.

At 8:34 a.m., the Sheriff's Department 911 Dispatch Center, which adjoins the EOC, received a **NOUE**, due to a leak at Waterford 3. Initial and subsequent notifications from the utility were received on a dedicated hotline. Dispatch center personnel have a written staff callout procedure for Waterford emergencies based on the ECLs. Pagers and telephone calls were used to put the EOC staff on standby at the **NOUE**. Upon receipt of the utility's **ALERT** notification at 8:52 a.m. due to a release greater than 10 times technical specification limits, the Director decided to activate the EOC. Personnel were again contacted and directed to report. A law enforcement officer was posted at the EOC entrance at 9:04 a.m., adding additional security to the locked front entrance. The back door remained locked. All personnel signed the roster at the front door and reported to their assigned work area. At 9:14 a.m., the EOC was declared operational and receipt of notifications from Waterford was formally transferred from the 911 Center to the EOC. A communications officer recorded notifications on the notification forms in the communications room. The notifications were also monitored in the operations room. There was some confusion over the third notification message, which identified **NOUE** as the ECL, since the second message had included an escalation to **ALERT**. The EOC staff called the utility to clarify the situation. The explanation provided was that the third message was intended as an update to the first message and thus reflected the ECL status from the first message. A State of Emergency was declared at 9:45 a.m. The EOC received notices of the **SAE** at 10:29 a.m. and the **GE** at 11:43 a.m.

The Civil Defense Director made protective action decisions with the assistance and advice of the EOC staff. Shortly after receipt of the **GE** recommending a combination of evacuation and sheltering for the plume EPZ, the Director received a call from St. Charles Parish to coordinate protective actions. The Director requested a few minutes to coordinate actions and obtain information from the EOC staff. She then polled the staff as to whether the parish was ready to implement the utility's recommended protective actions. When it was clear that resources were in place and there were no significant obstacles to completing an evacuation, the Director agreed with St. Charles Parish to implement the recommended protective actions to evacuate sections A1, B1, C1, D1, A2, and C2, with shelter-in-place of all other sections. The decision was made at 12:00 noon and public alerting was set for 12:10 p.m.

A subsequent message from the utility recommended changing the protective action for section B2 from shelter-in-place to evacuation, due to a change in the forecast wind direction. St. John the Baptist Parish was not part of the decision-making process for this change, since that section is within St. Charles Parish. St. John the Baptist simply deferred to St. Charles on that decision. The EOC Directors exhibited excellent direction and control. They provided timely and informative briefings and directed the staff to think ahead for future needs. They remained

in communication and coordinated actions with St. Charles Parish, the ENC, the EOF, and the State throughout the exercise. The authorization and implementation of protective action recommendations were completed in a timely manner. The entire EOC staff appeared knowledgeable and maintained a professional working atmosphere. At 1:22 p.m., the EOC Director was notified that the State had declared an emergency, a situation that could override decisions made at the parish level.

St. John the Baptist Parish has multiple systems for public alerting and notification. During the exercise, public alerting was demonstrated through a simulated sounding of the fixed siren system at 12:10 p.m. In addition to the fixed sirens, EOC staff explained a number of other methods for alerting the public. Fire department personnel are dispatched to each fixed siren site in order to monitor siren operation. If a siren does not sound, the fire personnel attempt to sound it manually; if that fails, they conduct backup route alerting in the affected area. Fire Department personnel also set up a mobile siren in one area of the EPZ that is not covered by the fixed siren system. Helicopters with PA systems cover unpopulated wetland areas and supplement the sirens. The Warning Coordinator showed the evaluator a flight pattern map from the parish plan. The helicopters pick up bolt-on PA units that are stored at the EOC. Additional alerting systems include:

- (a) Telecommunication devices for the deaf (TDDs) that can be activated from the 911 Dispatch Center. A few residents have these devices.
- (b) Instructional messages that can be broadcast on the community cable television channel.
- (c) A radio system that operates to schools and major industrial facilities. This system was tested during the exercise; however, some of the units were found to be not working and backup communications were used.

EOC personnel also placed calls to the Coast Guard and FAA to alert river and air traffic. St. Charles Parish alerted the two railroads with lines in the EPZ.

The EAS is the primary system for providing notification and protective action instructions to the public. St. John the Baptist Parish has agreed with St. Charles Parish to coordinate their public instructions and send a single message to the primary EAS station WWL. Since St. Charles Parish transmits the message to WWL, the coordination of timing between the alerting system and EAS (15-minute clock) could not be evaluated from the St. John the Baptist Parish EOC.

The PIO in the EOC developed two Emergency Public Information messages and faxed them to the ENC, Radio Station WWL, LOEP, and the St. Charles Parish EOC. The first message was an initial notification message, sent at 9:29 a.m., indicating that there had been an accident at Waterford 3, but no protective actions were necessary. The second message was developed in conjunction with the protective action decision at 12:00 noon. The message was developed from a prescribed form in the plan, with appropriate blanks filled in and boxes checked to reflect the protective actions chosen and the areas to which they applied. The message described the affected areas in terms of familiar landmarks and boundaries and identified the sections in the public information brochure. Clear and complete instructions were given on how to evacuate, including what to take along, what routes to take, and the location of reception centers. Clear

instructions also were provided for sheltering-in-place. Parents of school children were requested not to phone or go to the school, but rather to meet their children at the reception center. A note on the bottom of the last page of the message requested the radio stations to rebroadcast the message every 15 minutes.

Emergency Worker exposure control was effectively demonstrated at the EOC. The RO reported to the EOC at 9:11 a.m. and promptly sent out a message requesting dosimetry needs from all staff. A shortfall was determined, and the RO requested supplemental dosimeters from the State at 10:00 a.m. Equipment was checked, dosimetry zeroed, and kits prepared for issuance. The kits included DRDs (CDV 742, 0-200 R and CDV 730, 0-20 R), simulated TLDs, and dose record cards with instructions. At 9:28 a.m., the RO contacted St. James Parish to request that the emergency worker decontamination centers be put on standby for possible activation. The RO contacted the St. James Sheriff's Office at 10:30 a.m. and requested activation. At the 10:50 a.m. briefing, the RO reported that the decontamination centers would be activated at 11:00 a.m. for the East Bank at the Grammercy VFD and for the West Bank at South Vacherie VFD. Supplemental dosimeters arrived at 11:00 a.m. and dosimetry kits were issued. The RO reminded the staff to check their dosimeters and record the readings every 30 minutes. He reminded key personnel to notify their field personnel to also check their dosimeters and record the readings every 30 minutes. At 12:04 p.m., the RO briefed the staff on the expected contamination doses at 2, 5, and 10 miles from the plant. He ascertained that it was safe to continue operations in the secured EOC.

St. John the Baptist Parish was well prepared to provide assistance to special populations. The parish has one hospital, one nursing home, and one retirement home within the EPZ. During the exercise, the Health/Medical Coordinator contacted these facilities to obtain information on their needs for assistance. She obtained counts of how many individuals would be able to evacuate on an ordinary bus, how many would need a lift-equipped van or bus, and how many would require an ambulance. Parish policy is to provide bus transportation for the retirement home residents, even though some of them have cars, to spare them from a potentially challenging driving situation. The Health/Medical Coordinator had information on transport providers and worked with the Transportation Coordinator to obtain the required vehicles. The parish has an arrangement with Acadia Ambulance Service for emergency transportation. Acadia has over 200 ambulances. The parish also has an arrangement with Air Logistics to provide helicopter service, if needed, to evacuate hospital patients in critical condition. During a Waterford emergency, specialized transportation resources such as lift vans and ambulances would be assembled at a staging area near the EPZ to be ready in case they are needed.

The Health/Medical Coordinator also had an up-to-date list of 339 non-institutionalized individuals who might require assistance. The list was printed out from a recently revised computerized database. It included information on the individuals' specific needs and was organized by protective action area so those affected individuals could be quickly identified once a protective action decision was made.

The Law Enforcement Coordinator indicated that there were 2 jails with a total of 256 inmates in the affected area. Arrangements were made to evacuate the inmates by bus to a State facility in Baton Rouge. Several officers would accompany the inmates on each bus.

The EOC staff focused early on, on measures for protection of school children. The Schools Coordinator reported at the 9:45 a.m. staff briefing that the relevant schools had been contacted and would shortly report a head count of students. The Transportation Coordinator reported that bus companies in St. John the Baptist Parish and neighboring parishes had been contacted to notify them that transport assistance might be needed. By 10:00 a.m., the Schools Coordinator had a count of 11,306 students and staff at 17 locations. The Law Enforcement Coordinator was prepared to dispatch a squad car to each location to provide assistance, traffic control, and backup communications. Later on, a head count of 5,500 students was reported as evacuating; apparently the first count was a total, and not all of those schools had to be evacuated.

The Law Enforcement Coordinator simulated activation of T/ACPs at appropriate locations at appropriate times. St. John the Baptist Parish provides traffic control at a few locations in St. Charles Parish that are more easily accessible for St. John staff. The Law Enforcement Coordinator kept a running total of the number of cars and officers on assignment at T/ACPs, schools, jails, and other duties in order to determine whether additional resources might be needed. Arrangements were made to obtain up to 8 State Police units if needed; however, they were not needed during the exercise. The Public Works Coordinator simulated providing several crews to assist with setup of T/ACPs. Public Works had 12 barricades on hand, and could quickly obtain another 24 from local sources if needed.

St. John the Baptist Parish demonstrated the ability to maintain staffing and operations on a continuous basis. Parish staff performed this function as they would in an actual emergency: two or more staff per position responded initially, so that at first, the EOC was overstaffed. Then, the Director instructed the second shift staff to go home and rest. For the exercise, the second-shift staff either left temporarily, or in some cases, stayed but wore a green tag to indicate their status as observers rather than players. Later, the second-shift staff returned on a staggered basis to replace the first shift. This method ensured that all staff were initially acquainted with the situation and that extra staff were available to assist with the initial rush of activities, while still providing for 24-hour staffing. All EOC positions demonstrated a shift change. Outgoing staff effectively briefed incoming staff on the current status of the emergency. Response operations continued through the staggered shift change, between 10:15 a.m. and 11:28 a.m., without interruption. Second-shift staff demonstrated appropriate knowledge and skills to perform their response roles; in fact, the protective action decision making and implementation took place during the second shift and were very well executed.

At 1:45 p.m., the exercise was terminated.

