

FEB 25 2008



**FEMA**

Mr. Elmo E. Collins, Jr.  
Regional Administrator  
U.S. NRC, Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, TX 76011-4005

MAR 20 2008

Dear Mr. Collins:

Enclosed is a copy of the radiological emergency preparedness final report for the Waterford-3 Steam Electric Station Plume Pathway exercise evaluated on December 5, 2007.

There was one Area Requiring Corrective Action (ARCA) and one Plan Issue identified during the plume exercise. The ARCA is scheduled for correction at the next biennial exercise. The Plan Issue was corrected on December 18, 2007. A copy of the updated Procedure, Task GE-14, was delivered to FEMA Region VI on February 7, 2008 during the Louisiana Tri-Utility meeting in Baton Rouge.

Based on the results of this exercise, the offsite radiological emergency response plans and preparedness for the State of Louisiana and the affected local jurisdictions are deemed 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. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Louisiana site-specific to Waterford-3 will remain in effect.

A copy of this report was provided electronically to Mr. Anthony McMurtray, Chief, Inspection and Communication Section, at NRC Headquarters. Should you have questions, please contact Lisa Hammond, Regional Assistance Committee Chair, at 940-898-5199, or Elsa Lopez, Louisiana Site Specialist, at 940-898-5308.

Sincerely,

A handwritten signature in black ink, appearing to read "Vanessa Quinn".

Vanessa Quinn  
Acting Director  
Technological Hazards Division

Enclosure

cc: Governor's Office of Homeland Security & Emergency Preparedness – Mark A. Cooper  
Louisiana Department of Environmental Quality – Jeffrey Meyers  
Waterford-3 Steam Electric Station – Jack Lewis

# Waterford 3 Steam Electric Station

Exercise Report - 2007-12-05

Final Report - Radiological Emergency

Preparedness (REP) Program

2008-02-19



# FEMA





# FEMA

## Exercise Report

Waterford 3 Steam Electric Station

Exercise Date: 2007-12-05

Report Date: 2008-02-19

U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

800 North Loop 288

Denton, TX 76209

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# 1. Executive Summary

On December 5, 2007, a biennial Radiological Emergency Preparedness (REP) exercise was conducted in the plume exposure pathway emergency planning zone (EPZ) around the Waterford-3 Steam Electric Station (W-3) located near Taft, St. Charles Parish, Louisiana. The U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Region VI Office, evaluated the exercise. The purpose was to assess the level of preparedness of state and local responders to react to a simulated radiological emergency at Waterford-3. This exercise was held in accordance with DHS/FEMA policies and guidance concerning the implementation of state and local radiological emergency preparedness plans and procedures.

The previous exercise at this site was a Plume Exercise conducted on June 28, 2006. The qualifying emergency preparedness exercise was conducted on February 8, 1984. There have been sixteen evaluated exercises, including the exercise on December 5, 2007, plus several drills conducted since 1984.

DHS/FEMA Region VI Office, wishes to acknowledge the efforts of the many individuals in the State of Louisiana, St. Charles Parish, St. John the Baptist Parish, and surrounding jurisdictions who participated in this exercise. Protecting the public health and safety is the full-time job of some of the exercise participants and an additional assigned responsibility for others. Still others have willingly sought this responsibility by volunteering to provide vital emergency services to their communities. Cooperation and teamwork of all the participants was evident during this exercise.

This report contains the final written evaluation of the biennial exercise. The state and local organizations, except where noted in this report, demonstrated knowledge of their emergency response plans and procedures and adequately implemented them. There were no Deficiencies, no Areas Recommended for Improvement (ARFIs), one Plan Issue and one Area Requiring Corrective Action (ARCA) identified during this exercise.

## 2. Introduction

On December 7, 1979, the President directed the Federal Emergency Management Agency (FEMA) to assume the lead responsibility for all offsite nuclear planning and response. FEMA's activities under the REP Program, which are conducted pursuant to 44 Code of Federal Regulations (CFR) Parts 350, 351 and 352. These regulations are a key element in the Radiological Emergency Preparedness (REP) Program that was established following the Three Mile Island Nuclear Station accident in March 1979.

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

FEMA's Region VI responsibilities in radiological emergency planning for fixed nuclear facilities include the following:

Taking the lead in offsite emergency planning and in the review and evaluation of radiological emergency response plans (RERPs) and procedures developed by state and local governments;

Determining whether such plans and procedures can be implemented on the basis of observation and evaluation of exercises of the plans and procedures conducted by state and local governments;

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

Coordinating the activities of Federal agencies with responsibilities in the radiological emergency planning process:

- U.S. Department of Commerce (DoC)
- 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 Homeland Security-FEMA
- U.S. Department of Transportation (DOT)
- U.S. Department of Agriculture (USDA)
- U.S. Department of the Interior (DOI)
- U.S. Food and Drug Administration (FDA).

Representatives of these agencies serve on the Regional Assistance Committee (RAC), which is chaired by the Branch Chief of the DHS/FEMA Region VI Office. Formal approval of the Waterford-3 plans was granted by FEMA on April 25, 1988 under 44 CFR 350.

A REP exercise was evaluated on December 5, 2007, by DHS/FEMA Region VI Office to assess the capabilities of state and local emergency preparedness organizations in implementing their RERPs and procedures to protect the public health and safety during a radiological emergency involving Waterford-3. The purpose of this exercise report is to present the exercise results and findings on the performance of the offsite response organizations (OROs) during a simulated radiological emergency.

The findings presented in this report are based on the evaluations of the federal evaluation team, with final determinations made by the DHS/FEMA Region VI Office RAC Chair. The criteria utilized 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; and

Interim REP Program Manual, including the Radiological Emergency Preparedness Exercise Evaluation Methodology (August 2002).

Section III of this report, entitled "Exercise Overview," presents basic information and data relevant to the exercise. This section of the report contains a description of the plume and ingestion pathway EPZs, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the time of actual occurrence of key exercise events and activities.

Section IV of this report, entitled "Exercise Evaluation and Results," presents detailed information on the demonstration of applicable exercise evaluation areas at each

jurisdiction or functional entity. If applicable, this section also contains: (1) descriptions of all Deficiencies and Areas Requiring Coorrective Action (ARCAs) assessed during this exercise and recommended corrective actions and (2) descriptions of unresolved ARCAs assessed during previous exercises and the status of the OROs efforts to resolve them.

### 3.1. EPZ Description

The 10-mile EPZ of Watchdog-3 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 Watchdog-3 EPZ includes the parishes St. John the Baptist Parish and St. Charles Parish. There are several communities near the site within the 10-mile EPZ. These include Kilona, Mont. Notch, Jeaner, Hainville, Luling, Laplace, Edgard, Reserve, and Garyville.

