Waterford 3 Steam Electric Station

Exercise Report - 2009-06-24

Final Report - Radiological Emergency Preparedness (REP) Program

2009-08-25

FEMA

FEMA

Exercise Report

Waterford 3 Steam Electric Station

Exercise Date: 2009-06-24

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U.S. DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REP Program

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1. Executive Summary

On June 24, 2009, 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 December 5, 2007. The qualifying emergency preparedness exercise was conducted on February 8, 1984. There have been seventeen evaluated exercises, including the exercise on June 24, 2009, 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 Plan Issues and no Areas 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. FEMAs 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 Agriculture
- U.S. Department of Commerce
- U.S. Department of Defense
- U.S. Department of Energy
- U.S. Department of Health and Human Services

- U.S. Department of Homeland Security/FEMA
- U.S. Department of Housing and Urban Development
- U.S. Department of the Interior
- U.S. Department of Transportation
- U.S. Department of Veterans Affairs
- U.S. Environmental Protection Agency
- U.S. Federal Communications Commission
- U.S. Food and Drug Administration
- U.S. Nuclear Regulatory Commission
- General Services Administration
- National Communications System.

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 June 24, 2009, 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 3 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 4 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 Corrective 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. Exercise Overview

This section contains data and basic information relevant to the June 24, 2009, 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
  - Louisiana Governor's Office of Homeland Security and Emergency Preparedness
  - Louisiana Department of Environmental Quality
  - Louisiana State Police
  - Louisiana Department of Health and Hospitals
  - Louisiana Department of Agriculture and Forestry
  - Louisiana Department of Corrections
  - Louisiana Department of Justice
  - Louisiana Department of Social Services
  - Louisiana Department of Transportation and Development
  - Louisiana Department of Wildlife and Fisheries
  - Louisiana Workforce Commission
- Risk Jurisdictions
  - St. Charles Parish Department of Homeland Security & Emergency Preparedness
  - St. Charles Parish Fire Department
  - St. Charles Sheriff Department
  - St. Charles Parish Hospital/Medical Services
  - St. Charles Parish School Board
  - St. Charles Public Works
  - St. John the Baptist Office of Homeland Security & Emergency Preparedness
  - St. John the Baptist Parish Fire Department
  - St. John the Baptist Parish Sheriff Department
  - St. John the Baptist School Services
  - St. John the Baptist Parish Public Works
- Private Jurisdictions
  - Entergy Operations, Inc.
  - WWL Radio 870-AM

3.3. Exercise Timeline

Table 1 presents the time at which key events and activities occured during the Waterford-3 Steam Electric Station exercise on June 24, 2009.

Table 1 - Exercise Timeline
DATE: 2009-06-24, 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	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Alert	0817	0823	0826	0826	0823	0825	0826
Site Area Emergency	1040	1054	1102	1102	1040	1052	1054
General Emergency	1255	1310	1256	1256	1255	1307	1310
Simulated Rad. Release Started	1241	1250	1243	1243	1251	1246	1247
Simulated Rad. Release Terminated	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Facility Declared Operational		0843	0840	1139	0940	0859	0854
Declaration of State of Emergency		1230				1055	0920
Exercise Terminated		1430		1418	1418	1420	1419
1st Protective Action Decision: Evacuate response areas A1, B1, C1, D1, A2, C2 and shelter all remaining response areas						1331	1331
1st Siren Activation						1340	1340
1st EAS or EBS Message						1342	1342
KI Administration Decision:		1325		1321		1340	1343

Table 1 - Exercise Timeline
DATE: 2009-06-24, SITE: Waterford 3 Steam Electric Station, LA

Emergency Classification Level or Event	Time Utility Declared	WWL
Unusual Event	N/A	
Alert	0817	
Site Area Emergency	1040	
General Emergency	1255	
Simulated Rad. Release Started	1241	
Simulated Rad. Release Terminated	N/A	
Facility Declared Operational		
Declaration of State of Emergency		
Exercise Terminated		
1st Protective Action Decision: Evacuate response areas A1, B1, C1, D1, A2, C2 and shelter all remaining response areas		
1st Siren Activation		
1st EAS or EBS Message		1342
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 June 24, 2009, 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 excercise 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
P - Planning Issue
N - Not Demonstrated

Table 2 - Summary of Exercise Evaluation

DATE: 2009-06-24 SITE: Waterford 3 Steam Electric Station, LA A: ARCA, D: Deficiency, M: Met, N: Not Demonstrated		GOHSEP EOC	LDEQ HQ	LDEQ EOF	W3 ENC	St. Charles EOC & T/ACP	St. Charles School Board	St. John the Baptist EOC & T/ACP	WWL
Emergency Operations Management									
Mobilization	1a1				M	M		M	
Facilities	1b1								
Direction and Control	1c1	M	M	M		M		M	
Communications Equipment	1d1	M	M	M	M	M		M	
Equip & Supplies to support operations	1e1				M	M		M	
Protective Action Decision Making									
Emergency Worker Exposure Control	2a1					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	
Implementation of KI decision	3b1					M		M	
Implementation of protective actions for special populations - EOCs	3c1								
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								
Field Teams obtain sufficient information	4a2								
Field Teams Manage Sample Collection Appropriately	4a3								
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		M	
Emergency information and instructions for the public and the media	5b1				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, ARCAs, and Planning 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 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, P = Planning Issue).

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

4.2.1. Louisiana Jurisdictions

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

Criterion 1.c.1:
During the Waterford 3 radiological emergency response exercise on June 24, 2009, personnel in leadership roles at the State Emergency Operations Center (SEOC) successfully provided command and control functions in accordance with the plans, procedures and extent of play agreement.