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

- a. **MET:** Objectives 1, 2, 3, 4, 5, 9, 10, 11, 15, and 30

- b. DEFICIENCY: NONE
- c. AREAS REQUIRING CORRECTIVE ACTION: NONE
- d. NOT DEMONSTRATED: NONE
- e. PRIOR ISSUES – RESOLVED: NONE
- f. PRIOR ISSUES – UNRESOLVED: NONE

2.2.2 TRAFFIC/ACCESS CONTROL POINT

At a prearranged out-of-sequence time, one T/ACP was ordered activated. The Law Enforcement and Traffic Control Officer contacted a Sheriff's Department Officer who arrived at the EOC at 10:04 a.m. At that time, the Sheriff's Officer was provided with a radiation monitoring kit that contained two DRDs and a simulated TLD. The DRDs were a CDV-742 with a range of 0-200R and a CDV-730 with a range of 0-20R. Both DRDs had been zeroed for the exercise. The kit also contained a card for recording the readings taken from the two DRDs. The Sheriff's Officer was briefed that he needed to read and record the DRD readings at 30-minute intervals.

At 10:08 a.m. the Sheriff's Officer was dispatched from the EOC to set up the T/ACP at the John L. Ory Grade School located at 182 West Fifth Street, which is also State Highway 44.

The Sheriff's Officer simulated setting up the T/ACP. The presence of Public Works personnel was simulated in accordance with the extent-of-play. The Officer was familiar with the procedures to be utilized for this T/ACP and the associated T/ACP that would be simultaneously set up at the intersection of State Highway 44 and Hemlock Street.

Communications available to the Officer at the T/ACP included the 800 MHz police radio with which the Officer was able to contact the parish Dispatch Center, and Citizens Band radios in the patrol cars and at the parish Dispatch Center. Communications performed adequately during the exercise.

During the exercise, the Officer read and recorded readings of his DRDs.

In summary, the status of FEMA exercise objectives for the T/ACP is as follows:

- a. **MET:** Objectives 1, 4, 5, and 17
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES RESOLVED:** NONE
- f. **PRIOR ISSUES-UNRESOLVED:** NONE

2.2.3 SCHOOL BUS DRILL

At 9:15 a.m., the School Services Officer began contacting the School Transportation Coordinator and the school officials regarding an **ALERT** status at Waterford 3. At 9:20 a.m., the EOC Director made a decision to shelter-in-place schools in St. John The Baptist Parish. At 9:23 a.m., the School Transportation Officer notified the bus drivers of the LaPlace area of the shelter-in-place decision, but to prepare for evacuation.

At 10:05 a.m., during the **ALERT** ECL, the EOC Director made the decision to mobilize school transportation personnel for the evacuation of the John L. Ory Elementary School. The School Services Officer immediately requested that the Transportation Officer in the EOC contact the necessary resources for the evacuation of schools. The schools were contacted and the School Transportation Coordinators were requested to activate a sufficient number of bus drivers to evacuate the schools and simulate having them dispatched to the appropriate designated staging areas.

The Law Enforcement Officer at the EOC was instructed to have Deputy Sheriffs prepare to escort the buses to the Southeastern Louisiana University Reception Center in Hammond. Prior to deployment to the bus staging area, two Deputy Sheriffs were issued dosimetry kits containing a TLD and 0-20R and 0-200R DRDs. The officers received instructions on the reading of the DRDs and the need to complete the necessary information on their individual Dosimeter Report Form. They were instructed to read the DRDs every 30 minutes, which they did throughout the exercise.

At 10:07 a.m., the Transportation Coordinator contacted the bus driver. At 10:20 a.m., the bus arrived at the bus staging area located at the John L. Ory Elementary School. The bus driver was issued dosimetry and briefed by the Deputy Sheriff prior to being dispatched to the reception center. The bus driver was knowledgeable in the use of the DRDs. He followed the dosimetry procedures throughout the exercise.

The bus driver had a cellular phone, and he remained in contact with the Transportation Coordinator at the EOC. There were no undue delays, communication failure, or malfunctions during the exercise.

A representative number of students (approximately 25) were loaded into the bus in preparation for transporting them to the reception center. The teacher took a roll call and the paperwork was given to the bus driver. The students were unloaded prior to the bus leaving. The parents had been informed in a student handbook, an annual letter, and a Waterford 3 mailing where to pick up their children in the event of an evacuation due to plant conditions at Waterford 3.

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

- a. **MET:** Objectives 1, 4, 5 and 16
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES - RESOLVED:** NONE
- f. **PRIOR ISSUES - UNRESOLVED:** NONE

3. SUPPORT ORGANIZATIONS

3.1 LAFOURCHE PARISH EMERGENCY OPERATIONS CENTER

LaFourche is a support parish located 25 miles from Waterford 3 Steam Electric Station.

The **ALERT** ECL was received at the parish EOC from LOEP at 9:05 a.m. by telephone and was verified by fax at 9:05 a.m. Waterford 3 declared the **ALERT** at 8:38 a.m.

At 9:05 a.m., the Emergency Preparedness Director (EPD) and his deputy initiated their call lists to inform parish elected officials, agency heads and other EOC staff of the ECL. These individuals were placed on standby at the **ALERT** ECL and were activated at the **SAE** ECL. Calls were made to all personnel who were designated to serve on three shifts for 24-hour operations. The list included parish President, Police Chief, Sheriff, City Civil Defense, Fire Chief, American Red Cross, Acadian Ambulance, Nicholls State University (reception center) School Board (for transportation and shelter) Department of Social Services, and 3M Vacuum Truck. All calls were completed by 9:40 a.m. These calls were repeated at the **SAE**, which was received at the parish EOC at 10:38 a.m. and at the **GE**, which was received at 12:03 p.m. The EPD maintained a log of all calls and filed all incoming faxes.

None of the individuals contacted were slated to report to the parish EOC. Each agency head and representative remained at their normal duty station, responded to the requests and directives from the EOC, and coordinated their activities with their respective organization and with the Emergency Preparedness Director.

Security was established at 9:00 a.m. by a Sheriff's deputy at the front door, directing personnel either into the courthouse or the EOC.

The EOC utilized for the exercise was actually the office of the EPD and his assistant. The room was equipped with three telephone lines. Seven additional lines were available, but not activated. Equipment available included a facsimile machine, two computers, and communications equipment. Items available to support emergency operations included space, furnishings, lighting, ventilation, restrooms, and backup power. And backup power from a 100 KW generator, which is tested weekly. Maps available either on display or in the plan included: plume pathway EPZ with sectors identified; evacuation routes; reception centers; population by evacuation area; and traffic and access control points.

The EPD provided the list of designated T/ACPs and simulated directing the establishment of #1 and #3, during the **SAE**.

A large adjacent room was available and would be utilized as an EOC during major events, such as a hurricane threat. It was equipped with a status board (not utilized during this exercise) and with telephone jacks for seven telephones. These lines are not activated except during actual

emergencies. It requires approximately 30 minutes to activate this room as an EOC, requiring tables, chairs, telephones and status board to be installed.

The parish EPD provided direction and control and all required agency coordination via telephone. He frequently referenced his plan and utilized a detailed checklist of activities to be completed during each ECL.

Communication systems were adequate to support emergency operations. The primary communications system was the administrative telephone and three cellular phones. Radios provided backup communications. Radio systems available included the 800 Mhz band, the Skytell (satellite telephone for LOEP communications) and RACES. RACES was available but was not demonstrated during this event. All radio systems except RACES were tested and functioned properly.

A Contel Weather system was available through a computer link with pager capability with the National Weather Service. Predesignated call lists were set up in Winfax, a computer program, for transmitting media releases to individual locations or selected groups as required.

At 12:25 p.m. the controller injected a requirement for a shift change. Both EOC positions briefed their replacements and operations continued without interruption. Second shift personnel demonstrated a thorough grasp of current conditions and continued direction and control functions at the appropriate level.

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

- a. **MET:** Objectives 1, 2, 3, 4, and 30
- 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 NICHOLLS STATE UNIVERSITY RECEPTION CENTER

The Nicholls State University Reception/Care Center (NSU R/CC) is located in the Stopher Gymnasium on the University campus in Thibodaux, Louisiana.

Mobilization of the R/CC staff was initiated by a telephone call from the LaFourche Parish Civil Defense Director to the NSU R/CC Manager, who is also the Thibodaux Volunteer Fire Department (FD) Chief. The NSU R/CC Manager received three calls from the Civil Defense Director. The first was to notify the NSU R/CC Manager to standby, the second call was to notify him that there was an **ALERT**, and the third call notified him to activate the NSU R/CC at 7:00 p.m. The NSU R/CC Manager did not record the times for these notifications. At 6:00 p.m., the NSU R/CC Manager had the Thibodaux Police Department Communication Center activate a general alarm over the pager system to notify all 167 volunteer staff to assemble at the NSU R/CC at 6:30 p.m. The pagers were checked out and turned in using a special form. The list of those volunteers issued pagers was kept updated using this check-out/turn-in procedure.

A number of personnel were in place at 6:15 p.m., and at 6:40 p.m., volunteer staff were directed to begin activation. Volunteers set up the monitoring areas, one for females and one for males at opposite ends of the gymnasium lobby; one decontamination area for male evacuees in the men's locker room (no decontamination area was demonstrated for female evacuees per the extent-of-play agreement); reception tables in the gymnasium; and a vehicle monitoring station outside in the parking lot. By 7:45 p.m. the NSU R/CC was operational and the first evacuees arrived.

The NSU R/CC was staffed by a Reception Center Manager, a Radiological Supervisor, a campus police officer, 3 Thibodaux Police Officers, 4 employees of the Department of Social Services, Office of Family Support (2 for each shift demonstrated), 4 employees of the local chapter of the American Red Cross (ARC - 2 for each shift demonstrated), 2 paramedics from a local ambulance company, 2 emergency radiation health professionals, a 3M vacuum truck driver pursuant to a contract with the utility, and 30 volunteer FD employees (15 for each shift demonstrated).

Since this was an out-of-sequence exercise, there was little communication between the NSU R/CC and other emergency entities. Although there were telephones available in the gymnasium, these were not utilized during the exercise. Once the volunteer communication squad members were activated, they operated out of the FD Communication Center. The Communication Center, located at the Thibodaux FD building, was equipped with two commercial telephone lines, including the Police Department emergency line; the 16-channel, 100 Watt pager radio; an 800 MHz police radio with access to three fire frequencies, two law enforcement frequencies, Parish channels and the State fire network; and an 18-channel scanner. In addition, the volunteer FD had 39 mobile radios issued to key personnel, including the Chief and all company captains.