The 2000 census estimated the population of the EPZ to be 91,116 persons mainly concentrated in towns along the Mississippi River. There are two hospitals, two nursing homes, and two incarceration facilities in the EPZ.

The major highways include I-10, I-310, I-55, U.S. Highway 61, 61, and 69, and Louisiana Highways 18 and 3122. There are four railways in the EPZ, which are the Canadian National Railroad, Kansas City Southern Railroad, Union Pacific Railroad, and Burlington Northern Railroad. The Watchdog-3 EPZ is divided into 16 Protective Action Sections for the purpose of emergency response and implementation of protective actions.

The area within 50 miles of Watchdog-3 is entirely in the State of Louisiana. The physical exposure from this pathway would be from ingestion of contaminated water or foods such as milk, fresh vegetables or aquatic foodstuffs. The Ingestion Pathway (IPZ) consists of the parishes contained within the 10-mile EPZ plus the following parishes: Ascension, Assumption, East Baton Rouge, Iberville, Jefferson, Orleans, Lacombe, Livingston, Rapides, St. Charles, St. Bernard, St. James, St. Helena, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne, and West Baton Rouge. The 50-mile IPZ contains two large metropolitan areas: New

## 3. Exercise Overview

This section contains data and basic information relevant to the December 5, 2007, exercise to test the offsite emergency response capabilities in the area surrounding Waterford-3. This section of the exercise report includes a description of the plume pathway EPZ, a listing of all participating jurisdictions and functional entities that were evaluated, and a tabular presentation of the times of actual occurrence of key exercise events and activities.

### 3.1. EPZ Description

The area within 10-mile EPZ of Waterford-3 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, LaPlace, Edgard, Reserve, and Garyville.

The 2000 census estimated the population of the EPZ to be 91,116 persons mainly concentrated in towns along the Mississippi River. There are two hospitals, two nursing homes, and two incarceration facilities in the EPZ.

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 the Canadian National Railroad, Kansas City Southern Railroad, Union Pacific Railroad, and Burlington Northern Railroad. The Waterford-3 EPZ is divided into 16 Protective Action Sections for the purpose of emergency response and implementation of protective actions.

The area within 50 miles of Waterford-3 is entirely in the State of Louisiana. The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk, fresh vegetables or aquatic foodstuffs. The Ingestion Pathway (IPZ) consists of the parishes contained within the 10-mile EPZ plus the following parishes: Ascension, Assumption, East Baton Rouge, Iberia, Iberville, Jefferson, Orleans, Lafourche, Livingston, Plaquemine, St. Charles, St. Bernard, St. James, St. Helena, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne, and West Baton Rouge. The 50-mile IPZ contains two large metropolitan areas: New

Orleans and Baton Rouge. The 2000 census reports approximately 2,503,073 persons in the parishes making up the 50-mile IPZ.

### 3.2. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the Waterford 3 Steam Electric Station exercise:

#### State Jurisdictions

Governor's Office of Homeland Security and Emergency Preparedness

Louisiana Department of Environmental Quality

Louisiana State Police

Department of Agriculture and Forestry

Department of Health and Hospitals

Department of Social Services

Department of Transportation

#### Risk Jurisdictions

St. John the Baptist Parish

St. John the Baptist Parish Office of Homeland Security and Emergency Preparedness

St. John the Baptist Sheriff's Office

St. John the Baptist Fire Department

St. John the Baptist School Board

St. Charles Parish

St. Charles Parish Office of Homeland Security and Emergency Preparedness

St. Charles Parish Sheriff's Office

St. Charles Parish Fire Department

St. Charles Parish Police Department

St. Charles Parish Health and Medical Services

St. Charles Parish School Board

#### Support Jurisdictions

Acadian Ambulance Service

Plantation Volunteer District Radio Club

LaPlace Fire and Rescue

#### Private Jurisdictions

Entergy Operations, Inc.

Waterford-3 Steam Electric Station

Marathon Oil

Shell Chemical  
 American Red Cross  
 Federal Jurisdictions  
 U.S. Nuclear Regulatory Commission

### 3.3. Exercise Timeline

Table 1, on the following page, presents the time at which key events and activities occurred during the Waterford-3 Steam Electric Station exercise on December 5, 2007.

Table 1 - Exercise Timeline  
 DATE: 2007-12-05, SITE: Waterford 3 Steam Electric Station, LA

Emergency Classification Level or Event	Time Utility Declared	GOHSEP EOC	LDEQ HQ	LDEQ EOF	W3 ENC	St. Charles EOC & T/ACP	St. John the Baptist EOC & T/ACP
Unusual Event	0807	0818	0816	0817	0819	0819	0821
Alert	0911	0918	0921	0925	0916	0923	0922
Site Area Emergency	1033	1043		1055	1049	1045	1047
General Emergency	1202	1214		1202	1215	1215	1214
Simulated Rad. Release Started	1149	1214		1149	1215	1215	1223
Simulated Rad. Release Terminated							
Facility Declared Operational		1026		1108	1050	0944	0940
Declaration of State of Emergency		1205		1315	1310	1045	1030
Exercise Terminated		1333		1325	1343	1328	1332
Early Precautionary Actions:							
1st Protective Action Decision: Evacuated A1, B1, C1, D1, A2, B2, sheltered remaining sections						1257	1257
1st Siren Activation						1300	1300
1st EAS or EBS Message						1301	1301
2nd Protective Action Decision:							
2nd Siren Activation							
2nd EAS or EBS Message							
KI Administration Decision:		1310		1254		1327	1327

**Table 1 - Exercise Timeline**  
**DATE: 2007-12-05, SITE: Waterford 3 Steam**  
**Electric Station, LA**

Emergency Classification Level or Event	Time Utility Declared	WWL
Unusual Event	0807	
Alert	0911	
Site Area Emergency	1033	
General Emergency	1202	
Simulated Rad. Release Started	1149	
Simulated Rad. Release Terminated		
Facility Declared Operational		
Declaration of State of Emergency		
Exercise Terminated		
Early Precautionary Actions:		
1st Protective Action Decision: Evacuated A1, B1, C1, D1, A2, B2, sheltered remaining sections		
1st Siren Activation		
1st EAS or EBS Message		1301
2nd Protective Action Decision:		
2nd Siren Activation		
2nd EAS or EBS Message		
KI Administration Decision:		

## 4. 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 December 5, 2007, exercise evaluation to test the offsite emergency response capabilities of local governments in the 10-mile Emergency Planning Zone surrounding the Waterford-3 Steam Electric Station.

