



**FEMA**

August 20, 2008

Mr. Elmo E. Collins, Jr.  
Regional Administrator  
U.S. NRC, Region IV  
612 E. Lamar Blvd., Suite 400  
Arlington, TX 76011-4005

Dear Mr. Collins:

Enclosed is a copy of the radiological emergency preparedness final report for the River Bend Station Plume Pathway exercise evaluated on June 11, 2008.

There were three areas requiring corrective action (ARCAs) which were corrected during the exercise.

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 River Bend Station will remain in effect.

A copy of this report was provided electronically to Ms. Kathryn Brock, Office of Nuclear Security and Incident Response, 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 "William Peterson", is written over a horizontal line.

William Peterson  
Regional Administrator

Enclosure

cc: Governor's Office of Homeland Security & Emergency Preparedness – Mark A. Cooper  
Louisiana Department of Environmental Quality – Jeffrey Meyers  
River Bend Station – Joseph Leavines  
NRC Headquarters Document Control Desk

# River Bend Station

Exercise Report - 2008-06-11

Final Report - Radiological Emergency

Preparedness (REP) Program

2008-08-14



# FEMA





# FEMA

## Exercise Report

River Bend Station

Exercise Date: 2008-06-11

Report Date: 2008-08-14

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 June 11, 2008, a biennial Radiological Emergency Preparedness (REP) exercise was conducted for the Plume Exposure Pathway Emergency Planning Zone (EPZ) around the River Bend Station (RBS), located near St. Francisville, Louisiana. Personnel from the U.S. Department of Homeland Security-Federal Emergency Management Agency (DHS-FEMA) Region VI, evaluated all activities. The purpose of the exercise was to assess the level of preparedness of local responders to react to a simulated radiological emergency at RBS. It was held in accordance with FEMA's policies and guidance concerning the implementation of state and local REP plans and procedures.

The previous exercise at this site was conducted on August 16, 2006. The first qualifying exercise to satisfy FEMA rule 44 Code of Federal Regulations (CFR) 350 requirements for Nuclear Regulatory Commission (NRC) licensing to operate the facility was conducted in January 1985. Including the exercise on June 11, 2008, there have been fourteen DHS-FEMA Region VI evaluated exercises plus several drills conducted since then.

FEMA Region VI wishes to acknowledge the efforts of the many individuals in the State of Louisiana, West Feliciana, East Feliciana, Pointe Coupee, East Baton Rouge and West Baton Rouge Parishes 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 includes 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 response plans and procedures and properly implemented them. There were no Deficiencies, three Areas Requiring Corrective Action (ARCA) that were corrected on the spot, no Areas Recommended for Improvement (ARFIs), and one Planning Issue identified during the 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 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, ensuring the plans meet the federal criteria set forth in NUREG-0654/FEMA REP-1, Rev. 1 (November 1980);
  - Determining whether such plans and procedures 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 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 volunteer organizations and other 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 Technological Hazards Branch at the DHS-FEMA Region VI Office.

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 River Bend Station that affected the offsite population. The RAC Chair made the final classification of any issues identified, and the FEMA Region VI Regional Administrator approved the report.

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;

- 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 Emergency Planning Zone (EPZ), 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 evaluation areas at each jurisdiction or functional entity. If applicable, this section also contains descriptions of all Deficiencies and Areas Requiring Corrective Actions (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.

## 3. Exercise Overview

This section contains data and basic information relevant to the June 11, 2008, plume exercise to test the offsite response capabilities in the area surrounding the River Bend Station (RBS). This section of the report includes a description of the Emergency Planning Zone (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.

### 3.1. EPZ Description

The area within 10 miles of River Bend Station (RBS) is located in the State of Louisiana within the confines of West and East Feliciana Parishes, West and East Baton Rouge Parishes, and Pointe Coupee Parish. This area is referred to as the Emergency Planning Zone (EPZ).

The total population of the EPZ is 41,568 (Daytime Peak Season). Besides schools and churches, there are a few other special facilities. There are two hospitals within the 10-mile EPZ including the West Feliciana Parish Hospital (an MS-1 hospital). There are also four incarceration facilities. There are two paper mills, Tembec in West Feliciana and Georgia-Pacific in East Baton Rouge. In Pointe Coupee Parish, there are two electricity-generating plants, Big Cajun No. 1 and No. 2. Located approximately five miles south-southeast of RBS is the Port Hudson State Commemorative Area. Located approximately five miles north of RBS is the Locust Grove State Commemorative Area, and located approximately two miles north is the Audubon Commemorative Park.

There are two major railway lines running through the RBS EPZ. They are the Illinois Central Gulf and the Kansas City Southern Railroads. U.S. Highway 61, Louisiana State Highways 1, 10, 68, and 415 are the major roads within the EPZ.

The EPZ is divided into 18 Protection Action Sections (PAS) defined by geographical boundaries for the purpose of emergency response planning and their implementation of protective actions.

The 10-mile EPZ includes: RBS, Starhill, Audubon State Historic Site, St. Francisville, Hardwood, Elm Park, Bains Road, Airport Road, Mahoney Road, Carney, Freeland, Whitman, Tembec Area, Riddle Area, Tunica Swamp, Cat Island, Solitude, Wakefield,

Beachwood, Bains, Jones Vaughn Creek Road, Freeland Road, Highway 10 between Carney and Jackson, Williams Gas Pipeline/Transco and the sparsely populated area North of Highway 964 and West Highway 68, Delombre, Port Hudson State Historic Site, Jackson, Asphodel, Green Briar Road, Highway 68 south of Jackson City Limits to Highway 964, Highway 955 between Green Briar Road and Highway 412, Lindsay, Highway 68 south of Highway 964 to Highway 61, Highway 412 from Highway 955 to Thompson Road, Plains, Flanacher Road, Port Hudson, Bonn, Mount Pleasant, Port Hickey, Waterloo, and Big Cajun No. 2, Rougon, Chenal, Ventress, Patins, Leavel, Ploup, Brooks, Schexnayder, and Beaud. The Mississippi River runs through the southwestern portion of the EPZ.