For this exercise, the Thibodaux FD on-scene communications van was parked at the NSU R/CC. This van was engineered and built by fire department volunteers. It was equipped with two commercial telephones, which were served by a 300-foot telephone cable and jack that could be connected to any outside building telephone service jack; a mobile telephone for the driver; a

cellular telephone; a 16-channel, 100 Watt pager radio; an 800 MHz police radio identical to that in the Communication Center (a third 800 MHz police radio is also available in the Chief's emergency vehicle); and an 18-channel scanner. The scanner radio system was demonstrated with a general alarm message transmitted during the exercise

Dosimetry equipment was distributed under the supervision of the Radiological Supervisor, consisting of a simulated TLD, two DRDs (0-20 R and 0-200 R) and exposure-record cards. The Radiological Supervisor provided a briefing on their use including: how to read the DRDs; the maximum authorized mission exposure limit (1 R); the maximum turn-back values (5 R); a reminder to read the DRDs every 30 minutes; and to record the initial reading and subsequent readings on the exposure-record cards. All workers understood how to read the DRDs and complete the worker exposure-record card. Workers then were issued booties and gloves.

TLDs were provided by the utility, but were kept at the NSU maintenance building. Periodically utility personnel check, and if necessary, exchange the TLDs in storage. The DRDs are provided by LOEP and are also kept at the NSU maintenance building. Periodically LOEP personnel check, and if necessary, exchange the DRDs in storage. The FD personnel were familiar with the usage of the dosimeter charger. Several DRDs were found to be inoperative, however, there were a sufficient number available and most were charged and zeroed by FD personnel using the charger. The DRDs were periodically read during the first shift and the readings duly documented on the exposure-record cards. The second shift was not in place a sufficient time to require additional readings.

Although workers indicated they were to return the exposure-record cards to the Radiological Supervisor at the end of their shift, the exposure-record cards were not been collected from workers. No separate documentation of the issuance of dosimetry equipment was created when the equipment was distributed; therefore, the exposure-record cards were the only documentation of worker exposure. In addition, the Radiological Supervisor Checklist in the Implementing Procedures for the NSU R/CC (REV.6; 06/07/99) did not have a procedure for the Supervisor to collect, maintain, track or deliver the exposure-record cards to anyone. After some discussion, it was determined the cards should ultimately end up with the State, even though the utility is responsible for reading the TLDs.

At the male and female monitoring station, FD volunteers taped butcher paper to the floors at the entrance to the gymnasium lobby, including three monitoring squares placed at a sufficient distance to accommodate holding one's arms out to the side. One monitor and one recorder were assigned to monitor evacuees. A total of 15 evacuees were monitored by the two shifts. The monitors for the first shift were knowledgeable concerning the use of the monitoring equipment and performed thorough monitoring on each evacuee. Monitoring took approximately 3.5 minutes per evacuee. The monitors for the second shift were less experienced; however, the recorder and monitor worked as a team to remind each other of the monitoring procedures and the monitoring of each evacuee was complete and thorough. The monitoring time averaged approximately 4 minutes per evacuee. The monitors for both shifts were able to demonstrate the

proper procedures and use of the monitoring equipment but showed a need for additional training and practice.

Each shift demonstrated procedures for exchanging the plastic bag upon touching an evacuee. A touch was interjected for each shift. The monitors also immediately recognized when they had in reality touched an evacuee. Based on controller inject, each team demonstrated procedures for managing one contaminated evacuee per shift. The second-shift monitors were not as experienced at changing their monitoring equipment from 1x to 10x and back when presented with the elevated readings.

If an individual was found to be contaminated at the monitoring station, they were given a Personnel Contamination Survey Report. The monitor wrote the evacuee's name, the location of the contamination and other pertinent information. This report followed the individual through the decontamination process and was used to register them once they reach the gym. The evacuee was properly directed to follow the covered walkway to the decontamination area. At the female monitoring station there was no demonstration of decontamination as per the extent-of-play agreement and the evacuee was only asked to exit the monitoring area as if decontamination had been completed. Individuals who were not contaminated did not receive any paperwork and were told to enter the gym. A process needs to be developed that would track all evacuees from the point where they entered the system to where they exited. This is a separate process from the ARC Form 5972, which is utilized for shelter registration.

Procedures stated that when individuals were found to be contaminated their valuables were collected and placed in a plastic bag, which, if not contaminated, was then given to representatives at the registration table in the gym. After the individual was decontaminated and entered the gym to register, they would be reunited with their belongings. In this exercise this did not occur; the monitors were not aware of where to bring the valuables nor were the representatives at the registration table aware that they were responsible for returning the valuables to the individual. Additionally, there were no release forms, or records, to sign for the transfer and accountability of the valuables.

The physical setup of the decontamination area in the male locker room inhibits a robust decontamination program. To enter the decontamination area, an evacuee must pass through two 36-inch wide doorways which were divided with plastic sheeting, allowing only 18 inches on either side. Although this was a creative approach, it only marginally solved the problem in that 18 inches is hardly sufficient to allow clear passage of a contaminated individual. Recovering the pathways between entry and exit might be a more practical approach. It is recommended that the procedures be reviewed for additional options. The monitors were able to adequately demonstrate the proper procedures for personnel decontamination.

The Thibodaux Volunteer Fire Department performed vehicle monitoring. Two shifts of three individuals (2 monitors and 1 recorder) separately demonstrated reception and radiological monitoring of a vehicle. Monitoring was performed in the parking lot across the street from the Stopher Gymnasium building. Parish and University security personnel would be used to provide

traffic and access control; however, they did not participate in this exercise. The monitors were able to adequately demonstrate the proper procedures for vehicle monitoring

When a vehicle was found to be contaminated, the driver was instructed to move the vehicle to a grassy area about 150 feet away from the monitoring location. At this location, the driver was given a pair of booties to put on and instructed to proceed to the Stopher Gym personnel monitoring station. No release forms, custody forms or other records were available to sign for the transfer and accountability of the driver's vehicle and keys. Additionally, there was no process for returning the keys and vehicles to the individuals after the vehicles were decontaminated.

The Implementing Procedures provide a list of all radiological monitors; however, there was no separate roster of key personnel specifically assigned to each shift. The Radiological Supervisor, from the pool of volunteers, assigned monitors and recorders at the time. There was a full complement of monitors and recorders, as provided for in the NSU R/CC Implementing Procedures, for the two personnel monitoring areas, the vehicle monitoring area, and the male decontamination area to staff both shifts. The second shift was briefed by the Radiological Supervisor on the use of the monitoring equipment and their personal dosimeter equipment. The shift change for monitors and recorders was accomplished with no interruption in operations.

Key personnel, including the NSU R/CC Manager and Radiological Supervisor, knew their replacements. The second-shift NSU R/CC Manager was present, but the replacement for the Radiological Supervisor was not available. An individual was appointed to perform this function and the shift change was completed. The NSU R/CC Manager and the Radiological Supervisor indicated that to execute the shift change for these key positions, replacement personnel would be provided the appropriate checklist from the Implementing Procedures. These checklists indicate what procedures must be followed and which have been completed. Any additional information would be conveyed orally.

The congregate care evaluation was conducted by interview with a representative from the American Red Cross (ARC). Six facilities have been identified for shelter use, with a total capacity of 2,500 individuals. For this evaluation, West Thibodaux Junior High School was selected. The individual facilities staff will accomplish shelter staffing and management. ARC staff and volunteers would supplement this staff. The parish has a special needs shelter at the Raceland Community Center.

ARC shelter managers will not allow individuals to enter the shelter without a Disaster Shelter Registration Form (ARC Form 5972), which is given to evacuees at the NSU Reception Center. Facility staff would do food preparation until additional ARC volunteers arrived. ARC trained nurses would provide health services, and security would be provided by the parish and city police. RACES volunteers would provide supplemental communications.

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

- a. MET: Objectives 1, 4, 5, 18, 19, and 30
- 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 LAFOURCHE MON/DECON STATION

The capability to monitor and decontaminate emergency workers, equipment, and vehicles was demonstrated by the LaFourche Fire Protection District No. 1. The demonstration was conducted out-of-sequence during the evening of October 13, 1999, at the Station No. 2 firehouse located at Louisiana Route 1 and U.S. Route 90 in Raceland, Louisiana.

Members of the LaFourche Fire Protection District No. 1 manned the emergency worker monitoring/decontamination facility. During the exercise on the morning of October 13, the LaFourche Parish Emergency Operations Center notified the Fire Protection District of the emergency and put it on standby. Notification of the need to activate the emergency worker monitoring/decontamination facility came later from the LaFourche Parish Emergency Operations Center at 6:00 p.m. via a page to all members of the volunteer fire department. By 6:30 p.m. approximately 30 volunteers had arrived, including the Chief and two assistants. The Fire District had a full complement of personnel to staff both first and second shift operations. Setup of the facility began at 7:00 p.m., and the facility was fully activated and available to perform operations by 7:35 p.m.. In addition to the fire district volunteers, a person from 3M Vacuum Service, a private waste hauler, was present and available for interview.

Emergency workers at the LaFourche emergency worker monitoring/decontamination station rely on commercial telephones for primary communications using radios for backup. As the demonstration occurred out-of-sequence, actual communication with the LaFourche Parish EOC was established earlier during the day. However, through interview it was determined that both systems are fully operational. Radio systems are used routinely for communication purposes during actual fire and hurricane emergencies. This system can access the State Fire Net which can act as a conduit to link the monitoring/decontamination station to the EOC, other fire districts within the State of Louisiana, and the Sheriff's office.

Prior to the start of monitoring and decontamination activities at the facility, all monitoring and decontamination staff were issued properly zeroed 0-20R and 0-200R direct-reading dosimeters, a simulated TLD, and exposure-record card. Records were kept for all instruments assigned to the emergency workers. Each person was aware of the 1R reporting value, 5R turnback value, and the need to read his or her dosimeter every 30 minutes. In addition, signs were posted around the monitoring/decontamination facility to remind emergency workers of these values, and the Individual Dosimeter Report Form carried by each worker also listed these values and provided instructions. Through interview, it was determined that instruments are calibrated by the State. A note accompanying the dosimeters indicated that each was calibrated in September 1999. Emergency workers knew to turn in their instruments and record cards to their supervisor at the end of their shift.

The monitoring and decontamination facility was set up in accordance with the organization's Implementing Procedure, Rev.6, dated August 30, 1999. The layout was designed to prevent the spread of contamination. Paper covering was taped to the floor in areas where contaminated emergency workers would walk to the decontamination area, and clean areas were separated from

potentially contaminated areas by ropes attached to portable poles. Prior to the arrival of potentially contaminated emergency workers, the nine CDV-700 monitoring instruments with headphones, which were calibrated in September 1999, were checked out for proper operation with the attached check source. Prior to monitoring, small plastic baggies were used to cover the instrument probes with the beta shields open. Signs were posted throughout the facility indicating that the contamination level requiring decontamination was 0.1 mR/hour above background.