The Operations Manager (OM) led the response in the main room of the SEOC during the exercise. Under his direction, the SEOC staff notified 12 key Emergency Support Function (ESF) agencies to send representatives to the SEOC immediately after the Alert notification. Throughout the exercise, the OM held frequent briefings over the public address system to keep ESF representatives informed of the updated plant status and actions required by ESF personnel. He reminded ESF representatives to complete their checklists as new Emergency Classification Levels were declared and checked with them regularly to insure that this was being accomplished. The OM directed the actions of the Operations staff which included developing and amending the rolling Situation Report, communicating with outside agencies, coordinating with senior staff, and personally maintaining the Waterford 3 Nuclear Facility Event Implementing Procedures Checklist. The communications staff insured that all messages received from the utility, parishes and other parties were logged, numbered and distributed to appropriate staff. No conflicts in leadership were observed.

Two requests for resources came to the SEOC from the parishes during the exercise, and the OM handled them well.

A Unified Command Group (UCG), led by a designee from the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), met regularly in the Overwatch Room adjacent to the main room at the SEOC. The lead state agency representatives advised the UCG leader. The OM kept this group informed of events and response actions throughout the exercise. A Louisiana Department of Environmental Quality (LDEQ) representative and the utility's representative provided timely information to the UCG leader throughout the exercise. The UCG coordinated the response activities of the various state agencies, decided when to promulgate the Governor's Declaration of Emergency and determined when it was appropriate for the State Health Officer to issue an advisory regarding the ingestion of potassium iodide (KI) by emergency workers.

Criterion 1.d.1:

The Louisiana State Emergency Operations Center (SEOC) demonstrated that they had several means of communicating with various organizations.

The primary method of communicating with the Waterford 3 Steam Electric Station was a dedicated landline telephone and a facsimile (fax) machine. These two devices were demonstrated with no failures.

Communications with St. Charles and St. John the Baptist Parishes and other State organizations was achieved using 700/800 MHz radio systems. Demonstrations of this communications system were successful with no failures.

Within the SEOC and the Executive Overwatch, landline telephone was the primary method used to communicate with other response organizations and the different Headquarters locations. There were no failures reported.

Other communization methods available to the responders included WebEOC, email, and satellite telephone.

The State EOC also had backup communications equipment that could be dispatched to other Offsite Response Organizations in the event their own communications systems failed. The State had Mobile Command Posts that could supply landline telephone, teleconferencing capability, internet capability, and satellite telephones. These were not demonstrated, but available if needed.

There were no delays in the response activities because of communications failures.

Criterion 2.b.1:
During the Waterford 3 radiological emergency response exercise on June 24, 2009, State Emergency Operations Center personnel approved appropriate Protective Action Recommendations (PARs) based on available information regarding plant conditions, field monitoring data, dose projections and environmental conditions in accordance with the plans, procedures and extent of play agreement.

The Secretary's Designee (SEC) and the Technical Representative (TR) from the Louisiana Department of Environmental Quality (LDEQ) were located in the Overwatch room at the SEOC. Throughout the exercise, the SEC remained in contact with the accident assessment staff located at the Emergency Operations Facility (EOF). The accident assessment staff was responsible for developing the PARs based on dose

projections and field team data. The SEC approved all PARs.

The SEC routinely received an early heads-up from his EOF staff when the utility was considering a PAR, so that he could provide early input. At 1310, the SEOC received Notification Message #10 announcing the General Emergency (GE) classification level, and containing a PAR recommending evacuation of Protective Action Sections (PAS) A1, B1, C1, D1, A2, and C2 and sheltering of the remaining response areas in the 10 mile Emergency Planning Zone (EPZ). The SEC concurred with the utility's PAR. Message #11, received at 1429, added D2 to the PASs for evacuation due to a wind shift, and the SEC concurred in this PAR. The utility transmitted PARs to the offsite response organizations and their decision makers.

The SEOC staff provided a large display of the projected plume in both the main room and in the Overwatch room.

Criterion 2.b.2:
During the Waterford 3 radiological emergency response exercise on June 24, 2009, the State Health Officer (SHO) considered appropriate factors in making the Protective Action Decision (PAD) to authorize the administration of potassium iodide (KI) to Emergency Workers and institutionalized persons in the appropriate Protective Action Sections (PAS).

Except for the PAD to authorize the administration of KI, PADs are made at the Parish level in Louisiana.

The SHO from the Louisiana Department of Health and Hospitals (LDHH) was the designated authority to implement the PAD regarding the use of potassium iodide (KI). The State Emergency Operations Center (SEOC) received Message #9 at 1259 indicating that a radioactive release had begun at 1241. Messages #9 and #10, which was received at 1309, contained projected thyroid dose information. The SEC reviewed the projected thyroid doses contained in Messages #9 and #10 and determined that the doses justified the issuance of the KI advisory. After conferring with the Secretary's Designee (SEC) from the Louisiana Department of Environmental Quality (LDEQ) and his technical advisor, the SHO decided to issue a KI advisory.

The SHO, with the assistance of the SEC, completed and signed a pre-scripted message form for transmittal to the Parishes. The form provided for entering the details of the areas designated for KI use by EWs and institutionalized persons. The form was

completed at 1325 and transmitted to the Risk Parishes immediately thereafter.

The advisory stated that the LDHH authorized the administration of KI to State and local emergency workers who were working within 2 miles of Waterford-3 and that agencies affected by the advisory should seek the authorization of appropriate official(s) for administering KI to their emergency workers. LDHH also authorized the administration of KI to institutionalized individuals who could not be evacuated from the emergency planning zone (EPZ). LDHH recommended the following:
- 130 mg (1 tablet per day for 10 days) for all adults 18 years and older.
- 65 mg (1/2 tablet per day for 10 days) for all adults [sic] younger than 18 years old.
- Only those not allergic to iodine should take potassium iodide.
- Louisiana does not authorize administration of KI to the general population.

The SEC informed the Senior EOF Liaison (SEL) at the EOF that based on the SHO's advisory he authorized emergency workers to take KI.

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

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

4.2.1.2. Louisiana Department of Environmental Quality Headquarters

Criterion 1.c.1:
The Direction and Control (DC) function at the Louisiana Department of Environmental Quality (LDEQ) Headquarters was shared by the Headquarters Operations Officer (HOO), and the Senior EOF Liaison (SEL). The DC demonstration was initiated when the HOO received notification from Waterford 3 Steam Electric Station at 0826 that an ALERT had been declared at the plant.