Each jurisdiction and functional entity was evaluated on its demonstration of criteria contained in the exercise evaluation areas as outlined in the Federal Register, Vol. 67, No. 80, "FEMA - Radiological Emergency Preparedness: Exercise Evaluation Methodology" (April 25, 2002). Detailed information on the evaluation area criteria and the extent-of-play agreement for this exercise is included as an appendix to this report.

### 4.1. Summary Results of Exercise Evaluation

The matrix presented in the table on the following page presents the status of all exercise evaluation area criteria which were scheduled for demonstration during the drill by all participating jurisdictions and functional entities. Exercise criterion are listed by number and the demonstration status of those criterion are indicated by the use of the following letters:

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

D - Deficiency assessed

A - ARCAs assessed or unresolved ARCAs from previous exercises

N - Not Demonstrated (Reason explained in subsection B)

Table 2 - Summary of Exercise Evaluation

DATE: 2007-12-05 SITE: Waterford 3 Steam Electric Station, LA  A: ARCA, D: Deficiency, M: Met													
			GOHSEP EOC	LDEQ HQ	LDEQ EOF	LDEQ FMT 1	LDEQ FMT 2	W3 ENC	St. Charles EOC & T/ACP	St. John the Baptist EOC & T/ACP	St. John the Baptist School Board	WWL	
Emergency Operations Management													
Mobilization	1a1	M	M	M				M	M	M			
Facilities	1b1							M					
Direction and Control	1c1	M	M	M					M	M			
Communications Equipment	1d1	M	M	M	M	M	M	M	M	M			
Equip & Supplies to support operations	1e1	M	M	M	M	M	M	M	M	M			
Protective Action Decision Making													
Emergency Worker Exposure Control	2a1	M		M					M	M			
Radiological Assessment and PARs	2b1	M		M									
Decisions for the Plume Phase -PADs	2b2	M							M	M			
PADs for protection of special populations	2c1								M	M			
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1												
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1												
Protective Action Implementation													
Implementation of emergency worker exposure control	3a1			A	M	M			M	M			
Implementation of KI decision	3b1			M					M	M			
Implementation of protective actions for special populations - EOCs	3c1								M	M			
Implementation of protective actions for Schools	3c2										M		
Implementation of traffic and access control	3d1								M	M			
Impediments to evacuation are identified and resolved	3d2								M	M			
Implementation of ingestion pathway decisions - availability/use of info	3e1												
Materials for Ingestion Pathway PADs are available	3e2												
Implementation of relocation, re-entry, and return decisions.	3f1												
Field Measurement and Analysis													
Adequate Equipment for Plume Phase Field Measurements	4a1				M	M							
Field Teams obtain sufficient information	4a2			M									
Field Teams Manage Sample Collection Appropriately	4a3				M	M							
Post plume phase field measurements and sampling	4b1												
Laboratory operations	4c1												
Emergency Notification and Public Info													
Activation of the prompt alert and notification system	5a1								M	M		M	
Activation of the prompt alert and notification system - Fast Breaker	5a2												
Activation of the prompt alert and notification system - Exception areas	5a3								M				
Emergency information and instructions for the public and the media	5b1	M						M	M	M			
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1												
Mon / decon of emergency worker equipment	6b1												
Temporary care of evacuees	6c1												
Transportation and treatment of contaminated injured individuals	6d1												

## 4.2. Status of Jurisdictions Evaluated

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

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

Deficiency - Listing of the demonstrated exercise evaluation area criteria under which one or more Deficiencies were assessed during this exercise. Included is a description of each Deficiency and recommended corrective actions.

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

Not Demonstrated - Listing of the exercise evaluation area criteria which were not demonstrated as scheduled during this exercise and the reason they were not demonstrated.

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

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

The following are definitions of the 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 offsite 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."

The Department of Homeland Security/Federal Emergency Management Agency (DHS/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.

Evaluation Area Criterion-A number and letter combination that corresponds with the criteria in the FEMA Evaluation Areas.

Issue Classification Identifier-(D = Deficiency, A = ARCA).

Exercise Issue Identification Number-A separate two (or three) digit indexing number assigned to each issue identified in the exercise.

## 4.2.1. State Jurisdictions

### 4.2.1.1. Governor's Office of Homeland Security and Emergency Preparedness

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 2.b.2, 5.b.1.

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

#### 4.2.1.2. Louisiana Department of Environmental Quality Headquarters

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

#### 4.2.1.3. Louisiana Department of Environmental Quality EOF

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.1, 3.b.1, 4.a.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: 3.a.1.

ISSUE NO.: 70-08-3a1-A-01

ISSUE: OROs issue appropriate dosimetry and procedures, and manage radiological exposure to emergency workers IAW plans and procedures. Emergency workers periodically and at the end of each mission read and record dosimeter reading. (NUREG-0654, K.3)

CONDITION: The LDEQ team members in the main room, did not read their dosimeters or record readings during the exercise.

POSSIBLE CAUSE: LDEQ staff in the main room are separated from the staff in the dose assessment room. The Technical Logistics Coordinator located in the dose assessment room used a timer to prompt her to remind staff in that room and the FMTs to read and record dosimeter readings. The personnel in the main room had no such procedure and the licensee

personnel also had no procedure for prompting personnel to read their dosimeters. Although LDEQ was aware of the requirement as specified in their plans and procedures, they did not implement them.

REFERENCE: NUREG K.3.a; REP 14/15, 5.1, 5.2; Louisiana Peacetime Radiological Response Plan (Revision 10, October 2005), Attachment I.

EFFECT: The LDEQ staff may have been exposed to radiation and would not have accurate exposure records.

RECOMMENDATION: Train LDEQ staff to read and record dosimeter readings as per the plans and procedures.

- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

#### 4.2.1.4. Louisiana Department of Environmental Quality Field Monitoring Team One

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

#### 4.2.1.5. Louisiana Department of Environmental Quality Field Monitoring Team Two

- a. MET: 1.d.1, 1.e.1, 3.a.1, 4.a.1, 4.a.3.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None

- f. PRIOR ISSUES - UNRESOLVED: None

#### 4.2.1.6. Waterford 3 Emergency News Center

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

### 4.2.2. Risk Jurisdictions

#### 4.2.2.1. St. Charles Parish Emergency Operations Center and Traffic/Access Control Point

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2, 5.a.1, 5.a.3, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

#### 4.2.2.2. St. John the Baptist Parish Emergency Operations Center and Traffic/Access Control Point

- a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.1, 3.c.1, 3.d.1, 3.d.2, 5.a.1, 5.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

### 4.2.2.3. St. John the Baptist Parish School Board

- a. MET: 3.c.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: None
- f. PRIOR ISSUES - UNRESOLVED: None