### 3.2. Exercise Participants

Agencies and organizations of the following jurisdictions participated in the River Bend Station exercise:

#### State Jurisdictions

- Governor's Office of Homeland Security and Emergency Preparedness
- Louisiana Department of Agriculture and Forestry
- Louisiana Department of Environmental Quality
- Louisiana Department of Health and Hospitals
- Louisiana Department of Social Services
- Louisiana Wildlife and Fisheries

#### Risk Jurisdictions

- Baton Rouge City Police Department
- Capital Area Transit System
- East Baton Rouge Council of Aging
- East Baton Rouge Emergency Medical Services
- East Baton Rouge Fire Department
- East Baton Rouge Health Unit
- East Baton Rouge Office of Family Support
- East Baton Rouge Parish
- East Baton Rouge Parish Homeland Security and Emergency Preparedness
- East Baton Rouge Parish School Board
- East Baton Rouge Social Services
- East Baton Rouge Sheriff's Office
- East Feliciana Parish
- East Feliciana Parish Homeland Security and Emergency Preparedness

East Feliciana Parish Fire Department  
 East Feliciana Parish School Board  
 East Feliciana Parish Sheriff's Office  
 Point Coupee Parish  
 Point Coupee Parish Homeland Security and Emergency Preparedness  
 Point Coupee School Board  
 City of New Roads  
 First Student Bus Company  
 West Baton Rouge Parish  
 West Baton Rouge Parish Homeland Security and Emergency Preparedness  
 West Baton Rouge Fire Department  
 West Baton Rouge Sheriff's Office  
 West Baton Rouge School Board  
 Port Arthur City Police  
 West Feliciana Parish  
 West Feliciana Emergency Ambulance Service  
 West Feliciana Parish Council of Aging  
 West Feliciana Parish Fire Department  
 West Feliciana Parish Homeland Security and Emergency Preparedness  
 West Feliciana Parish Hospital  
 West Feliciana Parish Office of Family Support  
 West Feliciana Parish School Board  
 West Feliciana Parish Sheriff's Office  
 St. Francisville Police Department  
 St. Francisville Volunteer Fire Department  
 Town of St. Francisville  
 Zachary Fire Department  
 Private Jurisdictions  
 American Red Cross  
 Entergy Operations, Inc.  
 River Bend Station  
 Radio Amateur Civil Emergency Service (RACES)

### 3.3. Exercise Timeline

**Table 1 - Exercise Timeline**  
**DATE: 2008-06-11, SITE: River Bend Station, LA**

Emergency Classification Level or Event	Time Utility Declared	GOHSEP EOC	LDEQ HQ	LDEQ EOF	RB Alt. JIC	E. Baton Rouge Parish EOC & T/ACP	E. Feliciana Parish EOC & T/ACP
Unusual Event							
Alert	0847	0903	0904	0904	0922	0903	0907
Site Area Emergency	0958	1005	1007	1010	1010	1006	1007
General Emergency	1145	1157	1201	1145	1158	1157	1159
Simulated Rad. Release Started	1145	1157	1201		1158	1157	1159
Simulated Rad. Release Terminated		1357				1400	1405
Facility Declared Operational			0910	1120	0938	1000	1005
Declaration of State of Emergency		1047				1115	1205
Exercise Terminated		1357	1406	1354	1408	1400	1405
Early Precautionary Actions:							
1st Protective Action Decision:		1215	1231			1215	1217
1st Siren Activation		1225				1225	1225
1st EAS or EBS Message		1229				1229	1231
2nd Protective Action Decision:							
2nd Siren Activation							
2nd EAS or EBS Message							
3rd Protective Action Decision:							
3rd Siren Activation							
3rd EAS or EBS Message							
KI Administration Decision:							

**Table 1 - Exercise Timeline**  
**DATE: 2008-06-11, SITE: River Bend Station, LA**

Emergency Classification Level or Event	Time Utility Declared	Pointe Coupee Parish EOC & T/ACP	W. Baton Rouge Parish EOC & T/ACP	W. Feliciana Parish EOC & T/ACP
Unusual Event				NA
Alert	0847	0904	0903	0905
Site Area Emergency	0958	1004	1003	1006
General Emergency	1145	1155	1155	1158
Simulated Rad. Release Started	1145	1155	1155	1158
Simulated Rad. Release Terminated		1400		
Facility Declared Operational		1004	1010	0924
Declaration of State of Emergency		1010	0948	1045
Exercise Terminated		1400	1401	1400
Early Precautionary Actions:				NA
1st Protective Action Decision:		1218	1212	1200
1st Siren Activation		1225	1225	1225
1st EAS or EBS Message		1229	1228	
2nd Protective Action Decision:				
2nd Siren Activation				
2nd EAS or EBS Message				
3rd Protective Action Decision:				
3rd Siren Activation				
3rd 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 that participated in the June 11, 2008 exercise to test the offsite emergency response capabilities of state and local governments in the 10-mile EPZ surrounding the River Bend Station.

Each jurisdiction and functional entity was evaluated on the basis of its demonstration of criteria delineated in the exercise evaluation areas as outlined in the April 25, 2002, Federal Register, Radiological Emergency Preparedness: Evaluation Methodology. Detailed information on the exercise evaluation area criteria and the extent of play agreement used in this exercise are found in Appendix 3 of this report.

### 4.1. Summary Results of Exercise Evaluation

The matrix presented in Table 2, on the following page, presents the status of all exercise evaluation area criteria that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status is 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 - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

N - Not Demonstrated (Reason explained in Subsection B)

Table 2 - Summary of Exercise Evaluation (2 pages)

		DATE: 2008-06-11 SITE: River Bend Station, LA A: ARCA, D: Deficiency, M: Met									
		GOHSEP EOC	LDEQ HQ	LDEQ EOF	LDEQ FMT 1	LDEQ FMT 2	RB Alt. JIC	E. Baton Rouge Parish EOC & T/ACP	River Center RC	E. Feliciana Parish EOC & T/ACP	Zachary EWMD
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	
Equip & Supplies to support operations	1e1	M	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			M	M	M		M	M	M	M
Implementation of KI decision	3b1							M			
Implementation of protective actions for special populations - EOCs	3c1							M		M	
Implementation of protective actions for Schools	3c2										
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	
Support Operations/Facilities											
Mon / decon of evacuees and emergency workers, and registration of evacuees	6a1								M		M
Mon / decon of emergency worker equipment	6b1										M
Temporary care of evacuees	6c1								M		
Transportation and treatment of contaminated injured individuals	6d1										



Table 2 - Summary of Exercise Evaluation (Continued. page 2/2)

DATE: 2008-06-11 SITE: River Bend Station, LA  A: ARCA, D: Deficiency, M: Met			Pointe Coupee Parish EOC & T/ACP	PCPSD	W. Baton Rouge Parish EOC & T/ACP	W. Feliciana Parish EOC & T/ACP	WFPSD	EAS Radio Station WJBO
<b>Emergency Operations Management</b>								
Mobilization	1a1	M			M	M		
Facilities	1b1							
Direction and Control	1c1	M			M	M		
Communications Equipment	1d1	M			M	M		
Equip & Supplies to support operations	1e1	M			M	M		
<b>Protective Action Decision Making</b>								
Emergency Worker Exposure Control	2a1	M			M	M		
Radiological Assessment and PARs	2b1							
Decisions for the Plume Phase -PADs	2b2	M			M	M		
PADs for protection of special populations	2c1	M			M	M		
Rad Assessment and Decision making for the Ingestion Exposure Pathway	2d1							
Rad Assessment and Decision making concerning Relocation, Reentry, and Return	2e1							
<b>Protective Action Implementation</b>								
Implementation of emergency worker exposure control	3a1	M			M	M		
Implementation of KI decision	3b1				M			
Implementation of protective actions for special populations - EOCs	3c1	M			M	M		
Implementation of protective actions for Schools	3c2		M				M	
Implementation of traffic and access control	3d1	M			M	M		
Impediments to evacuation are identified and resolved	3d2	M			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							
<b>Field Measurement and Analysis</b>								
Adequate Equipment for Plume Phase Field Measurements	4a1							
Field Teams obtain sufficient information	4a2							
Field Teams Manage Sample Collection Appropriately	4a3							
Post plume phase field measurements and sampling	4b1							
Laboratory operations	4c1							
<b>Emergency Notification and Public Info</b>								
Activation of the prompt alert and notification system	5a1	M			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							
Emergency information and instructions for the public and the media	5b1	M			M	M		
<b>Support Operations/Facilities</b>								
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 subsection 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.