The HOO immediately notified all personnel that deploy to the field or other response locations to report to the LDEQ Briefing Room. The HOO privately briefed the group leaders outside the Briefing Room, including the SEL, Technical Representative (TR),

and the Logistics Coordinator (LC).

Following the initial briefing, the lead persons returned to the Briefing Room and the Senior Officer took control of the response actions. He briefed the Initial Response Team (to be deployed to the Emergency Operations Facility (EOF) at the plant), the Secretary's Designee (to be deployed to the State Emergency Operations Center (SEOC), and Field Monitoring Teams (simulated).

The initial briefing by the SEL included bringing the Emergency Workers (EW) up to date on the status of the emergency and what their individual responsibilities were in relation to LDEQ's overall response.

The EWs were briefed on meteorological conditions including wind speed and direction and how it could impact the timing and direction of their deployment to respond to the emergency. He instructed them to carefully check their equipment prior to deployment and ensure its operability. He instructed them to get their dosimetry and KI and reminded them of reporting and turn back values (150 mR and 750 mR respectively).

At 0856, the Secretary's Designee and one other staff deployed to the SEOC and at 0915, Field Monitoring Teams were deployed (simulated). All other staff deployed at 0955. Prior to deployment, all EWs were instructed to place a survey meter on the dashboard of their vehicle to monitor the environment as they traveled to their destinations and to always practice the "as low as reasonably achievable" (ALARA) concept.

Criterion 1.d.1:
The Louisiana Department of Environmental Quality (LDEQ) Headquarters had several means of communication with Emergency Workers (EW) and other Response Organizations. The primary means of receiving emergency notification messages from the Waterford 3 Steam Electric Station was a dedicated landline telephone and a facsimile (fax) machine.

Commercial landline telephone was utilized to contact offsite response organizations. Offsite Response Organizations with whom LDEQ communicated included St. Charles Parish, St. John the Baptist Parish, the Waterford 3 Emergency Operations Facility (EOF), and the State Emergency Operations Center.

Field personnel were contacted using 700 and 800 MHz radio systems and personnel

deployed to the field used the radios to monitor activity related to the emergency as they traveled. The Senior Officer had a staff member initiate radio checks with deployed EWs on several occasions to verify that contact with them could be made. All radio checks were successful.

All means of communications were demonstrated and there were no failures. There were no response problems related to a communications failure.

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

a. MET: 1.c.1, 1.d.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

Criterion 1.c.1:
The Louisiana Department of Environmental Quality (LDEQ) Emergency Operations Facility (EOF) team was composed of several members which included the Senior EOF Liaison (SEL), Accident Assessment Coordinator (AAC), Dose Assessment Coordinator (DAC), and Logistics Coordinator (LC). The team leader was clearly identified as the SEL who was responsible for working with the utility, AAC and DAC to formulate Protective Action Recommendations (PARs). All team members were provided updated information by the SEL and AAC as new information became available. Requests for information from parish officials were addressed without undue delay. All PARs were discussed between the SEL and AAC and then with the utility to assure concurrence. The PARs were then provided to the LDEQ Secretary's Designee for approval before the SEL communicated them to the parish officials.

Criterion 1.d.1:
The LDEQ staff had several methods of communication available. The primary system for communication is the state wide trunk radio system. In addition, the LDEQ EOF team members were also supplied cell phones and pagers. The primary communication system worked well throughout the exercise though there were times

when team members used cell phones. It was noted that cell coverage was not always available. The lack of cell coverage was not a problem for communication as the primary radio system did not fail. All communication by radio and cell phone was clear and occurred without delay.

Criterion 2.b.1:
The LDEQ EOF team arrived at the EOF at 1118 and immediately began setting up and getting updates from utility counterparts. While the SEL and ACC received updates, the LC began contacting other members of the LDEQ response team to let them know that they had arrived at the EOF. By 1139, the team was operational and assumed control of the response from LDEQ Headquarters. All activities and communications were documented thoroughly by the LC who kept exceptional notes.

The LDEQ team worked closely with the utility to coordinate field team positions, which were simulated for this exercise, so that efforts were not duplicated. Information was shared readily between the utility accident assessment and the LDEQ EOF team. As conditions in the plant deteriorated, the AAC and SEOF Liaison worked to formulate PARs should they be necessary.

At 1243, a release was identified and dose projections based on utility field data were provided to the state. The LDEQ DAC struggled to obtain the information needed to run an independent assessment for several reasons, including incomplete dose assessment reports from the utility. In addition, utility calculations from field data were difficult to use as they did not provide total mixed release rate for the purpose of running a forward projection. The DAC attempted to convert the field team positions into useful coordinates in order to back-calculate from the utility field data. Unfortunately computer and printer malfunctions prevented the DAC from producing a report for quite some time. In absence of an independent assessment, the LDEQ AAC and SEL used utility field data to formulate PARs.

The LDEQ EOF team members were very resourceful in overcoming the challenges facing dose assessment. Challenges with producing meaningful dose assessment from utility field data impacted the ability to calculate turnback values for the state and parish emergency responders. The AAC overcame this challenge by accessing information from the utility and calculating the conversion factor by hand. In addition, the DAC also overcame several challenges with the computer and printer. When the computer in the EOF stopped working the DAC used the back-up laptop computer and began hand writing the dose calculations when the printer failed in order to provide reports to the

AAC.

At 1303, the utility and LDEQ SEOFL discussed PARs and concurred. The PAR was to evacuate a 2 mile radius around the plant and 5 miles in the downwind direction with instructions to shelter the remaining protective action sections in the Emergency Planning Zone (EPZ). This PAR was then provided to the LDEQ Secretary's Designee for approval. The Secretary's Designee provided official approval at 1307 at which time the SEOFL provided the PAR to the parish officials.