### 4.2.3. Private Jurisdictions

#### 4.2.3.1. EAS Radio Station WWL

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

# APPENDIX 1

## EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2007-12-05, SITE: Waterford 3 Steam Electric Station, LA

LOCATION	EVALUATOR	AGENCY
Governor's Office of Homeland Security and Emergency Preparedness	*Marilyn Boots Linda Gee	DHS/FEMA DHS/FEMA
Louisiana Department of Environmental Quality Headquarters	Linda Gee	DHS/FEMA
Louisiana Department of Environmental Quality EOF	*Gary Goldberg James Hickey	ICF ICF
Louisiana Department of Environmental Quality Field Monitoring Team One	Bernis Hannah	ICF
Louisiana Department of Environmental Quality Field Monitoring Team Two	*George Brozowski	EPA-R6
Waterford 3 Emergency News Center	Bill Bischof Carl McCoy Frank Stead	DHS/FEMA ICF ICF
St. Charles Parish Emergency Operations Center and Traffic/Access Control Point	Ernie Boaze Joe Howard *Chad Johnston Daniel Prevo	ICF DHS/FEMA DHS/FEMA ICF
St. John the Baptist Parish Emergency Operations Center and Traffic/Access Control Point	Mike Goldsworthy *Al Lookabaugh Bill Maier	DHS-FEMA ICF NRC
St. John the Baptist Parish School Board	Mike Goldsworthy	DHS-FEMA
EAS Radio Station WWL	*Michael Sinclair	ICF
* Team Leader		

# APPENDIX 2

EVALUATION AREA 1: EMERGENCY OPERATIONS  
MANAGEMENT

Sub-element 1.a - Mobilization

Citation 1.a.1: ORGs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.

STATE OF LOUISIANA

Locations

EXTENT-OF-PLAY

State EOC, LDEO (Louisiana Department of Environmental Quality) Operations, LDEO Hdq., St. Charles Parish EOC, and St. John the Baptist Parish EOC, (ENC), St. Charles Parish EOC, and St. John the Baptist Parish EOC.

FOR

WATERFORD 3 STEAM ELECTRIC STATION

Extent of Play

December 5, 2007

All organizations will be mobilized in the same fashion as in an actual emergency. No pre-staging is anticipated for this exercise.

None

ARCA:

## Participating Organizations

Sub-element 1.c - Direction and Control

State of Louisiana

St. Charles Parish

St. John the Baptist Parish

Citation 1.c.1: Key personnel are assigned roles for the ORG provides direction and control of the overall response effort for which they are responsible.

Locations

State EOC, LDEO (Louisiana Department of Environmental Quality) Operations, LDEO Hdq., St. Charles Parish EOC, and St. John the Baptist Parish EOC.

Extent of Play

Leadership personnel will demonstrate the ability to perform essential functions and follow procedures in their facilities.

None

ARCA:

## **EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

### **Sub-element 1.a – Mobilization**

**Criterion 1.a.1: OROs use effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner.**

#### Locations

State EOC, LDEQ (Louisiana Department of Environmental Quality) Operations, LDEQ Headquarters (LDEQ HQ), Emergency News Center (ENC), St. Charles Parish EOC, and St. John the Baptist Parish EOC.

#### Extent of Play

All organizations will be mobilized in the same fashion as in an actual emergency. No pre-staging is anticipated for this exercise.

ARCAs:               None

### **Sub-element 1.c - Direction and Control**

**Criterion 1.c.1: Key personnel with leadership roles for the ORO provide direction and control to that part of the overall response effort for which they are responsible.**

#### Locations

State EOC, LDEQ (Louisiana Department of Environmental Quality) Operations, LDEQ HQ, St. Charles Parish EOC, and St. John the Baptist Parish EOC.

#### Extent of Play

Leadership personnel will demonstrate the ability to perform essential functions and follow procedures in their facilities.

ARCAs:               None

### **Sub-element 1.d – Communications Equipment**

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

#### Locations

State EOC, LDEQ (Louisiana Department of Environmental Quality) Operations, LDEQ HQ, LDEQ Field Monitoring Teams (FMTs), Emergency News Center (ENC), St. Charles Parish EOC, and St. John the Baptist Parish EOC.

#### Extent of Play

Two systems will be available at each location and at least one will be independent of commercial phone lines.

Note: Communications may be made with the LDEQ Environmental Radiation Laboratory for the purpose of meeting the communication needs of other players; however, the Radiation Laboratory will not be evaluated in this exercise.

NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs:                      None

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

**Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations.**

#### Locations

State EOC, LDEQ (Louisiana Department of Environmental Quality) Operations, LDEQ HQ, LDEQ FMTs, Emergency News Center (ENC), St. Charles Parish EOC, St. John the Baptist Parish EOC, Traffic/Access Control Points.

Extent of Play

1. Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies will be demonstrated for use as they would in an actual emergency. This includes dosimetry and any protective gear worn or used by emergency responders.

2. KI will be demonstrated in the field by response personnel.

3. LDEQ FMTs will not don anti-contamination suits.

NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs:               None

**EVALUATION AREA 2: PROTECTIVE ACTION DECISION-  
MAKING**

**Sub-element 2.a – Emergency Worker Exposure Control**

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

Locations:

State EOC, LDEQ (Louisiana Department of Environmental Quality) Operations, St. Charles Parish EOC, and St. John the Baptist Parish EOC.

Extent of Play:

1. If the scenario does not warrant a discussion on either the authorization to administer KI or emergency worker (EW) exposure exceeding administrative limits, then the criteria will be accomplished through an interview with the evaluator.

2. Decision making for KI and EW exposure level above administrative limits is done at the State EOC. According to the State policy, KI is not considered for the general public.

ARCAs:               None

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

**Criterion 2.b.1: Appropriate protective action recommendations are based on available information on plant conditions, field monitoring data, and licensee and ORO dose projections, as well as knowledge of on-site and off-site environmental conditions.**

Locations

State EOC, LDEQ (Louisiana Department of Environmental Quality) Operations.

Extent of Play

According to the State policy, KI is not considered for the general public. The LDEQ EOF controller will interject, as appropriate, data for the purpose of dose projection validation and verification.

ARCAs: None

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

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

Locations:

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

Extent of Play:

The decision to authorize administration of KI to institutionalized persons (these are not emergency workers) is made at the State EOC and communicated by GOHSEP to the Parishes. (According to the State policy, KI is not considered for the general public)

ARCA: None

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

**Criterion 2.c.1: Protective action decisions are made, as appropriate, for special population groups.**

Locations

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

Extent of Play

1. Special facilities include schools, hospitals, nursing homes, and jails located within the 10-mile EPZ. Lists of these facilities are identified in Parish procedures.
2. KI can be considered as an option for those special facilities (excluding schools) whose populations are not able to evacuate immediately.