**Area Requiring Corrective Actions** - 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 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** - Descriptions of ARCAs assessed during previous exercises that were resolved in this exercise and the corrective actions demonstrated.

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

The following are definitions of the two types of exercise issues that are discussed in this report.

A Deficiency is defined in the Interim REP Program Manual 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 the Interim REP Program Manual 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 DHS-FEMA Region VI Office has developed a standardized system for numbering exercise issues (Deficiencies, ARCAs and Plan Issues). This system is used to achieve consistency in numbering exercise issues among DHS-FEMA Regional Offices and site-specific exercise reports within each Regional Office. It is also used to expedite tracking of exercise issues on a nationwide basis.

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

**Plant Site Identifier** - A two-digit number corresponding to the Utility Billable Plant Site Codes.

**Exercise Year** - The last two digits of the year the exercise was conducted.

**Evaluation Area Criterion** - A letter and number corresponding to the Evaluation Area criterion.

**Issue Classification Identifier** - (D = Deficiency, A = ARCA, and P = Plan Issues).

**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.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

#### 4.2.1.2. 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.a.1, 4.a.2.
- b. AREAS REQUIRING CORRECTIVE ACTION: None
- c. DEFICIENCY: None
- d. NOT DEMONSTRATED: None
- e. PRIOR ISSUES - RESOLVED: 3.a.1.

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

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

CORRECTIVE ACTION DEMONSTRATED: During this exercise a prior issue from the 2007 Waterford-3 Plume Exercise was corrected as follows: The Logistics Coordinator in the Emergency Operations Facility (EOF) used a timer as a reminder to read dosimetry every 30 minutes. Every 30 minutes, the Logistic Coordinator would remind the LDEQ personnel in the Dose Assessment Room and in the main EOF Operations Room to read and

record their dosimeters. All LDEQ personnel read their dosimeters and recorded the reading on their Exposure Control Card. The Logistic Coordinator also went around and recorded all readings on a separate log to monitor everyone's exposure.

- 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. River Bend Alternate Joint Information Center

- a. MET: 1.a.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. East Baton Rouge 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

### 4.2.2.2. Baton Rouge River Center Reception Center

- a. MET: 1.e.1, 3.a.1, 6.a.1, 6.c.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1.

ISSUE NO.: 53-08-6a1-A-02

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

CONDITION: During the initial personnel survey the emergency worker misread the reading from the meter face as 1000 mR instead of 1000 counts per minute. This error was not corrected until the controller stopped play.

POSSIBLE CAUSE: Possible lack of radiological equipment training to the emergency worker providing the initial personnel monitoring.

REFERENCE: East Baton Rouge Parish Emergency Response Procedure for Reception Center (Baton Rouge River Center), Attachment 6: Initial Personnel Monitor.

Interim REP Program Manual, page III-92.

EFFECT: Following the termination of the reception center operations, the survey results are turned over to Louisiana Department of Environmental Quality. If those results show 1000 mR from the surveys, it would indicate that the evacuees received a dose from the release. The survey meters used at the reception center read counts per minute which measures the radioactivity or contamination.

CORRECTIVE ACTION DEMONSTRATED: The play was stopped by the controller and additional radiological equipment training was given to the emergency worker at the initial personnel monitoring station. Play proceeded and the emergency worker gave the correct reading of 1000 counts per minute to the recorder.

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

#### 4.2.2.3. East Feliciana Parish Emergency

##### Operations Center and Traffic/Access Control Point

- a. MET: 1.a.1, 1.b.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.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

#### 4.2.2.4. Pointe Coupee 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.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

#### 4.2.2.5. Point Coupee Parish School District

- 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

#### 4.2.2.6. West Baton Rouge 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

#### 4.2.2.7. West Feliciana 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.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



#### 4.2.2.8. West Feliciana Parish School District

- 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. Support Jurisdictions

##### 4.2.3.1. Zachary Fire Department Monitoring & Decontamination Center

- a. MET: 1.e.1, 3.a.1, 6.a.1, 6.b.1.
- b. AREAS REQUIRING CORRECTIVE ACTION: 6.a.1, 6.b.1.

ISSUE NO.: 53-08-6a1-A-03

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

CONDITION: A contaminated emergency worker's personal item (wristwatch) was not removed at the initial personnel monitoring station.

POSSIBLE CAUSE: Inadequate training and knowledge of procedures.

REFERENCE: NUREG-0654, K.5.b; East Baton Rouge Parish Emergency Response Procedure for Zachary Fire Department, Attachment 12.

EFFECT: Further spread of contamination to the emergency worker or monitors at the station may have occurred.

CORRECTIVE ACTION DEMONSTRATED: A correction on the spot was requested to review the disposition of personal items (wristwatch) which had

not been removed from the contaminated emergency worker. Training was conducted by the utility representative and the monitor correctly re-demonstrated the process for removal, tracking and disposition of personal items.

ISSUE NO.: 53-08-6b1-A-04

ISSUE: Facility/ORO has adequate procedures and resources for the accomplishment of monitoring and decontamination of emergency worker equipment including vehicles. (NUREG\_0654, K.5.b)

CONDITION: Improper speed and distance technique was used while surveying an emergency worker.

POSSIBLE CAUSE: Inadequate training on personnel surveying procedures.

REFERENCE: NUREG-0654, K.5.b.; East Baton Rouge Parish Emergency Response Procedure for Zachary Fire Department, Attachment 6.

EFFECT: Contamination may not have been detected causing further spread of contamination.

CORRECTIVE ACTION DEMONSTRATED: A correction on the spot was requested to review the proper techniques for speed and distance while surveying an individual. The utility representative reviewed and demonstrated the proper technique. The personnel monitoring team re-demonstrated surveying the emergency worker and successfully completed the process in accordance to the procedures.