At 1310, simulated LDEQ field teams provided data (injected by the controller) to the DAC. This information was used for back-calculation, but with no forward projections, there was nothing to compare the results with. The LDEQ field data was compared with utility data, but did not compare very well. The DAC reviewed the input and realized that there was an error on the default entries of the dose code. This entry was corrected only to have the computer fail prior to printing. The DAC switched to the back-up computer and ran the projection again. This time the numbers seemed to match more closely. Plume progression maps were not plotted during the exercise.

There were several upgrades to the PAR during the exercise. The first upgrade was to recommend the authorization of potassium iodide (KI) for emergency workers within two miles of the utility. This PAR was based on utility projections from field data that showed a dose to the thyroid of 37 Rem at site boundary. LDEQ Field Monitoring Team (FMT) data later confirmed this calculation. A second PAR upgrade was made at 1359 with the addition of Protective Action Section (PAS) D2 based on a wind shift.

It was observed that there was a discrepancy between utility and state dose projections on the last dose projection calculation of the exercise. The difference was significant and though the exercise was terminated, the LDEQ AAC and DAC worked together to determine the cause of the problem. There was only one minor error in input selection and when corrected it did not have an impact on the dose projection outcome. After thorough review of the input used by the DAC, it was determined that the LDEQ DAC had used all the parameters provided by the utility. The LDEQ dose projections were a factor of ten greater then the utility dose projections, but this difference would not have warranted different PARs than the ones selected by the LDEQ AAC and SEL. The FEMA evaluation staff recommends that the state follow up on this concern and determine the cause of the discrepancy between the utility and state agency projections.

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

a. MET: 1.c.1, 1.d.1, 2.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

4.2.1.4. Waterford 3 Emergency News Center

Criterion 1.a.1:
The Entergy Emergency News Center (ENC) demonstrated the ability to alert, notify and mobilize personnel and activate facilities in a timely manner. The ENC is located at 142 Delaronde Street in Algiers.

This facility is normally occupied by approximately 45 Entergy employees. There was no pre-positioning other than the normal complement of personnel whose normal duty station was at the facility. During emergencies, Entergy personnel are joined at the facility by representatives of the Louisiana Department of Environmental Quality (LDEQ), Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), St. Charles Parish, and St. John the Baptist Parish.

All ENC staff members were notified by their respective agencies at the Alert Emergency Classification Level (ECL). At 0823, a fax from Waterford 3 Steam Electric Station (W 3) was received at the ENC notifying that an Alert was declared at 0817. Notification was initiated by the various agencies by pagers and/or the Voice Notification System or telephone. ENC personnel began arriving at 0918. Three key personnel are identified in the plan for minimum staffing in order for the ENC to be declared operational. Those three key personnel are the ENC Director, the ENC Office Manager, and the Technical Spokesperson. At 0920, the ENC Director announced that all key personnel were present, and at 0940 the ENC Director declared that all functional areas were fully staffed and the facility was fully operational.

At 0945, the ENC Director led a command staff briefing in the ENC Command Room to summarize the Alert Notification Message. Also, during this briefing the Technical Spokesperson stated the plant status and event occurrence at W 3. The first press

briefing was held at 1002. Subsequent press briefings were held approximately every hour. The news bulletins were released at 1017, 1100, and 1312. At 1050, notification was received by fax that a Site Area Emergency had been declared at 1040. At 1255, the ENC was notified that a General Emergency had been declared. All ECL changes were accomplished by fax with a dedicated telephone hotline available as a backup means of communication.

All ECL changes and other pertinent information were noted on a status board located in the ENC Command Room. The Assistant Technical Spokesperson kept in contact with W-3 and informed the ENC Director of plant status and upcoming notifications. The Media Monitoring Supervisor informed the ENC Director of rumors and trends. St. Charles Parish, St. John the Baptist Parish, LDEQ, and GOHSEP representatives informed the ENC Director of the status of their agency response.

Criterion 1.d.1:
Communications equipment was adequately demonstrated at the Waterford 3 Emergency News Center (ENC). At least two communications systems were available, both of which operated properly throughout the event. There were no communications failures. Communication links were established and maintained with appropriate locations and all communications capabilities were managed in support of emergency operations.

The primary communications system demonstrated in the Command Room of the ENC was the dedicated fax, with the dedicated telephone hotline as a backup means of communication. The dedicated telephone hotline is also used to verify faxed notifications. The Assistant Technical Spokesperson was on the dedicated telephone hotline with the Waterford 3 Emergency Operations Facility (EOF), the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP), Louisiana Department of Environmental Quality (LDEQ), St. John the Baptist Parish, and St Charles Parish throughout the exercise. Multiple redundancies were available for every system. Computer terminals were available for direct utility communications, for detailed analysis of activities related to the function of the power plant, and for use in e-mail communications with the utility.

Upon arrival at the ENC, the Assistant Technical Spokesperson conducted a communications check with each of these organizations. Commercial telephones were available for all agency representatives in the Command Room and were operationally checked by each representative upon arrival at the ENC. Commercial telephones were

available in each of the functional areas of the ENC including Rumor Control, Media Monitoring, and Media Briefing areas. Also, each agency representative carried a cell phone. A media work room was also available with 20 work stations equipped with telephones and computers.

Criterion 1.e.1:
Equipment, maps, displays and other supplies were sufficient to support emergency operations at the Waterford 3 Emergency News Center (ENC). The ENC is located in the Louisiana Power and Light building at 142 Delaronde Street in Algiers. Dosimetry and potassium iodide is not made available at the ENC due to its remote location from the Emergency Planning Zone (EPZ). The ENC is located approximately 25 miles from the plant.

The ENC has more than adequate work space, with an extra Media Work Room located on the first floor of the building. The ENC Command Room is located on the second floor, along with the Rumor Control and Media Monitoring Rooms. The Media Briefing Room is located on the fifth floor.

Multiple maps and displays were available in the Command Room, and in the Media Briefing room, which were utilized throughout the exercise to assist in decision making and to familiarize the participants with the current status or to explain technical aspects of the briefings. These included: 10-mile EPZ maps, an Emergency Classification Level (ECL) chart, an ENC sign-in board, and several white boards. Charts were maintained with the advent of each significant event. All rooms had appropriate forms for documentation, numerous telephones, office equipment and supplies, and sufficient lighting.