ARCAs:                   None

**EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

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

Locations

LDEQ (Louisiana Department of Environmental Quality) Operations, LDEQ FMTs, St. Charles Parish EOC & TACP, and St. John the Baptist Parish EOC & TACP

Extent of Play

1. Correction-on-the-spot will be considered at these locations insuring that exercise play is not interrupted; for example, correction-on-the-spot at

Parish EOCs may be limited to areas outside the EOC operations area, i.e., emergency worker briefings and issue of dosimetry in other rooms.

2. Group dosimetry will be used in both Parish EOCs. Group dosimetry will be an option for field operations. TLDs will be available for all exercise participants.

3. Dosimetry will be made available for bus drivers' participation in the school bus drill.

4. The KI distribution process will be demonstrated for field personnel.

5. LDEQ FMTs will not don anti-contamination suits.

NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs: None

### **Sub-element 3.b – Implementation of KI Decision**

**Criterion 3.b.1: KI and appropriate instructions are available should a decision to recommend use of KI be made. Appropriate record keeping of the administration of KI for emergency workers and institutionalized individuals (not the general public) is maintained.**

#### Locations

LDEQ (Louisiana Department of Environmental Quality) Operations, St. Charles Parish EOC, and St. John the Baptist Parish EOC

#### Extent of Play

1. Correction-on-the-spot will be considered at these locations insuring that exercise play is not interrupted; for example, correction-on-the-spot at Parish EOCs may be limited to areas outside the EOC operations area, i.e., emergency worker briefings and issue of dosimetry in other rooms.

2. The KI distribution process will be demonstrated for field personnel.

3. LDEQ FMTs will not don anti-contamination suits.

NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs: None

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

**Criterion 3.c.1: Protective action decisions are implemented for special populations other than schools within areas subject to protective actions.**

Locations

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

Extent of Play

1. This criterion will be accomplished through a discussion. Contact with the special facility will be simulated.
2. Lists of special facilities will be available in Parish procedures.

ARCAs: None

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

**Criterion 3.c.2: OROs/School officials decide upon and implement protective actions for schools.**

Locations

St. John the Baptist Parish EOC and Participating School (name of school to be determined)

Extent of Play

1. The activity will be done out of sequence. For the exercise, one school, as determined by the EOC, will be notified by telephone to demonstrate this objective.
2. Correction-on-the-spot will be considered at this location at the discretion of and concurrence between the evaluator and the controller.

Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area.

3. For purposes of this exercise, no students will be moved as part of this exercise. The school bus may be directed to the nearest reception center under police escort.

4. Bus personnel will be notified by School Board personnel as they would be in an actual emergency.

ARCAs: None

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

**Criterion 3.d.1: Appropriate traffic and access control is established. Accurate instructions are provided to traffic and access control personnel.**

#### Locations

St. Charles Parish EOC, St. John the Baptist Parish EOC, and Traffic/Access Control Point (TACP)

#### Extent of Play

1. This criterion may be demonstrated out-of-sequence. TACP maps will be available at the Parish EOCs. Actual demonstration will be made by an EW at a location agreed upon with an evaluator.

2. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area.

3. Equipment and dosimetry will be demonstrated as in an actual emergency.

4. TACP personnel will be able to demonstrate the ability to locate traffic and access control points in their general area, the location of reception centers to which the public will be directed and the emergency worker decontamination station to which they would report at the conclusion of their mission.

ARCAs: None

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

**Criterion 3.d.2: Impediments to evacuation are identified and resolved.**

#### Locations

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

#### Extent of Play

1. Correction-on-the-spot will be considered at these locations at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. Correction on-on-the-spot at Parish EOCs are limited to areas outside the EOC operations area.
2. Controller interject may be used to initiate the demonstration for this criterion, and this activity may be conducted out-of-sequence.
3. Resources to assist with the removal of impediments are identified in Parish procedures.

ARCAs:                      None

## **EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSIS**

### **Sub-element 4.a. – Plume Phase Measurement and Analysis**

**Criterion 4.a.1: The field teams are equipped to perform field measurements of direct radiation exposure (cloud and ground Shine) and to sample airborne radioiodine and particulates.**

#### Locations

LDEQ Field Monitoring Teams (FMTs)

#### Extent of Play

LDEQ FMTs will not don anti-contamination suits. Correction-on-the-spot will be considered at this location at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted.

NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs:                      None

#### **Sub-element 4.a. – Plume Phase Measurement and Analysis**

**Criterion 4.a.2: Field teams are managed to obtain sufficient information to help characterize the release and to control radiation exposure.**

##### Locations

LDEQ (Louisiana Department of Environmental Quality) Operations

##### Extent of Play

LDEQ FMTs will not don anti-contamination suits. Correction-on-the-spot will be considered at this location at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted.

NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs: None

#### **Sub-element 4.a. – Plume Phase Measurement and Analysis**

**Criterion 4.a.3: Ambient radiation measurements are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant amount of radioactivity has been collected on the sampling media.**

##### Locations

LDEQ Field Monitoring Teams (FMTs)

##### Extent of Play

LDEQ FMTs will not don anti-contamination suits. Silver zeolite cartridges are available; however, only charcoal cartridges will be used during the exercise. Correction-on-the-spot will be considered at this location at the discretion of and concurrence between the evaluator and the controller. Caution should be exercised to insure that exercise play is not interrupted. NOTE: Two FMTs will participate during the sequence of the evaluated exercise. A third FMT will be evaluated out-of-sequence following a shift change and briefing.

ARCAs: None

## **EVALUATION AREA 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION**

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

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

#### Locations

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

#### Extent of Play

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

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

The initial message sent to the radio station (and simulated broadcast) will be the only message timed.

ARCAs: None

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

**Criterion 5.a.3: Activities associated with FEMA approved exception areas are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation.**

#### Locations

St. Charles Parish

## Extent of Play

1. One St. Charles Parish exception area will be demonstrated. The alerting along this route will be simulated. The alert message will be demonstrated to the evaluator's satisfaction prior to the actual demonstration of the alert route. Departure of helicopter will be approximately 10:00 am.
2. The demonstration of this element may be performed prior to the actual scenario event sequence with the permission of the evaluator.

ARCAs: None

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

**Criterion 5.b.1: OROs provide accurate emergency information and instructions to the public and the news media in a timely manner.**

## Locations

State EOC, Emergency News Center (ENC), St. Charles Parish EOC, and St. John the Baptist Parish EOC.