The first vehicle and emergency worker to be monitored arrived at the facility at 8:00 p.m. and was directed to the monitoring point adjacent to the firehouse. Vehicle monitoring was done by a first shift Monitor assisted by a Recorder. Both wore booties and rubber gloves. A very thorough monitoring of the vehicle exterior was demonstrated, including the bumpers, wheel wells, tires, door handles, side view mirrors, and engine air intake. During the monitoring, contamination was discovered (by Controller inject) on the left front and rear tires and wheel wells. Monitoring of the interior of the vehicle included the inside driver side door panel, seat, seatback, headrest, steering wheel, shift lever, radio, and pedals. Vehicle decontamination was not required to be demonstrated per the extent-of-play, and the vehicle was directed to an assigned area for segregation of contaminated vehicles. There, a firefighter was interviewed and demonstrated thorough knowledge of decontamination procedures.

The vehicle driver was instructed to put on plastic booties and proceed to the personnel monitoring area. At this location a Monitor assisted by a Recorder performed a thorough monitoring of the driver in accordance with the implementing procedures. Both wore booties and rubber gloves. Contamination was discovered on the individual's upper right arm, and he was directed to the decontamination area. In the decontamination area, a staff person, protected by Tyvec suit, booties and rubber gloves, directed the contaminated individual to remove the localized contamination by use of sticky masking tape. Subsequent monitoring indicated that the decontamination was successful and further decontamination by scrubbing or showering was not needed.

At 8:40 p.m., a shift change was demonstrated. The shift change was conducted smoothly, with outgoing staff briefing the incoming staff on the status of activities. The second-shift staff demonstrated their proficiency in personnel monitoring, decontamination, and vehicle monitoring.

All Monitors on both shifts knew to replace the baggie covering the instrument probe when they accidentally touched the vehicle or emergency worker. All Monitors also took background readings prior to monitoring the vehicles and emergency workers, and these background readings were properly recorded on survey reports.

At the completion of the monitoring and decontamination activities, the facility staff indicated that the staff in the potentially contaminated areas would strip off their protective clothing, booties, and gloves, would be monitored and, if necessary, decontaminated prior to being released from the facility.

Monitoring and decontamination activities at the facility were performed in accordance with the implementing procedures with the exception that the monitors on both shifts sometimes moved the monitoring probe too rapidly and sometimes held the probe more than the one inch from the body surface specified in the procedures. Also, in one instance, the Monitor in the personnel decontamination area stepped into the clean area without being aware of it, potentially contaminating that area.

With the exception of the above observations, the volunteers of the LaFourche Fire Protection District No.1 who participated in the exercise were observed to be well trained, enthusiastic, and very knowledgeable of their responsibilities

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

- a. **MET:** Objectives 1, 4, 5, 22 and 30
- b. **DEFICIENCY:** NONE
- b. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES - RESOLVED:** NONE
- f. **PRIOR ISSUES - UNRESOLVED:** NONE

3.4 OCHSNER FOUNDATION HOSPITAL

Waterford 3 Nuclear Power Plant notified Ochsner Foundation Hospital Emergency Department of an injured contaminated plant employee at 5:01 a.m. Emergency Department and Security personnel were notified by 5:06 a.m., and preparation of the patient reception/treatment area was initiated immediately. By 5:40 a.m., the treatment area and pathway to the ambulance bay was covered in Herculite and appropriately roped/secured. A physician, five nurses and two hospital HPs were dressed in protective clothing and ready for patient reception within that same time frame.

Each of the above staff was issued a TLD and a 0-200mR dosimeter. Dosimeters were zeroed and serial numbers recorded for each participant. Survey meters had been calibrated September 16, 1999, and a source check accomplished the day of the exercise, October 13, 1999.

Communications among the hospital, plant and the ambulance were demonstrated on several occasions with ETA, patient vital signs and nature of injury exchanged during these discussions.

The ambulance arrived at Ochsner at 6:03 a.m. Essential information about the patient was communicated between the ambulance crew and hospital receiving personnel. Once the patient's medical condition was evaluated, the patient was monitored for contamination levels by two hospital HPs. Decontamination of the patient's arm and head was accomplished while demonstrating excellent knowledge of procedures necessary to prevent cross-contamination. Gloves were changed at appropriate times and contaminated materials were bagged for disposal. Disrobing and exit procedures were effectively demonstrated.

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

- a. **MET:** Objectives 1, 4, 5, and 21
- b. **DEFICIENCY:** NONE
- c. **AREAS REQUIRING CORRECTIVE ACTION:** NONE
- d. **NOT DEMONSTRATED:** NONE
- e. **PRIOR ISSUES - RESOLVED:** NONE
- f. **PRIOR ISSUES - UNRESOLVED:** NONE

3.5 ST. CHARLES AMBULANCE SERVICE

The medical drill was initiated with a call at 5:01 a.m. notifying the hospital that an injured/contaminated employee needed transportation to the hospital. The Flight Care Helicopter could not be used because of foggy weather, therefore St. Charles Ambulance Service was requested through 911. At 5:12, the St. Charles Hospital EMS received a call requesting transportation of an injured/contaminated individual from the Waterford 3 Steam Electric Station to Ochsner Medical Center.

An ambulance was immediately dispatched, arriving at Waterford at 5:25 a.m. The ambulance departed Waterford at 5:31 a.m. with the patient that was contaminated and who had sustained an open fracture of the right forearm and a laceration on his forehead. The patient was appropriately packaged to prevent spread of contamination. The hospital was contacted by cellular phone as they left Waterford, verifying the patient's vital signs, contamination levels and an estimated time of arrival (ETA) of 35 minutes.

Upon arriving at the hospital at 6:03 a.m., the ambulance was directed to the Radiological Emergency Area (REA) which had been prepared and secured by the hospital staff. An appropriate transfer from the ambulance crew to the medical team was achieved with an oral briefing from the ambulance crew and the Waterford HP that accompanied the patient.

The HP conducted a thorough survey of both the ambulance crew and the vehicle. Crew and the vehicle were found to be clean and released back into service. Each ambulance crew member was provided one TLD, one 0-200mR DRD and a log to record readings every 15 minutes. They were knowledgeable in the use of dosimetry and KI and were also aware of their radiation exposure level.

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

- a. **MET:** Objectives 1, 4, 5, and 20
- b. **DEFICIENCY:** NONE
- 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

A/N	Alert and Notification
ALARA	As Low As Reasonably Achievable
ANL	Argonne National Laboratory
Anti-C	Anti-Contamination
ARC	American Red Cross
ARCA	Area Requiring Corrective Action
ARFI	Area Recommended for Improvement
CD	Civil Defense
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
EAS	Emergency Alerting System
EBS	Emergency Broadcast System
ECL	Emergency Classification Level
EEM	Exercise Evaluation Methodology
EMS	Emergency Medical Services
ENC	Emergency News Center
EOC	Emergency Operations Center

EOF	Emergency Operations Facility
EPA	U.S. Environmental Protection Agency
EPD	Emergency Preparedness Director
EPZ	Emergency Planning Zone
ER	Emergency Room
FDA	U.S. Food and Drug Administration
ETA	Estimated Time of Arrival
EW	Emergency Worker
FAA	Federal Aeronautics Administration
FEMA	Federal Emergency Management Agency
FMT	Field monitoring team
FTC	Field Team Coordinator
GE	General Emergency
GM	Guidance Memorandum
HAZMAT	Hazardous Materials
HP	Health Physicist or Health Physics Technician
INEEL	Idaho National Engineering and Environmental Laboratory
KI	Potassium Iodide
LDEQ	Louisiana Department of Environmental Quality
LDHH	Louisiana Department of Health and Hospitals
LETCO	Law Enforcement and Traffic Control Officer
LOEP	Louisiana Office of Emergency Preparedness

LP&L	Louisiana Power and Light Company
M/D	Monitoring/Decontamination
Mon/Decon	Monitoring/Decontamination
NaI	Sodium Iodide
NOFD	New Orleans Fire Department
NOUE	Notification of Unusual Event
NRC	U. S. Nuclear Regulatory Commission
OEP	Office of Emergency Preparedness
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
RACES	Radio Amateur Civil Emergency Service
RC	Reception Center
RO	Radiological Officer
REA	Radiological Emergency Area
REP	Radiological Emergency Preparedness
REP&R	Radiological Emergency Preparedness and Response
RM	Radiological Monitor

RTA	Regional Transit Authority
SAE	Site Area Emergency
T/ACP	Traffic/Access Control Point
TEDE	Total Effective Dose Equivalent
TLD	Thermoluminescent Dosimeter
UNO	University of New Orleans
USDA	U. S. Department of Agriculture
W-3	Waterford 3 Steam Electric Station

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

LOCATION	EVALUATOR	AGENCY
Overall Coordination	Larry Earp	FEMA RAC Chairman
Exercise Coordinator	Ernest Boaze	FEMA
State EOC, Baton Rouge	Ron Graham	USDA
LDEQ at Waterford 3 EOF	Joe Keller Daryl Thome	INEEL ANL
LDEQ Laboratory	Frank Wilson	ANL
Field Monitoring Teams:		
Team #1	Brad Salmonson	INEEL
Team #2	Harry Harrison	ANL
Team #3	George Brozowski	EPA
Team #4	Bill Gasper	ANL
Emergency News Center	Brenda Mosley Al Lookabaugh	FEMA ANL
Rumor Control	Richard Converse	ANL
St. Charles Parish EOC	Jerry Staroba Tracey Green	ANL ANL
Traffic Control	Marc Williams	DOT/FAA
St. John the Baptist Parish EOC	Marilyn Boots Ken Lerner	FEMA ANL
School Bus Drill	Angela Watson-Spinner	FEMA
Traffic Control	Richard Vaughn	DOT/FAA
St. Charles Ambulance Service	Tom Carroll	ANL
Ochsner Foundation Hospital	Phil Edgington	DHHS

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS (Cont'd)

<u>LOCATION</u>	<u>EVALUATOR</u>	<u>AGENCY</u>
LaFourche Parish EOC	Carl McCoy	ANL
LaFourche Mon/Decon Station	Bob Rospenda	ANL
	Sandra Bailey	ANL
	Mike Meshenberg	ANL
Nicholls State Reception Center	Bruce Young	ANL
	Becca Haffenden	ANL
	Harry Noftsker	ARC
Radio Station WWL	Henry Christiansen	DOT/FAA

APPENDIX 3

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

The exercise objectives selected for the participating local jurisdictions and support organizations were designed to elicit a response adequate for the proper demonstration of the required knowledge and capabilities of those participating. The following includes those objectives submitted by the State of Louisiana and approved by FEMA as those required to be demonstrated at specific locations during this exercise.

All objectives will be demonstrated as they would be performed in an actual emergency except where explicitly otherwise noted. The demonstration at the Lafourche Monitoring and Decontamination Station, and the Nichols State Reception Center will be conducted out-of-sequence on the evening of October 13, 1999.