The Rumor Control operators were well equipped at computer terminals with resource materials necessary for quick reference and for answering questions from the public. Rumor Control staffing consisted of 12 customer service operators and the Rumor Control Supervisor. The Media Monitoring group was equally well supplied with resource materials, three television sets (monitoring WVUE Fox 8, WDSU NBC, and WWL CBS), a computer terminal for internet monitoring (CNN, News 12, Channel 4, MSNBC, and Fox News), and three AM/FM radios (monitoring WWL 870 AM and WLMG 101.9 FM).

The Media Briefing Room was equipped with a table to seat spokespersons from the Louisiana Department of Environmental Quality (LDEQ), Governor's Office of Homeland

Security and Emergency Preparedness (GOHSEP), St. Charles Parish, St. John the Baptist Parish, and Entergy. There were microphones located on the Media Briefing Room table for the agency representatives. There were also approximately twenty chairs available for media personnel seating. An additional twenty chairs could be made available for extra media seating, if needed. Also located behind the table at the front of the Media Briefing Room was a large projector screen. The projector was used to display maps, status information, and graphics. There was a fixed camera located at the back of the Media Briefing Room to record press briefings. There was also a portable camera available, and a computer with the capability for broadcasting the press briefings over the internet.

The additional Media Work Room located on the first floor is equipped with 17 computer stations and multiple telephones. A backup generator is located just outside the rear of the building. Parking space for media transmitter trucks was also located at the rear of the building. ENC parking is located on the street, and in a gated parking lot across the street from the ENC.

Criterion 5.b.1:
Shortly after activation of the ENC, the ENC Director held an internal briefing for key staff members in the Command Room. The briefing started at 0945 and was one of five held throughout the day, generally about 15 minutes before press briefings. The ENC Director and the Technical Spokesperson from the utility gave plant updates. Key staff members gathered around the Command Room table each gave an update, whether they had anything to report or not. St. Charles Parish Sheriff's Office, St. Charles Parish School Board, the Media Monitoring Team Leader (who also shared the Rumor Control updates) and the ENC Office Manager all gave updates at the first internal briefing. When spokespersons from Louisiana Department of Environmental Quality (LDEQ), Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP) and St. John the Baptist Parish Emergency Management arrived, they provided updates at the second internal briefing. Governmental Affairs and Off-Site Agency Coordination representatives also provided updates during the internal briefings throughout the day. The Governmental Affairs updates revolved around communication passed between the ENC and state and local political offices. The Off-Site Agency Coordination updates revolved around information passed between the ENC and local emergency management agencies. The internal briefings also covered press briefing agenda items and procedures. The internal briefings were productive as key ENC players shared all information about ENC staffing and situational status before each of the five press briefings.

The first press briefing was at 1002. The ENC Director served as moderator and explained the ground rules to the media present before introducing the panel of spokespersons. He gave a plant status update and described the Alert Emergency Classification Level and dispelled a rumor identified by Rumor Control concerning injuries at the plant. Panelists included the Technical Spokesperson, a St. Charles Parish School Board PIO (Public Information Officer), St. Charles Parish Sheriff's Office PIO, and a St. John the Baptist Parish Emergency Management PIO. As in the internal briefings, the Technical Spokesperson referred to a plant schematic on a video diagram to explain plant status. The ENC Director said the Alert ECL was pre-cautionary and the plant employees were assessing damage. The St. Charles and St. John the Baptist PIOs said their respective Emergency Operations Centers (EOC) had been activated, the parishes were in contact with one another and the plant and no protective action recommendations had been made. They instructed the public to tune into Emergency Alert System (EAS) radio station WWL 870 AM as well as local TV channels 6 and 8.

The second press briefing began at 1100 with plant status and Site Area Emergency ECL explanations by the ENC Director and Technical Spokesperson. The ENC Director advised residents to tune into WWL 870 AM and WLMG 101.9 FM EAS stations. He also gave the toll-free telephone number for those needing transportation. He instructed residents to review their Public Information Brochures. The LDEQ PIO said two field monitoring teams were en route and the GOHSEP PIO said her agency had activated its EOC and could provide additional resources to the parishes if necessary.

The third press briefing was at noon. The ENC Director indicated there was still no danger to the public and to monitor EAS stations. St. Charles and St. John the Baptist Parishes both reported Emergency Declarations but that no protective actions had been recommended. The GOHSEP PIO said her agency was working to meet parish requests for 16 school buses and monitoring equipment.

The fourth press briefing was conducted at 1310. The ENC Director said a General Emergency was declared at 1225 and explained the ECL required protective actions by the public. He instructed the public to listen to EAS stations and review Public Information Brochures. The St. Charles Parish Sheriff's Office PIO said officials were reviewing the protective action recommendations and urged residents to listen to EAS stations for any ensuring protective action decisions.

The fifth press briefing was held at 1340. St. Charles and St. John the Baptist Parishes

said to evacuate protective action sections A1, B1, C1, D1, A2 and C2 and for all remaining protective action sections to shelter-in-place. St. John the Baptist Parish PIO said the schools in A2 had evacuated to either Lutcher High School or the Baton Rouge River Center. Those schools include Emily C. Watkins Elementary and Lake Pontchartrain Elementary. The St. Charles Parish School Board PIO then went into detail on both evacuation and shelter-in-place instructions.

A sixth press briefing was scheduled but exercise play at the ENC terminated at 1418.

Media kits included maps, a fact sheet, a Public Information Brochure, radiation information, a plant schematic and contact information.

Media and public phone calls were handled by 12 Rumor Control operators who utilized computers and reference materials to answer questions. The Rumor Control staff consisted of customer service operators already at their normal job stations. The Rumor Control team covered about 30 calls from media and the public during the exercise, identifying a rumor of injuries at the utility. The rumor was resolved after the Rumor Control Team Leader routed it through the Media Monitoring Team Leader to the ENC Director.