## Extent of Play

1. Utility, State, and Parish representatives will demonstrate the ability to provide emergency information and instructions to the public consistent with the scenario. News media will not be present. Selected personnel will simulate the role of reporters asking questions during briefings.
2. Rumor control will be demonstrated at the ENC.

ARCAs: None

### 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 all offsite response organizations (ORO) is to protect the health and safety of the public. This goal is achieved through the execution of appropriate plans and procedures. It is recognized that situations may arise that could limit the organizations in the exact execution of these plans and procedures.
3. In the event of an unanticipated situation, OROs are permitted to exercise flexibility in the implementation of their plans and procedures in order to successfully achieve the objective of protection of public health and safety and protection of the environment.
4. As a statement of fact, no ORO will deliberately deviate from its plans and procedures with the intent of avoiding responsibility.

#### References:

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

# APPENDIX 3

December 4-6, 2007

Tuesday, December 4, 2007

09:00 - State of Louisiana, LDEQ Player/Controller/Observer Meeting  
(LDEQ HQ, Baton Rouge, Marché/Mobile Room)  
(Out-of-State participants may join)

STATE OF LOUISIANA

13:00 - State/Utility Controller and Federal Evaluator Meeting  
(LDEQ HQ, Baton Rouge)

OFFSITE SCENARIO

14:00 - State of Louisiana Observer/Controller Meeting  
(LDEQ HQ, Baton Rouge, Room 1007)  
(Out-of-State)

FOR

WATERFORD 3 STEAM ELECTRIC STATION

15:00 - 17:00 - Team Meetings  
December 5, 2007

Wednesday, December 5, 2007

07:30 - 18:30 - Plume Phase Exercise (includes State EOC, LDEQ HQ, St. Charles  
EOC, St. John EOC, W-3 EOC, W-3 ENC, and Rumor Control)

## Participating Organizations

State of Louisiana  
St. Charles Parish  
St. John the Baptist Parish

09:00 - State Observer/Controller Meeting  
(LDEQ HQ, Baton Rouge, Marché/Mobile Room)  
(Out-of-State participants will join or must provide comments beforehand)

13:00 - Federal/State Local Exercise Summary Meeting  
(St. John EOC, LaPlace)  
(Out-of-State participants may join)

14:30 - Public Meeting  
(St. John EOC, LaPlace)  
(Out-of-State participants may join)

STATE OF LOUISIANA  
WATERFORD 3 SES EXERCISE  
December 5, 2007

Schedule of Events

December 4-6, 2007

**Tuesday, December 4, 2007**

- 09:00 - State of Louisiana, LDEQ Player/Controller/Observer Meeting  
(LDEQ HQ, Baton Rouge; Manchac/Mobile Room)  
(Out-of-State participants **may** join)
- 13:00 - State/Utility Controller and Federal Evaluator Briefing  
(LDEQ HQ, Baton Rouge; Room 1051)
- 14:00 - State of Louisiana Observer/Controller Briefing  
(LDEQ HQ, Baton Rouge; Room 1051)  
(Out-of-State participants **must** join)
- 15:00 - 17:00 - Team Meetings and Site Visits

**Wednesday, December 5, 2007**

- 07:30 - 16:30 - Plume Phase Exercise (includes State EOC, LDEQ HQ, St. Charles EOC, St. John EOC, W-3 EOF, W-3 ENC, and Rumor Control)

**Thursday, December 6, 2007**

- TBD - FEMA All-Evaluators Debriefing  
(Location TBD)
- 09:00 - State Observer/Controller Debriefing  
(LDEQ HQ, Baton Rouge; Manchac/Mobile Room)  
(Out-of-State participants **will join or must** provide comments beforehand)
- 13:00 - Federal/State/Local Exercise Summary Meeting  
(St. John EOC, LaPlace)  
(Out-of-State participants **may** join)
- 14:30 - Public Meeting  
(St. John EOC, LaPlace)  
(Out-of-State participants **may** join)

STATE OF LOUISIANA  
WATERFORD 3 SES EXERCISE  
December 5, 2007

I. 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 Department of Environmental Quality and the Governor's Office of Homeland Security & Emergency Preparedness; St. Charles Parish; and St. John the Baptist Parish.

II. Objectives

The objectives for offsite activities are listed in Attachment 1.

III. Summary of Events

Attachment 2 contains a detailed timeline of major onsite and offsite activities. The following is an overview summary of those events.

The following initial plant conditions are in effect:

The plant has been operating at 100% power for the past 250 days and is at the middle of core life.

The lower seal on Reactor Coolant Pump (RCP) 1B failed on night shift. The other seals on RCP 1B are functioning properly. There are no seal problems with any other RCPs.

The A/B charging pump is out of service for preventative maintenance (oil change). The pump was tagged out on the night shift and a PM crew came in at 06:00 to begin work. At the start of the drill, the oil has been drained and the crew is exiting the plant with the drained oil. They estimate the PM to be completed by 10:30 on December 5, 2007. The A/B electrical bus is aligned to the "B" side.

The sky is cloudy and scattered thunderstorms are predicted for Southeastern Louisiana. St. John the Baptist Parish is currently under a Severe Thunderstorm Warning and a Tornado Watch. St. Charles Parish is currently under a Severe Thunderstorm Watch. Flooding is not anticipated on the Nuclear Plant Island at this time. Currently there is no precipitation.

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The exercise will commence at 07:55.

At 08:00, a tornado strikes the Fire Pump House damaging the roof. Debris from the roof of the Fire Pump House causes damage to the Fire Protection System. The Outside Watch, or Security, notifies the Control Room that a tornado has damaged Fire Water Storage Tank 'A'. Missile damage to the tank causes loss of Fire Water to below minimum level specified by Technical Requirements Manual (TRM).

The Shift Manager declares an Unusual Event based on Emergency Plan Implementing Instruction EP-001-001, Recognition and Classification of Emergency Conditions, Initiating Condition HU6, EAL #2, " Report by plant personnel of tornado or high winds > 100 mph striking within PROTECTED AREA boundary" There are no Protective Action Recommendations (PARs) required at this time.

After checking with the National Weather Service and receiving indication that the tornado activity has passed out of the area, the Control Room should dispatch maintenance personnel to investigate the damage.

At 09:00, a vibration alarm is received for RCP 1B. Reactor Coolant Pump 1B trips due to a shaft seizure immediately after receiving the vibration alarm. An automatic reactor trip signal is received, but the reactor trip does not occur. The Control Room staff manually trips the reactor and implements OP-902-000, Standard Post Trip Actions, and OP-901-001, Reactor Trip Recovery Procedure. The Shift Manager declares an Alert based on Emergency Plan Implementing Instruction EP-001-001, Recognition and Classification of Emergency Conditions, Initiating Condition SA3 "Failure of Reactor Protection System instrumentation to complete or initiate an automatic reactor trip once a Reactor Protection System set point has been exceeded and manual trip was successful." There are no Protective Action Recommendations (PARs) required at this time.