OBJECTIVE 1: MOBILIZATION OF EMERGENCY PERSONNEL

Demonstrate the ability to fully alert, mobilize and activate personnel for both facility and field-based emergency functions.

Locations

State EOC, LDEQ HQ, LDEQ Radiological Emergency Response Team (RERT) at Waterford 3 EOF, LDEQ Field Monitoring Teams, LDEQ Laboratory, Emergency News Center (ENC), St. Charles Parish EOC, St. John the Baptist Parish EOC, LaFourcheParish EOC, Nicholls State Reception Center, LaFourche FPD Decon Station, Ochsner Foundation Hospital, and Flight Care Helicopter

Extent-of-Play

Emergency personnel will be alerted and mobilized per procedure, as they would be in an actual emergency. At the ALERT declaration, LDEQ RERT will be dispatched to the Waterford 3 EOF, the State EOC, the Emergency News Center, and Field Monitoring Teams to appropriate staging locations. The Nicholls State Reception Center and the LaFourche Monitoring and Decon Station will participate in the exercise out-of-sequence with the main exercise events. Two staff members will comprise a shift crew at the LaFourche Parish EOC as indicated in the LaFourche Parish plans.

OBJECTIVE 2: FACILITIES, EQUIPMENT AND DISPLAYS

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

Locations State EOC, LDEQ HQ, LDEQ RERT at the Waterford 3 EOF, LDEQ Laboratory, Emergency News Center, St. Charles Parish EOC, St. John the Baptist Parish EOC, and LaFourche Parish EOC.

Extent-of-Play Facilities, equipment and displays will be set-up as they would be in an actual emergency.

OBJECTIVE 3: DIRECTION AND CONTROL
Demonstrate the ability to direct, coordinate and control emergency activities.

Locations State EOC, LDEQ HQ, LDEQ RERT at Waterford 3 EOF, St. Charles Parish EOC, St. John the Baptist Parish EOC, LaFourche Parish EOC.

Extent-of-Play Direction and Control will be demonstrated as it would be in an actual emergency.

OBJECTIVE 4: COMMUNICATIONS
Demonstrate the ability to communicate with all appropriate locations, organizations, and field personnel.

Locations State EOC, LDEQ HQ, LDEQ RERT at Waterford 3 EOF, LDEQ Field Monitoring Teams, LDEQ Laboratory, Emergency News Center, St. Charles Parish EOC, St. John the Baptist Parish EOC, LaFourche Parish EOC, Nicholls State Reception Center, LaFourche FPD Monitoring and Decon Station, Ochsner Foundation Hospital, and Flight Care Helicopter

Extent-of-Play Communications will be demonstrated as they would be in an actual emergency.

OBJECTIVE 5: EMERGENCY WORKER EXPOSURE CONTROL
Demonstrate the ability to continuously monitor and control emergency worker exposure.

Locations LDEQ RERT at Waterford 3 EOF, LDEQ Field Monitoring Teams, LDEQ Laboratory, St. Charles Parish EOC, St. John the Baptist Parish EOC, Nicholls State Reception Center, LaFourche FPD Monitoring and Decon Station, Ochsner Foundation Hospital, and Flight Care Helicopter

Extent-of-Play Emergency worker exposure control measures will be demonstrated at appropriate locations as they would be in an actual emergency. Area dosimetry will be used in place of individual direct-reading dosimeters in the risk Parish EOCs. Radiation control measures will be limited to monitoring and decontamination personnel at the Nicholls State Reception Center.

ARCAs None

OBJECTIVE 6: FIELD RADIOLOGICAL MONITORING - AMBIENT RADIATION MONITORING
Demonstrate the appropriate use of equipment and procedures for determining field radiation measurements.

Locations LDEQ Field Monitoring Teams

Extent-of-Play LDEQ Radiological Monitoring Teams will be monitored and directed by the LDEQ Accident Assessment Team. This will occur initially from LDEQ Headquarters, and subsequently en route to the Waterford 3 EOF and finally from the EOF. LDEQ Radiological Field Monitoring Teams will perform ambient radiation monitoring and trace the plume footprint.

OBJECTIVE 7: PLUME DOSE PROJECTION
Demonstrate the ability, within the plume exposure pathway, to project dosage to the public via plume exposure, based on plant and field data.

Locations LDEQ Radiological Accident Assessment Team

Extent-of-Play Dose projections and protective action recommendations will be made in accordance with scenario provided information/data.

ARCAs None

OBJECTIVE 8: FIELD RADIOLOGICAL MONITORING - AIRBORNE RADIOIODINE AND PARTICULATE ACTIVITY MONITORING
Demonstrate the appropriate use of equipment and procedures for the measurement of airborne radioiodine concentrations as low as 10^{-7} (.0000001) microcuries per cubic centimeter in the presence of noble gases and obtain samples of particulate activity in the airborne plume.

Locations LDEQ Radiological Monitoring Field Teams

Extent-of-Play LDEQ Radiological Monitoring Field Teams will take air samples in simulated high radiation areas. Cartridges for radioiodine will be processed (counted) in the field. Cartridges and air particulate filters will be transported to the LDEQ Laboratory in Baton Rouge for analysis.

ARCAs: 70-97-08-A-01 and 70-97-08-A-02

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

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

Locations

State EOC, St. Charles Parish EOC, and St. John the Baptist Parish EOC

Extent-of-Play

Protective action decision making will be demonstrated at the parish EOCs as it would be in an actual emergency. The authorization whether or not to administer potassium iodide (KI) to emergency workers and institutionalized individuals is the only protective action decision made at the State EOC.

OBJECTIVE 10:**ALERT AND NOTIFICATION**

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

Locations

St. Charles Parish EOC, St. John the Baptist Parish EOC, and WWL Radio

Extent-of-Play

Alert system (sirens) activation will be simulated. EBS messages will be developed at the parish EOCs. St. Charles and St. John will use WWL radio as their primary notification outlet. As the public will not be involved in the exercise, there will be no actual broadcast of the notification messages. Message content will be communicated to the radio station from the parish EOCs. A standard test message will be released by the radio station at the time protective actions for the public are called for.

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

Demonstrate the ability to coordinate the formulation and dissemination of accurate information and instructions to the public.

Locations

St. Charles Parish EOC, St. John the Baptist Parish EOC

Extent-of-Play

Notification messages will be developed at the Parish EOCs as they would be in an actual emergency. Contact will be made between the Parish EOCs and the participating radio station for the coordination of the release of the notification messages. As the public will not be involved in the exercise, there will be no actual broadcast of the notification messages. A test message will be released by the radio station to simulate the release of emergency information to the public. Message content will be communicated to the radio station from the parish EOCs. These messages will not be broadcast. Provisions will be made to provide the text of the notification messages to the ENC and Rumor Control staff following their release. It should be noted that the participating radio station (WWL-AM) is a commercial enterprise with ongoing responsibilities.

WWL personnel will demonstrate the ability to receive information from the risk parishes and to broadcast appropriate protective action messages to the public. WWL will not alter its normal schedule or broadcast schedule for response to the exercise. The actual message will not, however, be broadcast. Provisions will be made to provide the text of the message to the ENC and Rumor Control staff following their release.

OBJECTIVE 12: EMERGENCY INFORMATION - MEDIA

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

Locations Emergency News Center

Extent-of-Play Information will be developed and disseminated to the media as it would be in an actual emergency. The State of Louisiana, St. Charles Parish and St. John the Baptist Parish, as well as Entergy/Waterford 3 will be represented at the Emergency News Center where all dissemination of information to the media will take place. News media briefings will take place on the 7th floor of the Entergy Building, 639 Loyola Avenue, New Orleans.

OBJECTIVE 13: EMERGENCY INFORMATION - RUMOR CONTROL

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

Locations Emergency News Center, Rumor Control Center

Extent-of-Play The Rumor Control Center is located at the Entergy Customer Service Center, 142 Delaronde Street in New Orleans. Customer Service Operators will serve as Rumor Control Operators and will conduct both their normal and emergency functions during the exercise. There will be at least 18 calls per hour to Rumor Control Operators at the Site Area Emergency and General Emergency classifications

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

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

Locations LDEQ Accident Assessment Team

Extent-of-Play This is a scenario dependent objective and will be demonstrated through an interview with the evaluator if the scenario does not warrant it.

OBJECTIVE 15: IMPLEMENTATION OF PROTECTIVE ACTIONS - SPECIAL POPULATIONS

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

Locations St. Charles Parish EOC, St. John the Baptist Parish EOC

Extent-of-Play This objective will be demonstrated through discussion in the parish EOCs and through communications as necessary and appropriate to the scenario with potentially affected facilities. No facility activation is anticipated.

OBJECTIVE 16: IMPLEMENTATION OF PROTECTIVE ACTIONS - SCHOOLS

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

Locations St. John the Baptist Parish EOC

Extent-of-Play A St. John Parish school will participate in the exercise and will demonstrate protective measures consistent with the scenario. This demonstration will be out-of-sequence with the exercise timeline. A school bus driver will be dispatched to the participating school to demonstrate mobilization, communications, and radiological exposure control methods. The bus driver will be able to identify the route to the assigned reception center, but travel to the reception center will not take place.

OBJECTIVE 17: TRAFFIC CONTROL

Demonstrate the organizational ability and resources necessary to control evacuation traffic flow and to control access to evacuated and sheltered areas.

Locations St. Charles Parish EOC, St. John the Baptist Parish EOC

Extent-of-Play One traffic control point will be established in each risk parish. Activities at these locations will include setup, traffic flow control and access control, establishment of barricades and a demonstration of emergency worker radiation exposure control. No actual interference with traffic will take place. Activities at these locations will be terminated when the evaluation has been completed and contact with the parish EOC has been established. The St. Charles location will be at the off-site assembly area for Waterford 3 plant workers. The St. John location will be at the participating school.

OBJECTIVE 18: RELOCATION CENTERS - REGISTRATION, MONITORING AND DECONTAMINATION

Demonstrate the adequacy of procedures, facilities, equipment and personnel for the registration, radiological monitoring and decontamination of evacuees.

Locations

Nicholls State Reception Center

Extent-of-Play

A full range of reception center related activities will be demonstrated at both reception centers including radiological monitoring and decontamination of evacuees, registration and the provision of other evacuee social services. A shift change will be demonstrated for all major activities. Nicholls State will demonstrate reception center activities after the conclusion of school hours, out-of-sequence with the exercise timeline. One monitoring team for male and female sides will be used for each shift. One team will be used to monitor vehicles. Decontamination will be set up and demonstrated for only one side at each reception center.