The Media Monitoring team was equally well supplied with resource materials, three television sets (monitoring WVUE Fox 8, WDSU NBC, and WWL CBS), a computer terminal for internet monitoring (CNN, News 12, Channel 4, MSNBC, and Fox News), and three AM/FM radios (monitoring WWL 870 AM and WLMG 101.9 FM).

Entergy Operations, Inc. distributed three news releases. The first was released at 1017. The second and third were released at 1120 and 1325, respectively. All of the news releases concerned emergency classification level (ECL) declarations at Waterford 3 Steam Electric Station (W 3). The first news release was for the Alert declaration, the second for the Site Area Emergency, and the third for the General Emergency.

GOHSEP produced two news releases. The first, released at 1220, concerned the activation of the State Emergency Operations Center (SEOC) in response to events at W 3. The second, released at 1300, concerned the Governor's Declaration of a State of Emergency as a result of a potential environmental hazard at W 3. GOHSEP also released Proclamation No. XX BJ 2009, which declared a State of Emergency in the State of Louisiana as a result of damage at W 3.

St. Charles Parish released an Emergency Public Information Declaration of a State of Emergency in St. Charles Parish at 1055.

St. John the Baptist Parish released an Emergency Public Information Declaration of a State of Emergency in St. John the Baptist Parish at 1155.

St. John the Baptist Parish and St. Charles Parish released a combined Emergency Alert System (EAS) Message at 1340 to inform the public of protective actions to take concerning events at W 3. The EAS, which was not written at the ENC but was distributed there, called for the evacuation of protective action sections A1, B1, C1, D1, A2 and C2. All other sections were instructed to shelter-in-place. It also instructed parents not to try to pick up children at school or phone the school because school children had already been evacuated to reception centers. The EAS message contained both evacuation and shelter-in-place instructions. It also gave an Entergy toll-free telephone number for those needing assistance (special needs) to call.

Overall, the ENC demonstrated its ability to adequately provide emergency public information to the public in an accurate and efficient fashion.

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

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

Criterion 1.a.1:

The St. Charles Parish Emergency Operations Center (EOC) was mobilized in a timely manner. The initiating event that mobilized the EOC was a call from the Waterford 3 Control Room over the operational hot line, a dedicated communication circuit between Waterford 3 and the offsite response organizations. At 0825, the Waterford 3 control room informed the offsite response organizations of the declaration of an Alert Emergency Classification Level (ECL) declared at 0817 due to the impact of a tornado on plant structures. A written fax of the notification message form followed shortly afterward at 0828. Because the notification was made over the dedicated notification circuit, the St. Charles Parish Emergency Coordinators did not need to authenticate the call as allowed by the plan.

The EOC Director instructed the emergency coordinators to initiate an EOC activation at 0834. The method of notification of the emergency responders is a web-based auto dialer system that prompts them to dial in to the EOC telephone number for further instructions. This system performed 25 calls. Callbacks from responders began occurring at 0837. For those responders who did not reply to the automatic calls, the emergency coordinators initiated manual calls at 0846. All the key responders were notified by 0849.

Responders began arriving at the EOC at 0837. By 0859, sufficient responders were on station for the EOC Director to declare the EOC operational at 0859, 34 minutes after the initiating notification.

The dedicated operational hot line and fax machine provided updates and Emergency Classification Level changes to St. Charles Parish. The Site Area Emergency notification was recieved at 1052 and the General Emergency notification recieved at 1307. Additionally, the Waterford 3 Control Room or EOF faxed new notification message forms and provided hotline notifications whenever a critical emergency parameter change occurred such as stability class, wind direction, wind speed or projected offsite radiological doses. A total of 12 notification message forms were recieved at the St. Charles Parish EOC. None needed authentication since they were announced on the operational hot line.

Criterion 1.c.1:
The Emergency Operations Center (EOC) Director has the overall control of the St. Charles Parish EOC. However, for this exercise the Emergency Coordinator was the acting EOC Director. Immediately after the Alert notification, the Director instructed the communication’s center personnel to mobilize the EOC staff. Staff began arriving within

10 minutes and the EOC was declared operational at 0859 with the initial briefing.

Subsequent briefings were held approximately every thirty minutes and at every Emergency Classification Level (ECL) change, or other significant event. During the briefings the EOC Director instructed the EOC staff on the communications protocols to be followed. Throughout the exercise the Director remained focused and in command of the EOC. The EOC Director used good delegation of authority. Additionally, the staff engaged in productive discussions and planning for evacuation and sheltering decisions. There were a total of 13 EOC briefings conducted by the Director. These briefings focused on any changes in the plant conditions, weather, or status on the preparedness activites in progress by the EOC staff.

All decisions to evacuate and shelter in place were made after concurrence by the acting Parish President. The Director also remained in contact with the St. John the Baptist Parish EOC Director at every major protective action decision.

Criterion 1.d.1:

The Communications Room in the St. Charles Parish Emergency Operations Center (EOC) is equipped with several types of communication systems and adequate manpower to support an incident at Waterford 3. The primary communications systems available include a direct hotline with Waterford 3, multiple 800 MHz radios to communicate with law enforcement, fire departments, utilities, industries, and local governments. Secondary communications equipment included commercial telephones, 700 MHz State radios, conventional cell phones and a fax machine. In the event that the dedicated hotline to Waterford 3 failed, the staff could easily be contacted. The Communication Room is also equipped with dedicated lines to the schools within the parish. In addition, the Communications Room was equipped with an emergency weather radio and staff routinely monitored weather conditions and alerts via cable television.

During the exercise, all message traffic from Waterford 3 on the hotline was followed-up with fax communication. Situation updates and protective action decisions were coordinated with St. John the Baptist Parish EOC via commercial telephone. Additionally, field teams were able to communicate with the EOC by handheld 800 MHz radio to check on weather and plant conditions. There were no breakdowns or undue delays of the communication equipment during the exercise.