The Alert declaration results in staffing the Technical Support Center (TSC), the Operational Support Center (OSC), the Emergency Operations Facility (EOF) and the Emergency News Center (ENC).

St. Charles Parish and St. John Parish will begin to activate their EOC staff at this time. The State EOC and will also begin activation. LDEQ will dispatch their response team to Waterford-3.

At this time, St. Charles Parish will notify the helicopter provider, and a response team will be dispatched to the helicopter base located in St. Charles Parish.

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At 09:40, the "B" charging pump trips due to a bell alarm relay failure. The Control Room enters OP-901-112, Charging and Letdown Malfunction, and requests a repair team to investigate the failure. The Control Room enters Technical Specification 3.1.2.4 and TRM 3.1.2.4. The bell alarm relay must be replaced to restore the charging pump to service.

The loss of flow caused by the RCP shaft seizure combined with the failure of the reactor automatic trip function results in damage to the fuel cladding and an increase in Reactor Coolant System (RCS) activity as indicated by radiation monitor alarms. The Control Room should request Chemistry to draw an RCS sample. When Chemistry places the primary sample panel on recirculation, radiation levels will indicate that fuel cladding damage has occurred.

At approximately 09:45, 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.

At approximately 09:45, St. John Parish will demonstrate traffic and access control at the demonstration school location.

At approximately 10:00, the helicopter is ready for alerting assignment. The pilot will be met by members of the St. Charles EOC staff, will be briefed on the assignment, and provided with dosimetry. The helicopter will be fitted with alerting equipment. As in an actual event, a member of the St. Charles staff will be assigned to the helicopter to provide assistance with navigation, operation of the alerting equipment and tracking of radiation doses. Once the helicopter is fitted with the alerting equipment and is prepared for flight, the helicopter will demonstrate its alerting capability along a pre-determined flight route.

At 10:05, an instrument air leak occurs on the header between valves IA-113B and IA-114B. Instrument air pressure drops to approximately 80 psi. The instrument air to station air cross connect should open, but does not due to a failed pneumatic relay in the valve controller. The Control Room enters OP-901-511, Instrument Air Malfunction. Operations may secure the "B" instrument air compressor and close IA-114B to restore header pressure. Mechanical maintenance should be dispatched to repair the header leakage and I&C

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maintenance should be dispatched to repair the cross connect valve. Both failures must be fixed to restore instrument air to normal operation.

At approximately 10:30, a large break Loss of Coolant Accident (LOCA) is initiated releasing radioactive primary coolant into the Containment. The Emergency Coordinator declares a Site Area Emergency based on Emergency Plan Implementing Instruction EP-001-001, Recognition and Classification of

Emergency Conditions, Initiating Condition FS1, "Loss or Potential Loss of ANY two Barriers." There are no Protective Action Recommendations (PARs) required at this time.

The Emergency Coordinator selects an offsite assembly area and announces a site evacuation. The Assembly Area Supervisor is dispatched and Security performs accountability in accordance with EP-002-190, Personnel Accountability. For the purposes of this drill, the non-essential personnel in the Protected Area evacuate to station parking lots and a small number of pre-designated personnel evacuate to the selected offsite assembly area.

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 demonstrate 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.

Both Rumor Control and Media response telephone calls begin at this time.

At 11:00, a crack occurs in the welded fitting for Component Cooling Water Surge tank level switch. When the water drains out of the float chamber, the level switch indicates a low surge tank level on the "B" side. This will cause the header isolation valves to close splitting the header into two systems. The Control Room enters OP-901-510, Component Cooling Water System Malfunction, and requests a repair team to investigate the problem with the surge tank level. The level switch must to be replaced to restore the system to normal operation.

Due to the size of the RCS leakage, Recirculation Actuation Signal (RAS) should occur approximately 1 to 1 1/2 hours after the initiation of RCS leakage. Approximately 20 minutes prior to the RAS, a 30 gallon per minute leak occurs on the inlet flange of the "B" HPSI pump suction relief valve. The operators

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should attempt to isolate the "B" HPSI pump to terminate the leakage. Since the HPSI pump suction isolation valve is a locked open valve, the Operator must go the valve gallery, above the Safeguards Room, to unlock and close the valve. While closing SI-203B, the roll pin in the reach rod breaks and the valve cannot be closed remotely.

When Recirculation Actuation Signal (RAS) is initiated, the "B" Containment Spray Pump fails due to burnt motor windings. Electrical maintenance will be dispatched to investigate the problem and will determine that the motor needs to be replaced. Due to radiation levels in the Safeguards Room, the motor repairs will not be able to be performed.

Due to RCS temperature and pressure, approximately 15 minutes after the RAS is initiated, the water leaking from the HPSI suction line flashes to steam. The radioactive steam is transmitted via the RAB normal ventilation system to the plant stack resulting in a release of radioactivity to the environment. The Emergency Coordinator, or EOF Director, declares a General Emergency based on Emergency Plan Implementing Instruction EP-001-001, Recognition and Classification of Emergency Conditions, Initiating Condition FG1 (FCB1/FCB4, RCB1/RCB3 and CNB4/CNB6, Loss of ANY two Barriers AND Loss or Potential Loss of Third barrier) OR AG1 (Offsite dose resulting from an actual or imminent release of gaseous radioactivity exceeds 1000 mR TEDE or 5000 mR CDE Thyroid for the actual or projected duration of the release using actual meteorology). Initial Protective Action Recommendations of evacuation of Protective Response Areas A1, B1, C1, D1 (2-mile radius), A2 and B2 (5 miles downwind) and sheltering for the remainder of the Protective Response Areas in the 10-mile EPZ are made.

When the "B" HPSI pump suction isolation valve SI-203B is closed, the release will be terminated and offsite dose rates will decrease. The emergency organization should discuss downgrading the emergency classification.

When, in the opinion of the Lead Controller, the exercise objectives have been sufficiently demonstrated and continuing will provide no additional benefit, the exercise will be terminated.

This decision will be coordinated with LDEQ and the NRC. When the exercise is terminated, area critiques will be conducted.