OBJECTIVE 19: CONGREGATE CARE

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

Locations

Nicholls State Reception Center

Extent-of-Play

A walkthrough of a congregate care center will be held during normal working hours on the day of the exercise for the reception center. The congregate center will be identified at the time the exercise scenario is submitted. American Red Cross representatives at the congregate care centers will be prepared to discuss key aspects of congregate care operations including locations, communications, arrangements for shelter, food services, sanitation, family assistance, child care, and medical care. They will also be prepared to discuss transportation issues, screening for contamination at the congregate care center and evacuee tracking.

OBJECTIVE 20: MEDICAL SERVICES - TRANSPORTATION

Demonstrate the adequacy of vehicles, equipment, procedures and personnel for transporting contaminated, injured or exposed individuals.

Locations

Flight Care Helicopter

Extent-of-Play

A simulated contaminated and injured worker will be identified at Waterford 3 in a separate drill to take place during the exercise. Medical transportation will be demonstrated via Flight Care Helicopter. If the Flight Care Helicopter is not available, St. Charles Ambulance Service will provide transportation to the hospital.

OBJECTIVE 21: MEDICAL SERVICES - FACILITIES

Demonstrate the adequacy of medical facility's equipment, procedures and personnel for handling contaminated, injured or exposed individuals.

Locations Ochsner Foundation Hospital

Extent-of-Play Ochsner Foundation Hospital will treat the simulated contaminated and injured Waterford 3 worker.

OBJECTIVE 22: EMERGENCY WORKERS, EQUIPMENT AND VEHICLES - MONITORING AND DECONTAMINATION

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

Locations Lafourche FPD Monitoring/Decontamination Station

Extent-of-Play Staff will be available to monitor personnel and vehicles and to decontaminate personnel. Facilities will be setup as they would be in an actual emergency. This activity will be demonstrated out-of-sequence with the exercise.

OBJECTIVE 25: LABORATORY OPERATIONS

Demonstrate laboratory operations and procedures for measuring and analyzing samples.

Locations LDEQ Laboratory

The LDEQ Laboratory will demonstrate the analysis of an air sample only taken during the plume phase of the exercise. Verification of the completion of the analysis will be made with LDEQ Radiological Emergency Response Team at the Waterford 3 EOF.

OBJECTIVE 30: CONTINUOUS, 24-HOUR STAFFING

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

Locations LDEQ Radiological Emergency Response Team at Waterford 3 EOF and ENC, LDEQ Radiological Field Monitoring Teams, LDEQ Radiological Laboratory. St. Charles EOC, St. John EOC, St. Charles and St. John operations at the ENC, Lafourche Parish EOC, Lafourche FPD Decon Station, Nicholls State Reception Center

Extent-of-Play The parishes propose to demonstrate objective 30 as shift change arrangements are done in actual events. Several responders for each EOC staff position would initially be mobilized at the beginning of the exercise. All exercise

participants may take part in initial response to exercise conditions. At some point in the exercise as determined by participants themselves, the players for each position will divide themselves into teams and at least one player will leave the EOC proper with an agreement to return at a predetermined time. Upon the return of the dismissed players, the persons participating in the exercise will be dismissed. All EOC staff positions will be changed during the course of the exercise. However, not all positions will be changed at the same time.

At Lafourche Parish EOC, the first-shift players will be replaced with an equal number of replacements. A shift change will be made for personnel at the Lafourche FPD Decon Station and at the Nicholls State Reception Center.

LDEQ will shift change for the following key positions: Senior EOF Liaison; Accident Assessment Coordinator at EOF; Dose Assessment Coordinator at EOF; Field Monitoring Team Coordinator at EOF; Two Field Monitoring Teams (2 members per team); Technical Spokesperson at ENC; LDEQ radiological Laboratory Specialist.

OBJECTIVE 31: OFF-SITE SUPPORT FOR THE EVACUATION OF ON-SITE PERSONNEL

Locations

St. Charles Parish EOC

Extent-of-play

At some point in the exercise, an evacuation of on-site personnel to an off-site assembly area will be demonstrated. The assembly area located in St. Charles Parish will be used for the exercise. St. Charles Parish will demonstrate traffic control and communications with the EOC at the assembly area.

GENERAL EXTENT-OF-PLAY (EOP)

1. 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.
2. The goal of off-site response organizations (OROs) 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 the plans and procedures.

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

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

APPENDIX 4

EXERCISE SCENARIO AND TIMELINE

SITUATION

This exercise will be conducted for the purpose of testing the ability of the following organizations to address an emergency at the Waterford 3 SES: The State of Louisiana, through the Louisiana Division of Environmental Quality and the Office of Emergency Preparedness; St. Charles Parish; St. John the Baptist Parish; LaFourche Parish; Nicholls State University Reception Center; LaFourche Monitoring/Decontamination Station; the Ochsner Foundation Hospital; and Flight Care Helicopter.

SUMMARY OF EVENTS - Medical Drill

At approximately 0445, an Operator at Waterford 3, who has been loading precoat resin in the Condensate Polisher Building, slips and falls down a ladder breaking his arm and striking his head on a building support. The Drill Control Team simulates the Control Room response and UNT-007-018, First Aid and Medical Care, is implemented. Response by the Emergency First Aid Team is simulated and primary surveys of the patient are performed.

At 0500, the Drill Control Team calls the Ochsner Foundation Hospital to start the drill. The Patient's primary survey information (vital signs) is provided. The Drill Control Team will then call the Flight Care Helicopter Ambulance Service and request them to dispatch the Flight Care Helicopter Ambulance Service to transport the patient to Ochsner. If the Flight Care Helicopter is unavailable, St. Charles EMS will be used as an alternate means for patient transport. The patient has been treated and transported to the Waterford 3 helicopter pad, awaiting transport to the hospital. He is on a backboard and wrapped with a blanket. The Backboard is not contaminated.

When the ambulance arrives at the Waterford 3 plant, the Drill Control Team and the HP Technician will assist in transferring the patient to the ambulance and provide vital signs to the ambulance attendant. The HP will accompany the patient to the hospital.

Upon arrival at Ochsner, the patient will be taken into the Radiological Emergency Area (REA), decontaminated and treated for the simulated injuries. After the treatment has proceeded to the point that the patient would be admitted to the hospital and the HP Technician has surveyed and released the ambulance, the medical response portion of the exercise will be terminated and a critique of the events will be conducted.

Biennial exercise

The exercise will commence at 0755.

At 0800, Chemistry will report to the Control Room to confirm the results of Dose Equivalent Iodine (DEI) to be 1.34 uCi/gm. The Shift Superintendent declares an Unusual Event based on Emergency Plan Implementing Procedure EP-001-001, Recognition and Classification of Emergency Conditions, B/UE/III, RCS Dose Equivalent Iodine greater than Technical Specifications Limits.

Notification of the Unusual Event is made to the primary off-site organizations; LDEQ, LOEP, St. Charles Parish, St. John Parish, and Waterford 1 & 2.

At approximately 0830, Gas Decay Tank "A" experiences a relief valve flange leak. The Plant Stack monitors, PRM-IRE-0100.1S and PRM-IRE-0100.2S, N. G. channels, go into alarm and raise to 1.82 E-02 uCi/cc which indicates greater than 10 times Technical Specifications. The Control Room instructs Chemistry to perform a Stack Gas Sample to confirm and validate the activity.

The Shift Superintendent declares an Alert based on Emergency Plan Implementing Procedure EP-001-001, Recognition and Classification of Emergency Conditions, A/A/I, "A valid HIGH alarm or grab sample indicates a release which is equal to or greater than 10 times Technical Specifications Limits." There are no protective action Recommendations (PARs) required for this declaration.

The Alert declaration results in the activation of the Waterford 3 Technical Support Center (TSC), the Operational Support Center (OSC) and the Emergency News Center (ENC). The Near-sight and Off-site Emergency Organizations are mobilized and the Emergency Operations Facility and the Corporate Emergency Center (in Jackson, MS) are staffed.

When the TSC Communicators attempt to use the Operational Hotline (OHL), they will find the circuit is not operable. Due to the failure of the OHL, notifications to the OHL members will be made using alternate communications circuits. The failure of the OHL is due to a shorted power supply transformer to the TSC Communicator #1 OHL phone. The TSC will request a repair team from the OSC to investigate the problem. Replacing the shorted power supply will repair the circuit.

Notification of the Alert is made to primary off-site response organizations. LOEP will in turn notify participating off-site support organizations.

St. Charles Parish and St. John Parish will begin activation of their Emergency Operations Centers. The State will also begin initial activation of the State Operations Group. LDEQ will begin to activate its response team including field monitoring personnel for possible response to the Waterford 3 site. Lafourche Parish will begin activation of its EOC. Notification will be-

made from the Lafourche EOC to Nicholls State Reception Center responders and to the Lafourche Fire Protection District #1 Decon Station personnel.

At 0915, Charging Pump "A" trips on overcurrent. The pump failure is due to single phasing of the motor as a result of a contact failure in the breaker causing an overcurrent condition in the motor. Repair teams will be requested from the OSC to investigate the failure of the Charging Pump.

At approximately 1000, the school portion of the exercise will be initiated out-of-sequence with the exercise timeline. The St. John Parish EOC will direct that a school bus driver be mobilized to the demonstration school site.

The St. John Parish school bus driver will proceed to the participating school and will be met there by a Sheriff's Department patrol unit. The school bus driver will receive instructions and dosimetry from the school administration and will be directed to the designated reception center. The school bus will not travel to the reception center, but will be able to demonstrate the ability to follow directions to the reception center along with the ability to communicate with the parish EOC through the Sheriff's Department patrol unit. St. John Parish will demonstrate traffic and access control at the demonstration school at this time.

At 1015 a Reactor Coolant System (RCS) "A" Hot Leg #1 rupture event produces a LOCA. The reactor trips. Safety Injection, Emergency Feedwater (EFW) and Main Steam Isolation Signal (MSIS) and Containment Isolation Activation Signal (CIAS) are initiated. Chemistry starts to ramp up. The "B" Atmospheric Dump Valve (ADV) fails to open. A repair team will be dispatched to repair the failed ADV.

The Emergency Coordinator (EC) or EOF Director if activated, declares a Site Area Emergency based on Emergency Plan Implementing Procedure EP-001-001, Recognition and Classification of Emergency Conditions, B/SAE/I, "RCS leakage greater than available Charging Pump capacity (LOCA or Steam Generator Tube Rupture)." There are no Protective Action Recommendations (PAR) required for this declaration.

Notification of the Site Area Emergency is made to the primary off-site response agencies. LOEP in turn notifies participating support organizations. Rumor calls to Media Response and Rumor Control are initiated at this time.