Criterion 1.e.1:

The St. Charles Parish Emergency Operations Center (EOC) is located underground with secured access to the facility. The facility is designed with the Operations Room adjacent to the Communications Room. The Operations Room is equipped with computer based video displays that allow all participants to view up-to-date information throughout the room. The room is also equipped with a smart board running EPA's CAMEO MARPLOT software which was used to track evacuation routes and access control points and traffic control points. The operations area is equipped with 16 workstations to support the emergency functions. Each workstation was equipped with a commercial telephone, a satellite phone, and adequate working space.

Other wall displays included two large maps with the designated parish evacuation areas. Smaller maps were available and updated with current weather and wind direction; these were portable and could easily be moved around the room. Other wall displays included a large parish map with evacuation routes marked, two large 5 and 10 mile Emergency Planning Zone (EPZ) maps with identifiers for reception centers, evacuations routes, access control points, traffic control points and special populations. A large whiteboard was used throughout the exercise to record events as they occurred. A recorder maintained the board during the exercise. Additionally, all messages were logged into WebEOC.

Shortly after the EOC was activated, thermoluminescent dosimeters (TLDs) were issued to each of the EOC staff members with 600 TLDs available to the emergency staff. Also available, but not used, due to area dosimetry, were 115 direct reading dosicards with a calibration due date of 5/2010. Inventory also included 200 0-200R CDV-742 dosimeters with calibration due 2/2010, and 200 0-5R Arrowtech 725 dosimeters with calibration due dates of 7/30/09. Other radiological equipment included eight Ludlum Model 3 survey meters with calibration dates of 5/11/2009, due 5/11/2010. Operational check on survey instruments was not demonstrated during this exercise. In addition, the EOC's radiological equipment also included 2 dosimeter chargers, batteries and 2016 tablets of potassium iodide (KI) with an expiration date of 8/2013.

The EOC radiological kits also included Individual Record Forms, KI Precaution Leaflet, KI Administration Forms, KI Medical Forms, and KI Medical Questionnaires which were all used for the exercise. Additionally, all equipment and supplies were well organized and ready to transport and distribute to emergency workers.

Criterion 2.a.1:

The St. Charles Parish Emergency Operations Center (EOC) staff demonstrated the ability to use a valid decision-making process for the protection of emergency workers. Although the scenario events and parameters did not afford an ability to demonstrate approval of dose limit extensions during the exercise, the parish radiological officer showed his knowledge of the authorities involved in extension of dose limits and announced these authorities to the EOC staff at several times during the exercise. He was aware of the emergency dose limit extensions related to protection of property (10 Rem total effective dose equivalent (TEDE), lifesaving and protection of large populations (25 Rem TEDE) as they existed in the St. Charles Parish Emergency Plan and Procedures. He was aware that dose limit extensions beyond the normal limits in the emergency plan (1 Rem or up to 5 Rem for the entire event) required the approval of the Parish President. He also stated his intention to consult with the state dose assessment staff in the emergency operations facility prior to any extension of dose limits.

At 1340, after receipt of the authorization letter from the State Health Officer for emergency workers to ingest potassium iodide (KI), the EOC Director announced the Parish President's concurrence and directed the EOC staff to have their emergency workers in the field ingest KI. This decision was announced promptly and workers were immediately directed to report to the KI issue point, receive and ingest KI. At 1346, after being advised by the state dose assessment staff that the isotopic mixture of the radioactive materials release necessitated use of a dosimeter correction factor, the Radiological Officer announced the new as-read dosimeter limits (635 mRem or up to 3150 mRem for the entire event) to the entire EOC staff and instructed the staff to relay these values to their emergency workers in the field.

Finally, after a shift in wind direction of the radioactive materials release occurred at 1359, the St. Charles Parish EOC staff recognized the impact of the wind shift on their emergency workers in the field and took prompt action to minimize its radiological consequences. The Radiological Officer directed his radiation protection technicians at the dosimetry issue point in Luling to relocate away from the plume to the resource receiving point further away from the plume. The Fire Services Officer recognized the need to relocate the staff of the Hahnville Fire Department out of the affected zone and directed them to relocate to the Luling Fire Department.

Criterion 2.b.2:

The St. Charles Parish President with input from the Emergency Operations Center Director make Protective Action Decisions (PAD) after considering appropriate factors

and coordination with St. John the Baptist Parish. Louisiana policy is not to issue potassium iodide (KI) to the general public.

Only one PAD was made by the decision makers during this exercise. The Parish President and EOC Director considered the protective action recommendation from the utility, the weather conditions, and coordination with the St. John the Baptist Parish prior to making the PAD that affected the Parish. The decision to evacuate protective action sections A1, B1, C1, D1, A2, and C2 and shelter in place the remaining protective action sections was made at 1331. The siren sounding was coordinated with St John the Baptist Parish and both sounded the sirens at 1340, and St. Charles Parish issued a joint emergency alert system message at 1342.

The State did make the decision to authorize the use of KI for emergency workers within two miles of the plant. After receipt of the authorization letter from the State Health Officer for emergency workers to ingest potassium iodide (KI), the EOC Director announced the Parish President's concurrence and directed the EOC staff to have their emergency workers in the field ingest KI. This decision was announced promptly and workers were immediately directed to report to the KI issue point, receive and ingest KI.

Criterion 2.c.1:
Special population groups in St. Charles Parish include school children, institutionalized persons in hospitals, nursing homes and the parish correctional center, as well as non-institutionalized individuals who are medically restricted or transportation dependent. The authority for protective action decision making for school children is the parish school system superintendent. The authority for protective action decision making for hospitals and nursing homes is the administrator of each individual facility. The authority for protective action decision making for the parish correctional center is the center administrator, or warden. The Parish President is the authority for protective action decision making for non-institutionalized special populations just as he or she is for the general population. For this exercise, no protective actions were implemented for special populations in advance of the same actions being implemented for the general population. This policy is in accordance with the St. Charles Parish Radiological Emergency Response Plan and Implementing Procedures.