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IV. Attachments

1. Exercise Timeline
2. Exercise Cue Cards
3. Offsite Controller/Monitor Assignments

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A tornado strikes the Waterford-3 Fire Pump House damaging the roof. Unusual Event is declared.	Waterford 3	0000
Notification of the Unusual Event is made to St. Charles Parish, St. John Parish, LDEQ, GOSHSEP and Waterford 1 & 2.	Waterford 3	0050
Reactor Coolant Pump 1B trips due to a shaft seizure. The Control Room staff manually trips the reactor, and the Shift Manager declares an Alert.	Waterford 3	0145
Notification of the Alert is made to St. Charles Parish, St. John Parish, LDEQ, GOSHSEP and Waterford 1 & 2.	Waterford 3	0150
Activation of the St. Charles EOC, St. John EOC and the State EOC is initiated. LDEQ begins deployment of Accident Assessment team to the Waterford 3 site. EMC begins activation.	St. Charles St. John LDEQ GOSHSEP EMC	0230
Chassis towing team is dispatched to the reactor base.	St. Charles	0345

ATTACHMENT 1

EXERCISE TIMELINE

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0800	Waterford 3	A tornado strikes the Waterford-3 Fire Pump House damaging the roof. <u>Unusual Event</u> is declared.
~0820	Waterford 3	Notification of the <u>Unusual Event</u> is made to St. Charles Parish, St. John Parish, LDEQ, GOHSEP and Waterford 1 & 2.
0845	Waterford 3	Reactor Coolant Pump 1B trips due to a shaft seizure. The Control Room staff manually trips the reactor, and the The Shift Manager declares an <u>Alert</u> .
~0900	Waterford 3	Notification of the <u>Alert</u> is made to St. Charles Parish, St. John Parish, LDEQ, GOHSEP and Waterford 1 & 2.
0930	St. Charles St. John LDEQ GOHSEP ENC	Activation of the St. Charles EOC, St. John EOC and the State EOC is initiated. LDEQ begins deployment of Accident Assessment team to the Waterford 3 site. The ENC begins activation.
~0945	St Charles	Helicopter provider is notified of the Alert. St. Charles alerting team is dispatched to the helicopter base.

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0945	St. John	The St. John school demonstration portion of the exercise is initiated. The St. Charles EOC directs a school bus driver to the Garyville Magnet School. Traffic and access control is also demonstrated at the school at this time.	Cue Card #1
0950	St John	St. John Parish demonstrates Traffic/Access Control activities at the Garyville Magnet School.	Cue Card #2
~1000	St. John	The St. John school bus driver arrives at the Garyville Magnet School School. The bus driver is briefed, supplied with dosimetry and provided an escort. No actual dispatch to a reception center will occur.	Cue Card #3
~1000	St Charles	Helicopter is available for the alerting demonstration.	
~1015	LDEQ	The LDEQ Accident Assessment Team arrives at the Waterford 3 EOF.	After arrival of the LDEQ Accident Assessment Team at the EOF and the EOF is declared operational, decision-making coordination will be done with the LDEQ staff present at the EOF.
~1015	ENC	News Briefing is held.	Cue Card #4

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- |       |  |  |             |
|-------|--|--|-------------|
| 1030  | Waterford<br>3                                 | A large break Loss of Coolant Accident (LOCA) is initiated releasing radioactive primary coolant into the Containment. The Emergency Coordinator declares a <u>Site Area Emergency</u> . |             |
| ~1045 | Waterford<br>3                                 | Notification of the <u>SAE</u> is made to St. Charles Parish, St. John Parish, LDEQ and GOHSEP.  |             |
| 1045  | ENC  | Calls Are Made to Media Response   | Cue Card #5 |
| 1045  | Rumor<br>Control<br>Center                     | Calls are made to Rumor Control Center   | Cue Card #6 |
| ~1045 | Waterford<br>3/<br>St.<br>Charles/<br>St. John | The risk parishes are notified of the Waterford 3 onsite evacuation. Traffic and access control personnel are dispatched to the offsite assembly area.                                   |             |
| 1050  | St.<br>Charles                                 | Traffic Control personnel are dispatched to Assembly Area.   | Cue Card #7 |
| 1100  | Waterford<br>3                                 | A crack occurs in the welded fitting for Component Cooling Water Surge tank level switch.  |             |

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- |       |                          |   |
|-------|--------------------------|---|
| 1200  | Waterford 3              | Due to RCS temperature and pressure, the water leaking from the HPSI suction line flashes to steam. The radioactive steam is transmitted via the RAB normal ventilation system to the plant stack resulting in a release of radioactivity to the environment. Waterford-3 declares a <u>General Emergency</u> . |
| ~1215 | Waterford 3              | Notifications and protective action recommendations are made to offsite organizations.  |
| ~1230 | ENC                      | News Briefing is held following the declaration of General Emergency. <span style="float: right;">Cue Card #8</span>  |
| ~1230 | LDEQ Accident Assessment | Around this time, the LDEQ Accident Assessment Team identifies and assesses need to implement KI for offsite emergency workers. This recommendation is passed onto the State Health Officer located at the State EOC.   |
| 1245  | Waterford-3              | When the "B" HPSI pump suction isolation valve is closed, the release will be terminated and offsite dose rates will decrease. The emergency organization should discuss downgrading the emergency classification.  |
| ~1245 | State EOC                | Around this time, the State Health Officer makes a decision concerning whether or not the administration of KI for the risk Parishes and State emergency workers.   |
| 1300  | Waterford-3              | When, in the opinion of the Lead Controller, the exercise objectives have been sufficiently demonstrated and continuing will provide no additional benefit, the exercise will be terminated.  |
| ~1300 | ALL                      | The plume phase of the exercise is terminated.  |

# APPENDIX 4

## PLANNING ISSUES

### 1. Governor's Office of Homeland Security and Emergency Preparedness

ISSUE NO.: 70-08-2b2-P-02

**CONDITION:** The Communications Center adjacent to the State Emergency Operations Center (EOC) was tasked with faxing the KI advisory to the affected parishes of St. Charles and St. John the Baptist. The Communications Center was unsuccessful in sending the fax to St. John the Baptist Parish after 5 attempts in 5 minutes. Shortly thereafter, the exercise was terminated, and St. John the Baptist Parish never did receive the KI advisory per parish officials.

**POSSIBLE CAUSE:** The fax number listed in the implementing procedure contained the wrong fax number for St. John the Baptist Parish (985-652-2138 instead of 985-652-2183).

**REFERENCE:** "Waterford III Nuclear Facility Event Implementing Procedures", Task GE-14 for the Com Desk Section, page 9, dated November 15, 2007. NUREG 0654, J. Protective Response, #9 and 10.f.

**EFFECT:** The officials in St. John the Baptist Parish did not receive the KI advisory; therefore, emergency workers and institutionalized individuals were never notified to ingest KI.

**RECOMMENDATION:** Revise the implementing procedures to list the correct fax number for St. John the Baptist Parish. Include procedures to follow-up with the parishes on receipt of the KI advisory.