The Waterford 3 Emergency Coordinator selects an off-site assembly area and announces a site evacuation. The Assembly Area Supervisor is dispatched and Security performs accountability. For the purposes of this exercise, the personnel in the Waterford 3 Protected Area will evacuate to station parking lots and a small number of pre-designated personnel will evacuate to the selected off-site assembly area. If not already performed, transfer of responsibilities for command and control, off-site dose assessment and communications from the TSC to the EOF will be initiated.

St. Charles Parish will be notified of the Waterford 3 site evacuation and will dispatch Sheriff's Department personnel to the Monsanto Park Assembly Area. Sheriff's Department personnel will conduct traffic and access control activities at the assembly area. The traffic and access control activity will terminate when the Federal evaluator indicates a satisfactory completion of this activity.

When the EOF Dose Assessment personnel attempt to establish radio contact with the field monitoring teams, they will find the primary radio circuit is inoperable. Communications with the field monitoring teams will have to be conducted using the alternate radio circuit.

When Containment pressure reaches 17.7 psig, a containment spray activation signal is received. Containment Spray Pump "A" fails to start due to a breaker failure. A Repair Team will be dispatched to repair the failed breaker.

The "B" Containment Spray Pump will start but due to a leak on the containment spray header there will be no flow through the containment spray nozzles, which will keep Containment pressure high.

If the decision is made to cross-connect "A" LPSI with "A" Containment Spray Header, SI-125A (SDC "Heat Exchanger Inlet valve") will open. This will limit the ability to decrease Containment pressure. A repair team will be dispatched to attempt to open SI-125A.

At 1130, a Containment penetration fails, releasing radioactivity into the annulus. As annulus pressure increases, the Shield Building Ventilation System will cycle between recirculation and exhaust to control the annulus at a negative pressure. This results in a release to the atmosphere via the plant stack.

When the Containment failure is identified and dose assessment calculations are performed, the EOF Director declares a General Emergency based on Emergency Plan Implementing Procedure EP-001-001, Recognition and Classification of Emergency Conditions, A/GE/I, "Dose projection or radiological monitoring team indicates dose rates at EAB equal or greater than 1000 mR/hr Whole Body or equal to or greater than 5000 mR/hr Thyroid, or plant conditions exist which could result in a release of radioactivity such that these dose rates at the EAB could be reached or exceeded. The minimum Protective Action Recommendation (PAR) at a General Emergency is for evacuating Protective Response Areas A1, B1, C1, and D1 (2-mile radius), A2 and C2 (5 miles downwind) and for sheltering all remaining protective response areas.

Notification of the General Emergency is made to the primary off-site response agencies. LOEP in turn notifies participating support organizations. Protective action recommendations are made from Waterford 3 to off-site organizations.

Protective action decisions are made by the risk parishes and the timing for the sounding of sirens and the content of EAS messages is established. The sirens will not actually be sounded in either parish. However, information contained in the EAS message will be forwarded to the primary

EAS station for each parish. This information will not be released to the public, but the EAS station may conduct a standard EAS test at this time, if conditions allow.

The LDEQ Accident Assessment staff located at the Waterford 3 EOF will assess the need to administer KI to emergency workers and institutionalized persons. A recommendation will be forwarded to the State Health Officer located at the State EOC. After reviewing the information forwarded from the LDEQ representatives, the State Health Officer will make a decision concerning the use of KI.

After the first shift has performed vital functions associated with the exercise, a shift change will be implemented for the LDEQ staff at the Waterford 3 EOF. St. Charles EOC personnel, St. John EOC personnel, Lafourche Parish EOC personnel, and State and parish representatives at the ENC using appropriate shift change protocol.

Once the plume edge is defined, LDEQ Radiological Monitoring Teams will take air samples within the radiological plume at or around the 100mR/hr radiation field. These samples require analysis for particulates at the LDEQ Radiological Laboratory in Baton Rouge. Only one air sample cartridge and particulate filter will be dispatched to the LDEQ Radiological Laboratory for analysis. Both the particulate filter and the cartridge will be analyzed in the laboratory. The results will be transmitted from the laboratory to the State's Radiological Response Team at the utility's Emergency Operations Facility.

At approximately 1245, the wind direction changes and is now coming from 198 degrees. Due to the wind change, the PARs will change to evacuating Protective Response Areas A1, B1, C1, D1 (2-mile radius) and A2, B2, and C2 (5 miles downwind) and sheltering all remaining protective response areas. Note: With the change in wind direction, area C2 is no longer an affected downwind area, but in accordance with EP-002-052, PARs should not be downgraded until the recovery/reentry phase of accident mitigation. Therefore, C2 will still be included in the PAR.

Termination of the exercise will be coordinated between the utility Lead Controller and the LDEQ Lead Controller to insure that the objectives associated with the release have been demonstrated.

At approximately 1300, the plume phase of the exercise will be terminated and area critiques will be conducted.

Reception Center Drill

At approximately 1900, simulated evacuees will arrive at the Nicholls State University Reception Center. Upon arrival of the evacuees, a vehicle will be discovered to be contaminated and will be impounded. One monitoring team each will be set up for the male and female monitoring areas. Decontamination will be demonstrated for only one side. An evacuee will be found to be contaminated when monitored and this person will be directed to the decontamination station. After performance of decontamination procedures, the evacuee will be found to be clean and will be released to the general population. Evacuees will be provided with registration, family

reunification and shelter services prior to termination of the reception center demonstration. Prior to deactivation, a shift change will be demonstrated for the reception center staff and for the monitoring/decontamination staff.

Emergency Worker Monitoring/Decontamination Station Drill

At approximately 1900, a simulated emergency worker is directed to the Lafourche FPD emergency worker decontamination station in Raceland for evaluation. Upon arrival at the Lafourche FPD station, the emergency worker's car is found to be contaminated and is impounded. When he is monitored, the emergency worker is found to be contaminated and undergoes decontamination procedures. The emergency worker is found to be free of contamination and is dismissed. Prior to deactivation of the decontamination center, the staff will demonstrate a shift change.

EXERCISE TIMELINE

<u>Time</u>	<u>Organization</u>	<u>Event</u>
<u>10/13/99</u>		
0430	Waterford 3	The medical portion of the exercise is initiated.
0500	Waterford 3	A simulated contaminated/injured person is identified at Waterford 3. The Ochsner Foundation Hospital and Flight Care Helicopter notified and a helicopter is dispatched. (Note: If the Flight Care Helicopter is unavailable, St. Charles EMS will be used as an alternate means for patient transportation.)
~0530	Waterford 3	The medical transportation vehicle arrives at the Waterford 3 site, receives the patient and departs for Ochsner Foundation Hospital.
~0600	Ochsner Foundation Hospital	The medical transportation helicopter arrives at the Ochsner Foundation Hospital and treatment of the contaminated/injured person begins.
~0615	Ochsner Foundation Hospital	The ambulance is surveyed and decontaminated if necessary prior to release.
~0630	Ochsner Foundation Hospital	Medical procedures dealing with the contaminated/injured person are concluded and the medical portion of the exercise is terminated.
0800	Waterford 3	DEI assessment indicates levels outside Technical Specification limits.
~0815	Waterford 3	Notification of the <u>Unusual Event</u> is made to St. Charles Parish, St. John Parish, LDEQ, LOEP, and Waterford 1 & 2.
0830	Waterford 3	An <u>Alert</u> is declared due to a valid high radiation alarm equal to or greater than 10 times the Technical Specification limit.

TIMELINE

<u>Time</u>	<u>Organization</u>	<u>Event</u>
<u>10/13/99</u>		
0845	Waterford 3	Notification of the Alert is made to St. Charles Parish, St. John Parish, LDEQ, and LOEP. LOEP in turn will make notifications to participating support organizations, including Lafourche Parish.
0900	St. Charles, St. John LDEQ, LOEP, Lafourche	Activation of the St. Charles EOC, St. John EOC, State EOC and the Lafourche EOC is initiated. LDEQ begins deployment of Accident Assessment team to the Waterford 3 site and Field Monitoring Teams to staging locations
1000	St. John	The St. John school demonstration portion of the exercise is initiated. The St. John EOC directs a school bus to the demonstration school. Traffic and access control personnel are also dispatched at this time.
~1015	St. John	The St. John school bus driver arrives at the demonstration school. The bus driver is briefed, supplied with dosimetry and provided an escort. No actual dispatch to a reception center will occur.
~1015	Waterford 3	A Reactor Coolant System hot leg pipe rupture results in a LOCA. <u>Site Area Emergency (SAE)</u> is declared.
~1015	LDEQ	The LDEQ Accident Assessment Team arrives at the Waterford 3 EOF. After arrival of the LDEQ Accident Assessment Team, the EOF is declared operational, decision-making coordination will be done with the LDEQ staff present at the EOF.
1030	Waterford 3	Notification of the SAE is made to St. Charles Parish, St. John Parish, LDEQ and LOEP. LOEP notifies participating off-site support organizations.

TIMELINE

<u>Time</u>	<u>Organization</u>	<u>Event</u>
<u>10/13/99</u>		
~1030	ENC	Calls are made to Media Response.
1030	Rumor Control Center	Site Area Emergency calls are made to the Rumor Control Center operators.
~1130	ENC	Calls are made to Media Response.
~1030	Rumor Control Center	Site Area Emergency calls are made to the Rumor Control Center operators.
1030	Waterford 3/ St. Charles	The risk parishes are notified of the Waterford 3 on-site evacuation. Traffic and access control personnel are dispatched to the off-site assembly area.
1045	Waterford 3	A limited evacuation of Waterford 3 on-site personnel is conducted.
1130	Waterford 3	Containment penetration fails, resulting in a release to the atmosphere via the plant stack.
1145	Waterford 3	A <u>General Emergency (GE)</u> is declared due to high radiation levels at the site EAB. Notifications and protective action recommendations are made to off-site organizations. LOEP makes notifications to participating off-site support organizations.
1200	Rumor Control Center	General Emergency calls are made to Rumor Control operators.
1230	Lafourche EOC	A shift change is implemented for Lafourche EOC staff members.
1230	St. Charles EOC	A shift change for the St. Charles EOC staff is confirmed.

TIMELINE

<u>Time</u>	<u>Organization</u>	<u>Event</u>
<u>10/13/99</u>		
1230	St. John EOC	A shift change for the St. John EOC staff is confirmed.
1230	ENC	A shift change for parish and State representatives at the ENC is confirmed.
1230	LDEQ Accident Assessment	Around this time, the LDEQ Accident Assessment Team identifies the need to implement KI for off-site emergency workers. This recommendation is passed on to the State Health Officer located at the State EOC.
1230	LDEQ at W3 EOF	A shift change is confirmed for LDEQ personnel after vital functions are completed.
1245	State EOC	Around this time the State Health Officer makes a decision concerning the authorization of KI for the risk parishes and State emergency workers.
1245	Waterford 3	A change in wind direction results in additional PARs.
~1300	LDEQ at State EOC	A shift change is confirmed for LDEQ personnel after vital functions are completed.
1300	Waterford 3	Information on additional PARs is transmitted to off-site organizations.
1300	LDEQ Accident Assessment	LDEQ Field Team air sample cartridge and particulate filter are transported to the LDEQ Laboratory in Baton Rouge.
1330	Waterford 3	The exercise is terminated.