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

#### 4.2.4. Private Jurisdictions

#### 4.2.4.1. EAS Radio Station WJBO

- 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

## ACRONYMS AND ABBREVIATIONS

AAC	Accident Assessment Coordinator
AJIC	Alternate Joint Information Center
ARC	American Red Cross
ARCA	Areas Requiring Corrective Action
CAD	Computer Assisted Design
DAC	Dose Assessment Coordinator
DRD	Direct Reading Dosimeter
EAS	Emergency Alert System
EBR	East Baton Rouge
EBRFD	East Baton Rouge Fire Department
EBRP	East Baton Rouge Parish
ECL	Emergency Classification Level
EFP	East Feliciana Parish
EMD	Emergency Management Director
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Teams
FTC	Field Team Coordinator
GE	General Emergency
HOO	Headquarters Operations Officer
IPM	Initial Personnel Monitor
IPZ	Ingestion Planning Zone
IRT	Initial Response Team
JIC	Joint Information Center
LDEQ	Louisiana Department Environmental Quality
NRC	Nuclear Regulatory Commission
PAD	Protective Action Decisions
PAR	Protective Action Recommendation
PAS	Protective Action Sections
PIO	Public Information Officer
RAC	Regional Assistance Committee
RACES	Radio Amateur Civil Emergency Services
RADEF	Radiological Defense Officer
RBS	River Bend Station
RC	Reception Center
REP	Radiological Emergency Preparedness
SAE	Site Area Emergency
SEL	Senior EOF Liaison

SEOC	State Emergency Operations Center
SOP	Standard Operating Procedures
T/ACP	Traffic and Access Control Point
TEDE	Total Effective Dose Equivalent
VMT	Vehicle Monitoring Team
WBRP	West Baton Rouge Parish
WFP	West Feliciana Parish
WFSD	West Feliciana School District

# APPENDIX 2

## EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2008-06-11, SITE: River Bend Station, LA

LOCATION	EVALUATOR	AGENCY
Governor's Office of Homeland Security and Emergency Preparedness	*Ernie Boaze Ronald Bonner	ICF ICF
Louisiana Department of Environmental Quality Headquarters	Ronald Bonner	ICF
Louisiana Department of Environmental Quality EOF	*Richard Grundstrom David Seebart	ICF ICF
Louisiana Department of Environmental Quality Field Monitoring Team One	*George Brozowski	EPA-R6
Louisiana Department of Environmental Quality Field Monitoring Team Two	Jill Leatherman	ICF
River Bend Alternate Joint Information Center	*Bill Bischof Robert Duggleby Morrison Jackson	DHS/FEMA ICF
East Baton Rouge Parish Emergency Operations Center and Traffic/Access Control Point	Joe Howard *Al Lookabaugh	DHS/FEMA ICF
Baton Rouge River Center Reception Center	Nan Calhoun Robert Duggleby *Chad Johnston Jill Leatherman	DHS/FEMA ICF DHS/FEMA ICF
East Feliciana Parish Emergency Operations Center and Traffic/Access Control Point	*Nan Calhoun Linda Gee Chad Johnston	DHS/FEMA DHS/FEMA DHS/FEMA
Pointe Coupee Parish Emergency Operations Center and Traffic/Access Control Point	Shyrlee Fox *James McClanahan	DHS/FEMA RVI ICF
Point Coupee Parish School District	Shyrlee Fox	DHS/FEMA RVI
West Baton Rouge Parish Emergency Operations Center and Traffic/Access Control Point	Lenora Borchardt *Marynette Herndon	ICF ICF
West Feliciana Parish Emergency Operations Center and Traffic/Access Control Point	Mike Goldsworthy *Wendy Swygert	DHS-FEMA ICF
West Feliciana Parish School District	Mike Goldsworthy	DHS-FEMA
Zachary Fire Department Monitoring & Decontamination Center	Mike Goldsworthy *Joe Howard	DHS-FEMA DHS/FEMA
EAS Radio Station WJBO	*Elsa Lopez	DHS/FEMA
* Team Leader		

## APPENDIX 3

# River Bend Station Extent of Play

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**Revision 3  
5/14/2008**

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**EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

**Sub-element 1.a – Mobilization**

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

Locations

State EOC, Louisiana Department of Environmental Quality Headquarters (LDEQ HQ), LDEQ at EOF (LDEQ EOF), Alternate Joint Information Center (Alternate JIC), East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

Partial participation at the State EOC will include the Governor's Office of Homeland Security & Emergency Preparedness (GOHSEP), LDEQ, and the Louisiana Department of Health and Hospitals (LDHH).

The JIC emergency response team will be pre-positioned near the Alternate JIC located in Baton Rouge and will mobilize and activate the facility at the Alert ECL.

ARCAs      None

**EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

**Sub-element 1.b – Facilities**

**Criterion 1.b.1: Facilities are sufficient to support the emergency response. (NUREG-0654, H.3)**

Locations

East Feliciana Parish EOC

Extent of Play

The East Feliciana Parish EOC is new facility which will be demonstrated.

ARCAs      None



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**EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

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

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

Locations

State EOC, LDEQ HQ, LDEQ EOF, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

ARCAs      None

**EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

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

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

Locations

State EOC, LDEQ HQ, LDEQ EOF, Louisiana Department of Environmental Field Monitoring Team 1 (LDEQ FMT 1), Louisiana Department of Environmental Field Monitoring Team 2 (LDEQ FMT 2), Alternate JIC, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

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.

ARCAs      None

**EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT**

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

**Criterion 1.e.1: Equipment, maps, displays, dosimetry, potassium iodide (KI), and other supplies are sufficient to support emergency operations. (NUREG-0654, H.7; J.10.a, b, e; J.11; K.3.a)**

Locations

State EOC, LDEQ HQ, LDEQ EOF, LDEQ FMT 1, LDEQ FMT 2, Alternate JIC, East Baton Rouge Parish EOC, East Feliciana Parish EOC, Pointe Coupee Parish EOC, West Baton Rouge Parish EOC, West Feliciana Parish EOC, Zachary Fire Department Monitoring & Decontamination Center, Baton Rouge River Center Reception Center, Traffic/Access Control Points

Extent of Play

LDEQ FMTs will not don anti-contamination suits. Anti-contamination suits are available in the field team kits and will be demonstrated through discussion with the evaluator.

Dosimetry and KI are not applicable at the Alternate JIC.

**OUT OF SEQUENCE DEMONSTRATION**

- Zachary Fire Department Monitoring & Decontamination Center will be demonstrated out of sequence from the main exercise activities on Monday, June 9, 2008 at approximately 6:00 PM. Participants may be pre-staged near the monitoring & decontamination center.
- Baton Rouge River Center Reception Center will be demonstrated out of sequence from the main exercise activities on Tuesday, June 10, 2008 at approximately 9:00 AM. Participants will be pre-staged at or near the reception center.

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

ARCAs      None

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

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

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**Criterion 2.a.1: OROs use a decision-making process, considering relevant factors and appropriate coordination, to insure that an exposure control system, including the use of KI, is in place for emergency workers including provisions to authorize radiation exposure in excess of administrative limits or protective action guides. (NUREG-0654, K.4; J.10.e, f)**

Locations

State EOC, LDEQ EOF, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

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 shall be accomplished through an interview with the evaluator. Note: Parish decision-makers receive recommendations for KI and EW exposure from the State EOC.

ARCAs      None

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

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

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

Locations

State EOC, LDEQ EOF

Extent of Play

The LDEQ EOF controller will interject simulated field monitoring data to the Dose Assessment Coordinator for the purpose of dose projection validation and verification through back calculations.

ARCAs      None

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

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

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

Locations

State EOC, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

According to the State of Louisiana's policy, KI is not considered for the general public.

ARCAs      None

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

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

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

Locations

East Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC, West Baton Rouge Parish EOC (if applicable)

Extent of Play

If the scenario does not warrant a discussion on protective action decisions for the protection of special populations, then the criteria shall be accomplished through an interview with the evaluator.

If the Resource Data Book at the West Baton Rouge Parish EOC does not list any special populations at the time of the exercise, the criteria shall be accomplished through an interview with an evaluator.

ARCAs            None

### EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION

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

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

#### Locations

LDEQ EOF, LDEQ FMT 1, LDEQ FMT 2, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC, Pointe Coupee Parish School District, West Feliciana Parish School District, Zachary Fire Department Monitoring & Decontamination, Baton Rouge River Center Reception Center

#### Extent of Play

LDEQ FMTs will not don anti-contamination suits.

#### **OUT OF SEQUENCE DEMONSTRATION**

- Zachary Fire Department Monitoring & Decontamination Center will be demonstrated out of sequence from the main exercise activities on Monday, June 9, 2008 at approximately 6:00 PM. Participants may be pre-staged near the monitoring & decontamination center.
- Baton Rouge River Center Reception Center will be demonstrated out of sequence from the main exercise activities on Tuesday, June 10, 2008 at approximately 9:00 AM. Participants will be pre-staged at or near the reception center.

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

ARCAs

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70-07-3a1-A-01: To be demonstrated during this exercise at the LDEQ EOF.

### **EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

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

#### Locations

East Baton Rouge Parish EOC, West Baton Rouge Parish EOC

#### Extent of Play

Note: There are no institutionalized individuals within the 10-mile EPZ affected areas of East Baton Rouge Parish or West Baton Rouge Parish. Decision-making and discussion will focus on emergency workers.

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

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

ARCAs      None

### **EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

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

#### Locations

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East Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC, West Baton Rouge Parish EOC

Extent of Play

The EOCs will demonstrate the capability to alert and notify special population facilities, special populations and individuals according to plans and procedures, as applicable, and it will be accomplished through a discussion. Contact with a special facility will be simulated.

If the Resource Data Book at the West Baton Rouge Parish EOC does not list any special populations at the time of the exercise, the criteria shall be accomplished through an interview with an evaluator.

ARCAs     None

**EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

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

Locations

Pointe Coupee Parish School District, West Feliciana Parish School District

Extent of Play

A school official from a selected school will report to the EOC and demonstrate the implementation of protective actions for the school population by describing to the evaluator the procedures that would be followed. The school official will discuss with evaluator the capability to alert and notify all schools according to plans and procedures, as applicable.

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

The discussions with the school official and the transportation provider will occur outside of the EOC operations area after they report to the EOC. The discussions will occur at a time, as determined by the evaluator, when EOC activities do not require observation.

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

ARCAs None

**EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

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

Locations

East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

This may be demonstrated out of sequence. One traffic and access control staff will demonstrate knowledge of their roles and responsibility by discussion with the evaluator. The discussion will be at or near the EOC. Travel to the traffic and access control point will not be demonstrated. If the scenario does not warrant this discussion at a location, the controller will inject data to stimulate a discussion.

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

ARCAs None

**EVALUATION AREA 3: PROTECTIVE ACTION IMPLEMENTATION**

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

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



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Locations

East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, and Pointe Coupee Parish EOC

Extent of Play

Evaluation will be by discussion, or by controller interject, of the capability to identify and take appropriate actions to deal with impediments and may be conducted out-of-sequence.

ARCAs

None

**EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSES**

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

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

Locations

LDEQ FMT 1, LDEQ FMT 2

Extent of Play

LDEQ FMTs will not don anti-contamination suits.

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

ARCAs

None

**EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSES**

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

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

Locations

LDEQ EOF

Extent of Play

ARCAs      None

**EVALUATION AREA 4: FIELD MEASUREMENT AND ANALYSES**

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

**Criterion 4.a.3: Ambient radiation measurement are made and recorded at appropriate locations, and radioiodine and particulate samples are collected. Teams will move to an appropriate low background location to determine whether any significant (as specified in the plan and/or procedures) amount of radioactivity has been collected on the sampling media. (NUREG-0654, I.9)**

Locations

LDEQ FMT 1, LDEQ FMT 2

Extent of Play

LDEQ FMTs will not don anti-contamination suits. Charcoal cartridges will be used for air sampling during this exercise. Note: Silver zeolite cartridges are available.

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

ARCAs      None

**EVALUATION AREA 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**

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**instructional message to the public must include as a minimum the elements required by current FEMA REP guidance. (10 CFR Part 50, Appendix E.IV.D & NUREG-0654, E.5, 6, 7)**

Locations

State EOC, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC, WJBO

Extent of Play

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

The State EOC will demonstrate through discussion the dissemination of the EAS message to the public. The State EOC will fax the EAS message to the Alternate JIC.

OUT OF SEQUENCE SITE ASSISTED VISIT

WJBO radio station – A site assisted visit will be performed Monday June 9, 2008 at 1:00 pm.

ARCA's            None

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

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

**Criterion 5.a.3: Activities associated with FEMA approved exception areas (where applicable) are completed within 45 minutes following the initial decision by authorized offsite emergency officials to notify the public of an emergency situation. Backup alert and notification of the public is completed within 45 minutes following the detection by the ORO of a failure of the primary alert and notification system. (NUREG-0654, E.6, Appendix 3.B.2.c)**

Locations

East Feliciana Parish EOC

Extent of Play

The helicopter and pilot will pre-stage at the helipad located at the Sheriff's Annex on Highway

61.

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The pilot will launch when notified of the declaration of a General Emergency. The helicopter will complete the flyover of the PAS 9 exception area within approximately 45 minutes of the decision to notify the public of the emergency. The broadcast of the message will be simulated.

The EOC will demonstrate the availability of a second person to accompany the pilot to make the pre-scripted announcement; however the Entergy Controller will simulate this emergency worker in flight to accommodate aircraft loading and will read the message to the FEMA evaluator.

The Public Address system will be demonstrated after the flyover at the False River Air Park. The helicopter will land at the Air Park for the evaluator and controller to disembark. The evaluator and controller will be located near the launch pad to receive a simulated broadcast made from the helicopter in flight. The helicopter will launch and make an in-flight announcement test message similar to "This is a test." The evaluator and/or controller on the ground will signal when the broadcast is heard. When the demonstration is completed, the helicopter will return the evaluator and controller to the original launch point.

If a law enforcement priority prevents the use of the helicopter or the pilot or the helicopter is not available, the demonstration will be completed using the Pointe Coupee Parish helicopter and pilot. If the unavailability is short notice, the demonstration will be scheduled out of sequence at a later date to be determined.

If advance notice of the unavailability of the West Feliciana Parish helicopter is received, the Point Coupee Parish staging area for the demonstration is the False River Air Park.

ARCAs      None

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

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

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

Locations

State EOC, Alternate JIC, East Baton Rouge Parish EOC, West Baton Rouge Parish EOC, East Feliciana Parish EOC, West Feliciana Parish EOC, Pointe Coupee Parish EOC

Extent of Play

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. Controllers will inject public phone team messages, media phone team messages and news briefing messages.