APPENDIX 5

AREAS RECOMMENDED FOR IMPROVEMENT

FIELD MONITORING TEAMS

Description: The field teams had vehicles that were appropriate for the anticipated field conditions; however, one field team (#2) found that the vehicle hood would not open when they got to their staging area. This was not detected at LDEQ Headquarters because, in the interest of time, the exercise controller directed the field teams to wait until they got to their staging areas before checking the operability of the air sample pumps. The members of field team #2 were resourceful and were able to open the vehicle hood by using tools that were available in the vehicle, however, it took about five minutes to open the hood. This could add unnecessary exposure time during the field monitoring.

Recommendation: Check all vehicles before leaving the LDEQ Headquarters. Alternatively, if the vehicles are dedicated to LDEQ, consider installing external power point connectors for the air sample pump power supply. This will eliminate the need to open the hood at each air sampling location.

EMERGENCY NEWS CENTER

Description: There were no breakdowns in the communication system, but there were delays in receiving some facsimile messages since they were using only one incoming fax and one outgoing fax machine.

Recommendation: Consider using a second incoming fax machine to handle the load.

Description: The SAE was declared at 10:23 a.m., the message was received at 10:37 a.m., but the first news briefing was not held until 11:15 a.m.

Recommendation: Be prompt in releasing what is known. Announce a time for additional information or the next media briefing.

Description: The Technical Spokesperson could have used the large reactor diagram to enhance the briefings.

Recommendation: Use the Technical Spokesperson and appropriate visual aids to assist in clarifying the technical material in the briefings.

Description: The parish used overhead visuals at the second news briefing. Since a screen was not used, there was a glare on the visual. The print was also too small and dense to be effective.

Recommendation: Redesign the overhead visuals with larger print and fewer words per page. Use a screen or improved backdrop on which to project the image to avoid the glare from the overhead projector. A power point presentation using a laptop computer would be ideal if the equipment is available.

Description: The extent-of-play for this exercise stated that there was to have been at least 18 calls per hour placed during the **SITE AREA EMERGENCY** and **GENERAL EMERGENCY** classifications. This was a period just under 3 ½ hours and should have resulted in about 60 calls to the phone center. The actual figure was just over half of the required amount and involved less than one call per operator.

Recommendation: Ensure that an adequate number of calls are placed to Rumor Control during the next exercise.

ST. JOHN THE BAPTIST ISSUES:

Description: The second EAS message from St. Charles Parish does not clearly differentiate between old and new information.

Recommendation: Consider having an ad hoc section to the message, i.e., "Persons in Section B2, who previously had been recommended to shelter-in-place, should now evacuate. All other protective action recommendations remain the same as they were before."

PLANNING ISSUES

FIELD MONITORING TEAMS

Description: Field Team #1 experienced some initial difficulty in locating their staging area location. This was due in part to the EPZ grid maps only showing the road network within the 10-mile EPZ. Since one of the two bridges that cross over the Mississippi River is outside of the 10-mile EPZ, the bridge was not shown on the map. This caused some confusion when field team #1 left the Waterford 3 Training Center parking lot. The field team members correctly identified the staging area grid location coordinates, but they assumed that the river crossing shown on the map (a ferry crossing) was the bridge. As a result field Team #1 turned the wrong direction on Highway 61, going away from, rather than towards, the staging area location.

Recommendation: Consider expanding the area coverage of the EPZ maps to include the areas with the bridges over the Mississippi River.

EMERGENCY NEWS CENTER

Description: According to procedure, the ENC was waiting for the fax of the official EAS message before releasing information, which was slow coming from the parishes. They had received other official documentation prior to the EAS message.

Recommendation: Re-evaluate what documents must be received by the ENC prior to release of official information.

NICHOLLS STATE RECEPTION CENTER

Description: Although the monitors were knowledgeable about changing the plastic bag on the monitor shields after touching an evacuee, at times the monitor was assisted by the recorder, who also touched the contaminated bag or rubber band. The second-shift monitor was less experienced and set the monitoring device on a nearby table to change the bag, and reused the contaminated rubber band. Neither shift monitor removed the contaminated bag by rolling it in upon itself to prevent contamination of the monitors' gloves. The first-shift monitor was very experienced, and assisted the first-shift recorder in filling out the form for the contaminated evacuee. However, in doing so, he frequently touched the form with his gloved hand, thus possibly contaminating the paper and the clipboard. On occasion the monitor would step to the clean side of the monitoring area, or the recorder would step to the monitoring side.

Recommendation: Provide training and practice in controlling cross contamination.

Description: There was no worker sign-in sheet available to the evaluator, so the actual number of positions filled, by name and title could not be determined.

Recommendation: Provide a sign-in sheet with names and positions. This assists in determining that sufficient, trained personnel are available for all shifts.

Description: The Implementing Procedures do not provide for initial issuance documentation of the recipient and serial number of the TLDs distributed. Therefore, the only documentation of the TLD issuance is the worker's exposure-record card, where there is a space for the worker's name, address, home phone number, social security number, organization, the date, the supervisor, the R/CC and the TLD serial number.

Recommendation: Develop a distribution and recording procedure where the serial number of the TLD is tied to an individual that also clearly spells out a chain-of-custody for the transfer and final deposition of the TLD.

Description: Although the workers were apparently told to turn in the exposure-record cards to the Radiological Supervisor, under the Implementation Procedures there is no procedure for collecting them at the end of the shift or at the end of the exercise so that a formal exposure record is maintained.

Recommendation: Develop a procedure that clearly spells out a chain-of-custody for the transfer and final deposition of an individual's exposure-record card.

Description: If an individual was found to be contaminated at the monitoring location, they were given a Personnel Contamination Survey Report. The monitor wrote the evacuee's name, the location of the contamination and other pertinent information. This report stayed with the individual through the decontamination process and was used to register them once they reached the gym. Individuals who were not contaminated did not receive any paperwork and were told to enter the gym. Without having a record for everyone who had been monitored, clean or contaminated, evacuees reporting to the R/CC could not be tracked. This chain-of-custody problem extended to the registration and final disposition of all screened evacuees. A process needs to be developed that will track an evacuee from the point where they enter the system (monitoring) to where they exit. This is a separate process from the ARC Form 5972, which is utilized for shelter registration.

Recommendation: Adding an additional box at the bottom of the Personnel Contamination Survey Report that indicates an individual has been monitored and found to be clean will correct part of this problem. Tracking all individuals from entry to exit will require two lists be developed which could be compared to assure that everyone who entered was processed.

Description: Procedurally, when individuals are found to be contaminated, their valuables are collected and placed in a plastic bag, which, if not contaminated, is then given to representatives at the registration table in the gym. After the individual is decontaminated and goes to the registration table to register, they would be reunited with their belongings. In this exercise this did not occur. The monitors were not aware of where to bring the valuables, nor were the representatives at the registration table aware that they were responsible for returning the valuables to the individual. Additionally, there were no release forms or records to sign for the transfer and accountability of the valuables.

Recommendation: Let the evacuee keep their valuables. They may be placed in a plastic bag that the evacuee can control during the decontamination process. If the valuables have been contaminated, they can be decontaminated or discarded by the evacuee in the decontamination process. This relieves the utility and the parish and other government entities from the liability of having custody of private citizens' valuables. If the decision is for the R/CC to continue to take custody of the valuables, then release forms or records to sign for the transfer and accountability of the valuables must be developed.

Description: When a vehicle is found to be contaminated, the driver is instructed to move the vehicle to a grassy area about 150 feet away from the monitoring location. At this location the driver is given a pair of booties to put on and is instructed to proceed to the Stopher Gym personnel monitoring station. No release forms, custody forms or other records are available to sign for the transfer and accountability of the drivers' vehicle and keys. Additionally, there is no process for returning the keys and vehicles to the individuals after the vehicles have been decontaminated.

Recommendation: Release forms, custody forms, security procedures, and other records must be developed and available to sign for the transfer and accountability of the drivers' vehicle and keys. Additionally, procedures need to be developed for returning the keys and vehicles to the individuals after the vehicles have been decontaminated.

LAFOURCHE MON/DECON STATION

Description: Adequate dosimeters (0-20R and 0-200R) were available for all emergency workers. However, the *Implementing Procedure, LaFourche Parish Fire Protection District No.1, Emergency Worker Decontamination Station, Rev.6, 8/30/99*, does not list these instruments on the inventory sheet located in Attachment 7, page 7-1. In addition, the plan does not state to whom emergency workers should turn in their dosimeters and record cards for processing, and when this action should occur.

Recommendation: Update the implementing procedures to include dosimetry in the inventory list, and to indicate to whom and when emergency workers should turn in their dosimetry and record cards.

Description: The monitors on both shifts sometimes moved the probe too rapidly during personnel and vehicle monitoring. Contrary to the implementing procedures (see pages 3-4 and 3-5, Rev.6, 8/30/99), sometimes the probe was held more than the one inch from the body and vehicle surface (up to three to six inches).

Recommendation: Provide monitors with additional training and/or practice in the appropriate rate of moving the instrument probe during monitoring, as well as the appropriate distance from the surface to be monitored.

APPENDIX 6

EAS RADIO STATION WWL - NEW ORLEANS

Radio station WWL, located in downtown New Orleans, participated in the exercise. The station operates 24-hours per day, 7 days per week. It has a dedicated phone line, fax machine, multiple workstations, and emergency backup power.

An incoming phone call triggers a flashing light at the phone, as well as a light board, and a strobe light mounted on the wall, indicating an incoming EAS call. The incoming call can be routed to multiple redundant recording systems (cassette, reel-to-reel, computer system, etc.). The fax machine received incoming messages at 9:29 a.m. and at 12:10 p.m.

Copies of procedures books are on hand at a number of locations, i.e, news director, chief engineer, and board operator. The station staff is well trained and knowledgeable on how to meet the needs/requirement of an EAS transmission authorized by a parish official.

A call on the first message was received at 12:06 p.m., with the direction that the broadcast be initiated at 12:10 p.m. At 12:10 p.m., a live (simulated) broadcast from the on-line St. Charles Parish official was made and recorded.

The capability to re-transmit the message at requested intervals was demonstrated. A second message was received over the dedicated line at 12:52 p.m., and was broadcast and recorded (simulated) simultaneously.

The ability to receive, understand, process, and broadcast an EAS message to the public was fully demonstrated by Radio Station WWL.