ARCA's            None

#### **EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES**

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

**Criterion 6.a.1: The reception center/emergency worker facility has appropriate space, adequate resources, and trained personnel to provide monitoring, decontamination, and registration of evacuees and/or emergency workers. (NUREG-0654, J.10.h; J.12; K.5.a)**

##### Locations

Zachary Fire Department Monitoring & Decontamination Station, Baton Rouge River Center Reception Center.

##### Extent of Play

#### **OUT OF SEQUENCE DEMONSTRATION**

- **Zachary Fire Department Monitoring & Decontamination Center** will be demonstrated out of sequence from the main exercise activities on Monday, June 9, 2008 at approximately 6:00 PM. Participants may be pre-staged near the monitoring & decontamination center.

Two emergency workers will be monitored for contamination. A controller will inject data for a simulated contamination level for one emergency worker. Decontamination will be evaluated by demonstration and further discussion.

- **Baton Rouge River Center Reception Center** will be demonstrated out of sequence from the main exercise activities on Tuesday, June 10, 2008 at approximately 9:00 AM. Participants will be pre-staged at or near the reception center.

The capability to monitor 20% of the West Feliciana Parish, East Feliciana Parish and East Baton Rouge Parish evacuees living in the 10-mile EPZ over a 12-hour period will be demonstrated. To meet 20% requires (20% of 20,189 population) a monitoring capability of 5 to 6 evacuees per minute.

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Six people will simulate evacuees for demonstration. One portal monitor will be set up and the 6 evacuees processed. One (male) of the six will be simulated contaminated. One (male) monitoring station for contaminated evacuees will be set up and the contaminated individual will be processed to the decontamination station. Decontamination will be evaluated by demonstration and further discussion.

Handling of potentially contaminated personal belongings will be demonstrated by discussion.

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

ARCAs None

**EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES**

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

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

Locations

Zachary Fire Department Monitoring & Decontamination Station

Extent of Play

One emergency worker vehicle will be monitored for contamination. A controller will interject data for a simulated contamination level for one vehicle. Decontamination will be evaluated by discussion.

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

**OUT OF SEQUENCE DEMONSTRATION**

- Zachary Fire Department Monitoring & Decontamination Center will be demonstrated out of sequence from the main exercise activities on Monday, June 9, 2008 at approximately 6:00 PM. Participants may be pre-staged near the monitoring & decontamination center.

ARCAs        None

**EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES**

**Sub-element 6.c- Temporary Care of Evacuees**

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

Locations

McKinley Middle School (East Baton Rouge Shelter)

Extent of Play

OUT OF SEQUENCE DEMONSTRATION – The selected shelter will be evaluated by discussion and walk-through at 8:00 am on Tuesday June 9, 2008.

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:**

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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 4

STATE OF LOUISIANA

OFFSITE SCENARIO

FOR

RIVER BEND STATION

June 11, 2008

Participating Organizations

State of Louisiana

East Baton Rouge Parish

East Feliciana Parish

Pointe Coupee Parish

West Baton Rouge Parish

West Feliciana Parish

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I. Purpose

This exercise will be conducted for the purpose of testing the ability of the following organizations to address an emergency at the River Bend Station: the State of Louisiana through the Louisiana Department of Environmental Quality and the Governor's Office of Homeland Security and Emergency Preparedness; East Baton Rouge Parish; East Feliciana Parish; Pointe Coupee Parish; West Baton Rouge Parish; and West Feliciana Parish.

II. Objective

The objectives for offsite activities are listed in Attachment 1.

III. Summary of Events

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

The initial conditions include the information that Div II diesel generator (D/G) was running parallel to the grid per procedure SOP-0053 and tripped at 0755, 5 minutes before the drill start. The drill will start at 0800. The first event after the crew has assumed the shift is a control rod drop accident. At approximately 0845, the Shift Manager (OSM) will receive a chemistry report that the reactor coolant sample analysis indicates activity greater than 300  $\mu\text{Ci/gm}$  dose equivalent I-131. An Alert will be declared at approximately 0845 to 0900 on fission product barrier category FA1-1.

At approximately 0940, a grid transient will cause spurious trips of CNM-P1A, CNM-P1C, CCS-P1A, and NJS-LDC1A supply breaker. The reactor will scram on lowering water level due to the loss of condensate (CNM) and feedwater (FWS). The RCIC injection system will initiate (manually or automatically) to maintain post scram reactor water level. The high pressure coolant injection system (HPCS) may initially inject if level lowers to -42" or if manually initiated. HPCS will be secured. Reactor pressure vessel (RPV) pressure will be controlled using main steam drains or safety relief valves (SRVs).

The RPV scram transient will result in a weld failure on the reactor coolant Recirculation system (Recirc or RCS) loop A pump suction line. Unidentified leakage will rise to approximately 200 gpm and a drywell (DW) 1.68 psid signal will occur at approximately 0945. The drywell high pressure 1.68 psid initiation setpoint is an indication of loss of the reactor coolant system barrier. At approximately 0945 to 1000 a Site Area Emergency will be declared on FS1 EAL 1 (FCI and RCI), loss or potential loss of 2 barriers. The SAE will be declared within 15 minutes of reaching 1.68 psid.

At approximately 1118, the RCS leak at Recirc A line crack degrades to a line break between the suction valve B33-MOVF023A and the Recirc pump A. RCIC and CRD will inject but the magnitude of the leak is greater than the makeup. The drywell airlock door seal will fail and alarms will come in on control room panel P863 to alert operators. This is indication of drywell bypass leakage.

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The crew will attempt to inject with HPCS but the injection valve E22-MOVF004 fails to re-open. Level will lower to  $< -162''$  top of active fuel (TAF), at approximately 1125 to 1130. After level lowers below TAF, area radiation monitors and the Containment / Drywell post accident monitor (PAM) indications will rise. Seven safety relief valves (SRVs) will be opened to emergency depressurize the RPV to enable low pressure emergency core cooling system (ECCS) injection. RHR A will inject but RHR B and C valves, LPCS injection valve, and HPCS injection valve fail to open. The Severe Accident Procedure (SAP) containment flooding will be entered when RPV level cannot be restored and maintained above -186 inches. The estimated time for SAP entry is around 1145. Control room supervisor decision making process will determine entry. General emergency conditions are met when the SAPs are entered and GE FGI-1 will be declared within 15 minutes of entering the SAPs. (FCI and RC1 loss and PC2 potential loss) The containment and drywell post accident monitor readings will rise. Minimum PAR scenario 6 will be recommended.

The drywell airlock seals fail causing drywell bypass to the containment atmosphere. Containment integrity is maintained throughout the scenario. The activity in the containment is not scrubbed because of the drywell bypass. Radiation release is from the containment design leakage into the annulus and will be filtered by Standby Gas Treatment system prior to release to the environment.

HPCS injection valve will fail to open and after RPV depressurization, LPCS and LPCI B & C injection valves will fail to auto open once below the shutoff head due to MOV failures. RHR A SDC injection valve MOVF053A or injection valve MOVF042A may be opened after the low pressure interlocks clear.

NJS-SWG1A will be restored and the RCS leak will be isolated at approximately 1245 by closing the Recirc A suction valve MOVF023A. Level will be restored above TAF. The main plant effluent monitor reading will lower after restoring level.

At approximately 1330 to 1400, the simulator will be placed in FREEZE after verifying that all onsite and offsite objectives have been demonstrated.

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Scenario Timeline

**0800 Initial Conditions**

Plant operating at 100% power  
On-line 180 days.

- Div II work week.
- Div II Diesel Generator (D/G) was started for a system operating procedure (SOP) run at 0755. The D/G started, ran for approximately 1 minute and 50 seconds and then shut down. No trip alarms were received. The only alarm received was the LUB OIL TEMP LOW alarm. On the local panel, the UNIT TRIPPED light came on, UNIT AVAILABLE EMERGENCY STATUS light on, SYNCHRONOUS light on and no other abnormal conditions. After the engine coast down to stop, the UNIT TRIP light went out with no operator actions. The 3<sup>rd</sup> RO and I&C technician are at the D/G investigating. The system engineer was called but has not arrived.

The offgoing shift manager remembered a similar occurrence on the diesel generator last year caused by a problem with the logic board in the local control panel. He has not investigated any further.

- CNM-PIB out of service, motor removed
- NJS-SWG1S and 1T are cross-tied with power from NPS-SWG1B. NJS-SWG1S tripped last night. The operator found HVL-CHLR1B and supply breaker ACB389 tripped but it couldn't be determined immediately that the chiller trip was the cause of the bus feeder breaker ACB380 trip. Operations racked out and danger tagged ACB380 and ACB389 as a precaution. After a visual inspection, operators cross-tied the S and T switchgear. All readings are normal. Work request was written.

Weather

- Wind direction 358
- Wind speed 4 mph
- Delta T +0.1
- Precipitation: heavy overcast, forecast is 60% chance of rain for this afternoon and tonight.

**NOTE**

*The times indicated in the timeline are approximate. The time of scenario events may be affected by operator response in the simulator or by the timeliness of Emergency Response Facility activation and actions.*

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**Event 1 Alert FA1-1 (FC-1 loss of fuel clad)**

TIME	Event	Cues/Indications	Expected Response
0800	Investigation of DIV II D/G failure	(CR-2007-00784)	OSM/CRS/STA will determine Tech Spec applicability. (TS 3.8.9 and 3.8.1.1) The OSM will make notification per procedure OSP-46. The crew will pursue the cause of the D/G failure.
≈ 0820	Control Rod Drop Rod 3637	Rise in reactor power Rising offgas pre-treat and main steam line radiation levels	Indications include a rise in Pre-treat, MSL radiation, and turbine building monitors.  Rising radiation levels to indicate clad damage. The OSM will direct chemistry to sample reactor coolant
	<b><u>Contingency Controller Inject</u></b> if the CRS or OSM direct a manual scram at any time during or after this event, stop the action with the following message: <b>"For the purpose of exercise progression control, do <u>not</u> insert a manual scram; perform a controlled shutdown using the applicable GOP."</b>	(A controller must be near the ATC operator and another near the CRS at the control rod drop event to inject this message if necessary)	The OSM will consult the EALs. The crew will implement AOP-0061 section 5.7 OSM/CRS/STA will call the reactor engineer to the control room.
0835	<b>Controller Inject to OSM</b> The OSM will receive a chemistry report from the controller that coolant sample results are 300	<b><u>Inject Message</u></b> <b>Controller will tell the OSM that a time compression is simulated for the sample</b>	The OSM/CRS/STA will review TS 3.4.8 action B TS LCO to isolate MSL in 12 hrs  Review TS 3.7.4 for offgas. The offgas pretreat

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TIME	Event	Cues/Indications	Expected Response
	$\mu$ Ci/gm dose equivalent I-131. Controller in the simulator will provide the cue to the OSM.	result For the purpose of the drill, a chemistry sample and analysis is complete and confirms TS limit is exceeded.	will be less than TS.
≈0835 to 0850 PI	<b>CLASSIFICATION</b> The Shift Manager will declare an Alert FA1-1 on FC1 loss of fuel clad barrier (coolant sample analysis of 300 $\mu$ Ci/gm dose equivalent I-131) IAW EIP-2-001, <i>Classification of Emergencies</i> .	<b>The 15-min. clock for the classification starts when the OSM receives the sample analysis report.</b>	The Shift Manager will declare an ALERT FA1-1. The Shift Manager, or designee, will request the communicator to report to the control room, complete the short notification message form, announce the Alert in the control room, make a plant announcement of the Alert and to activate all facilities, and complete the Alert checklist in EIP-2-002, <i>Classification Actions</i> .
≈0850 to 0905 PI	<b>NOTIFICATION</b> The communicator will transmit the short notification message form for Alert using ESP-COMM and activate the ERO paging system.	<b>The 15-min. clock for the notification starts at the Alert declaration time.</b>	The communicator will report to the simulator and implement the checklist of EIP-2-006, <i>Notifications</i> , to notify the state and local authorities using ESP-COMM. The Shift Manager will approve the short notification message. When directed, the communicator will activate the Emergency Response Organization using Dialogic paging system for an Alert.
≈ 0840 to 0900	The OSM/CRS/STA will make notifications per OSP-0046.		When notifications are made, the OSM will receive directions to start a controlled shutdown per GOP-002.
	The chemistry technician and TSC ENS Communicator will report to the simulator.		The TSC/CR Communicator will report to the simulator and assume the ENS notification function.
			The TSC ENS Communicator will assume ENS notification function and will relocate to the TSC

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TIME	Event	Cues/Indications	Expected Response
			when operational.
	The EOF, TSC, and OSC will man with minimum staffing and operability established within 45 minutes of the declaration.		The Shift Manager/RM/ED will transfer the Emergency Director (ED) functions to the ED in the TSC. Emergency declaration, corrective actions, personnel protection The OSC will assume tracking and accountability for teams dispatched.
	The JIC will man the alternate JIC.		The EOF will assume the Recovery Manager (RM) functions. State and local notification, dose assessment, and protective action recommendations (PAR) will be performed in the EOF.

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**Event 2 Site Area Emergency FS1-1 (FC1 and RC1)**

<b>TIME</b>	<b>Event</b>	<b>Cues/Indications</b>	<b>Expected Response</b>
<b>0940</b>	<p>A grid transient occurs and CNM-PIA, CNM-PIC, CCS-PIA, and NJS-SWGIA all trip.</p> <p>The reactor scrams on either manual initiation or level 3.</p> <p>Approximately 200 gpm RCS leakage will start in the DW from a crack at a weld on Recirc A loop after the reactor scram.</p>	P680 alarm and indication of trips	<p>Loss of CNM and FWS injection and level will lower.</p> <p>Emergency operating procedures will be entered when RPV water level lowers to less than 9.7 inches.</p>
<b>After 0940</b>	After CNM trips, Level 2 initiations – HPCS, RCIC, and containment isolations		<p>RCIC and HPCS will inject. HPCS will be secured or injection valve will auto close on level 8. RCIC will be capable of maintaining RPV level in the normal band.</p> <p>Radiation levels will rise in the RCIC room when the system starts due to the coolant activity.</p>
<b>0940-1000</b>	<p>RCIC will inject after auto or manual initiation and CRD is available.</p> <p>If DW temperature cannot be maintained below 145° F, EOP ENC 20 may be used to restore the available DW unit coolers.</p>		HPCS injection valve E22-MOVF004 will fail to re-open after it is overridden closed from the auto initiation.



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TIME	Event	Cues/Indications	Expected Response
≈0945-1000  PI	DW high pressure 1.68 psid will be reached  SAE FS1-1 (FCI loss of fuel clad and RCI loss of reactor coolant boundary) condition is met.	The SAE declaration clock starts when DW reaches 1.68 psid	The Emergency Director will declare a site area emergency (SAE) on FS1-1 (FCI loss of fuel clad and RCI loss of reactor coolant boundary). The RM will direct and approve the notifications. The ED will direct an owner controlled area evacuation. The protected area evacuation will be simulated. The OCA evacuation notification by a Security Officer will be simulated.  The ED will demonstrate decision making for the egress point and an assembly area as required for protective actions for plant personnel.
≈1000-1015  PI	NOTIFICATION The communicator (EOF) will transmit the short notification message form for SAE using ESP-COMM.	The 15-min. clock for the notification starts at the SAE declaration time.	The communicator will implement the checklist of EIP Notifications to notify the state and local authorities using ESP-COMM.
	Protected Area evacuation and accountability Simulated		The Security Coordinator in the TSC will verify accountability within 30 minutes of the declaration.
≈1030	The OSC team may attempt to reset and restore NPS SWG1A ACB14 and 15; however CNM A and C pumps cannot be restarted. NJS-SWG1A supply breaker will <u>not</u> reset.		CNM will <u>not</u> be restored.  NJS-ACB21 breaker may be restored to cross-tie NJS-SWG1A to NJS-SWG1B. After the bus is re-energized, the recirc valves B33-MOVF023A and MOVF067A will partially close using the control switches on P680. The will not go full closed.

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**Event 3 General Emergency FG1-1 (FC1 loss, RC1 loss and PC2 potential loss)**

TIME	Event	Cues/Indications	Expected Response
1118	The crack in the A Recirc loop propagates to a line break. DW temperature and pressure rises. RPV level lowers to TAF, RCIC cannot maintain level and will be lost after the RPV is depressurized.		RPV level will lower. Containment and Drywell PAMs start to rise after loss of adequate core cooling. The leak is a crack on the A Recirc suction line between the suction MOV and the pump. The leak cannot be isolated because of loss of power to the suction and discharge MOVs (NJS-SWG1A).
1125 to 1130	RPV water level will go to below TAF.  Emergency Depressurization occurs before level lowers to -186 inches.		RHR A injection valve will open and inject when pressure interlocks are cleared.  The seals fail on the drywell personnel airlock causing bypass leakage through the air lock seals to the containment atmosphere.
≈1135	Containment post-accident radiation monitors (PAM) RMS-RE16A and 16B and DW PAM RMS-RE20A and 20B readings rise.	DRMS and ERIS indication.	Indication of gap release and clad damage after loss of adequate core cooling.
≈ 1145	RPV level cannot be maintained above -186 inches and SAP containment flooding will be entered. This is a potential loss of containment.		After the SAPs are entered, E12-MOVF053B will be opened.  The simulator controller will make adjustments to the rate of injection to try to maintain a balance somewhere between -210 inches and TAF after the SAPs are entered.

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TIME	Event	Cues/Indications	Expected Response
≈1145-1200 PI	<b>CLASSIFICATION</b> The Emergency Director will declare a General Emergency on FG1-1, loss of any 2 fission product barriers and a potential loss of the third (loss – RC1 & FC1 and potential loss PC2). Entry into SAP containment flooding is the potential loss of containment PC2. If the crew does <u>not</u> enter the SAPs, a GE condition will be met when Containment post-accident radiation monitor(s) reads greater than 1E4 R/hour.	DRMS and ERIS indication. <b>15-min. clock starts when the SAPs are entered.</b>  <b>If SAPs are <u>not</u> entered, after the PAM setpoint is exceeded.</b>	The Emergency Director will upgrade to a General Emergency.
~ PI	The Recovery Manager will issue minimum PAR - Scenario 6. (Wind from 358 degrees, centerline sector J and adjacent sectors H and K)	<b>The 15-min. clock for the PAR starts after the GE is declared.</b>	The Recovery Manager will recommend PAR scenario 6 and direct the communicator to send the notification of GE and PAR.
≈ PI (2)	<b>NOTIFICATION</b> The communicator (EOF) will transmit the short notification message form for GE and PAR using ESP-COMM.	<b>15-min. clock notification of GE and PAR starts at the GE declaration time and PAR decision time.</b>	The communicator will transmit the SNMF  The Recovery Manager will complete the PAR verification checklist

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TIME	Event	Cues/Indications	Expected Response
			PAR scenario 6 is the minimum PAR to evacuate 2 mile radius (section 1) and 5 miles downwind (sections 4, 9, and 16). Shelter the 10 mile radius (sections 2, 3, 8, 5, 6, 7, 10, 11, 12, 13, 14, 15, 17, and 18) Evacuate schools, institutions, and recreation areas in the 5-mile radius.
≈1230 - 1245	Fuel Clad damage RMS-RE16A and 16B will reach approximately 1E4 R/hr	Rising radiation level on area monitors. PAMs and main plant exhaust.	Fuel clad damage will be simulated to increase after level lowers and stays below the top of active fuel.
1120 - 1300	Some ECCS injection valves fail to open on the initial open signal.  E12-MOVF042A or F053A will be opened after emergency depressurization and the recirc loop line break	Cannot open using control switches in the control room.	E12-MOVF042B and E12-MOVF042C fail to open. Failure mode is the pressure switch and interlock for low header pressure to allow opening.
			E21-MOVF005 will fail to open. bent valve stem causing binding
			E12-MOVF053B may be partially opened after the SAPs are entered to maintain level between -162 and -210 and then fully opened at approximately 1245.
			E22-MOVF004 was overridden closed after the initial loss of CNM and FWS.
≈1240 - 1245	Leak is isolated by closing B33-MOVF023A and B33-MOVF067A.		An OSC team successfully closes the MOVs by driving them closed from the breakers. B33-MOVF023A - NHS-MCC2A bkr 1D B33-MOVF067A - NHS-MCC2A bkr 5D
≈1245	E12-MOVF053B may be fully opened HPCS injection valve will be opened.		HPCS E22-MOVF004 will be opened manually by an OSC team.

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TIME	Event	Cues/Indications	Expected Response
	Radiation levels will stabilize in the containment and main plant exhaust after the core is covered.		A PAR upgrade is not expected. Weather conditions will be stable for the duration of the scenario and radiation release will not require a PAR beyond minimum PAR.
≈1330 – 1400	Place the Simulator in FREEZE (if all onsite and offsite objectives have been demonstrated)		The EOF EP controller will coordinate with LDEQ to ensure all offsite objectives have been demonstrated before terminating the exercise. LDEQ will verify by contact with controllers in the state and local EOCs.