The St. Charles Parish Office of Homeland Security and Emergency Preparedness maintains a current database of non-institutionalized special needs individuals for the entire parish as well as methods to notify them in the event of an emergency at Waterford 3. The Parish Emergency Operations Center (EOC) staff consulted this list

during the exercise and re-checked it as emergency and meteorological conditions changed. When the initial protective action decision was made to evacuate response areas A1, B1, C1, D1, A2 and C2, the Health/Medical Officer quickly determined the number of affected special needs individuals, both institutionalized and non-institutionalized, to be a total of 22, and provided this number to both the Transportation Officer and the Fire Services Officer.

Shortly after reporting to the EOC, the School Services Officer established contact with the school system superintendent and the school emergency services office to advise them of the emergency. He periodically updated these entities as the scenario progressed. He worked closely with the Transportation Officer to pre-plan for a contingency situation if the school superintendent elected to relocate school children early. When the initial protective action decision was made to evacuate protective action sections A1, B1, C1, D1, A2 and C2, the School Services Officer quickly determined that no schools were in these affected areas.

The Law Enforcement Officer at the EOC was a deputy with the St. Charles Parish Sheriff's Office and served as the liaison between the EOC and the parish law enforcement resources. At 0905, the Law Enforcement Officer contacted the parish correctional center and advised the Warden to perform the implementing procedure for the correctional center. The Law Enforcement Officer kept the warden updated periodically as scenario events progressed, including the need to possibly evacuate the correctional center if protective action decisions were revised to include evacuation of the response area in which it is located. The Law Enforcement Officer worked closely with the Radiological Officer and the Transportation Officer to plan for this contingency. The correctional center had pre-planned for correctional officers to serve as bus drivers for transportation of inmates to alternate facilities.

Criterion 3.a.1:

Emergency worker exposure control was excellently implemented at the St. Charles Parish Emergency Operations Center (EOC). The Radiological Officer (RO) was responsible for this criterion and he was assisted by a back-up RO and Radiation Protection Technicians (RPT) in the field. A second back-up RO was also on hand at the EOC and employed as a log keeper. The evaluator observed that a team of five technicians were called to the EOC, briefed and dispatched within an hour of EOC activation (at 0943). Prior to their dispatch, the radiation protection technicians distributed simulated thermoluminescent dosimeters (TLDs), medical questionnaire forms and dosimeter report forms to all EOC staff. The evaluator noted that all EOC

responders wore simulated TLDs on their bodies in the manner prescribed in the St. Charles Parish Radiological Emergency Response Plan and Procedures.

Upon arriving at the EOC at 0902, the RO quickly established exposure monitoring at the facility. The plan and procedures allow the use of group dosimetry at the EOC and this was practiced for the exercise. The RO kept an electronic dosimeter nearby in the operations room of the EOC and read it every half hour. He used a kitchen timer to ensure that the readings were precisely timed. Each half hour he would announce the dosimeter reading and instruct all EOC staff to enter the reading on their dosimeter report forms. Additionally, he instructed EOC staff to contact emergency workers in the field to prompt them to read and record their exposure reading, ensuring documentation of radiation exposure.

The RO demonstrated his knowledge of the radiation exposure limits specified in the plan and procedures, and he announced these to the EOC staff on more than one occasion during the exercise. He constantly reminded the EOC staff of the normal exposure limits and at least once announced the emergency limits and the authority for approving them. The normal limits are a daily (per shift) exposure limit of 1 Rem Total Effective Dose Equivalent (TEDE) or up to 5 Rem TEDE limit for the entire event. The emergency exposure limits are 10 Rem TEDE to protect valuable property and 25 Rem TEDE for life saving operations and protection of large populations. The exercise scenario did not provide an opportunity for the St. Charles Parish EOC to implement the emergency exposure limits, but the RO demonstrated a satisfactory knowledge of them.

The St. Charles Parish EOC is located within the 10 mile Emergency Planning Zone; however it is a hardened facility, located underground and with dedicated water, power and ventilation. Emergency workers and others reporting to the EOC do have the potential to be radiologically contaminated, and for this reason the radiation protection technicians set up a control point at the entrance to the parish courthouse with a survey meter and a pancake probe for detecting contamination on returning individuals. The evaluator noted this control point when exiting the EOC to observe a field demonstration; however, he did not have an opportunity to observe personnel survey procedures there.

The evaluator observed demonstration of a traffic control point in the field during the exercise. He interviewed three emergency workers. All workers correctly wore the required dosimetry and had the appropriate radiation exposure reporting forms. All three were knowledgeable of both the normal and emergency radiation exposure limits

and that special authorization was required for exceeding the normal limits.

The evaluator observed a radiological briefing provided by the radiation protection technicians at their briefing location at the West Bank Bridge Park. The briefing was conducted in accordance with the parish plan and procedures. Sufficient quantities of the appropriate dosimetry (simulated TLDs and electronic dosimeters) and documentation forms were present at that location.

The evaluator also noted that the RO satisfactorily demonstrated implementation of a dosimeter correction factor after he was informed of the correction factor by the state dose assessment staff. Rather than multiply the as-read dosimeter readings to obtain the true dose, the procedures apply the correction factor to the exposure limits to arrive at a new, lower limit. The RO announced these new limits to the EOC staff and directed them to notify the deployed emergency workers. When projected doses were announced for various distances from the reactor site, the RO converted these projected doses to dose rates and further applied these dose rates to the normal exposure limits to calculate stay times for emergency workers at various locations. He announced these stay times to the EOC responders for their use in resource planning. This practice was a beneficial aid to the EOC staff for planning for their workers' protection.

Criterion 3.b.1:
Potassium Iodide (KI) is available at St. Charles Parish Emergency Operation Center (EOC) for their emergency workers (EW) and institutionalized individuals. The EOC has on hand 2016 doses of 130 mg. KI tablets, expiration date 08/2013. Louisiana policy is not to issue KI to the general population.

The State Health Officer is responsible for authorizing the use of KI for EW and institutionalized individuals and for the communication of this decision to the Parish officials. St. Charles Parish Radiological Officer (RO) uses a medical questionnaire iodine sensitivity form to determine if any of their EW is allergic to shellfish or iodine prior to any of the EW obtaining KI for ingestion. The EW is advised that taking KI is voluntary and is advised of the possible side effects.

EWs are issued the medical questionnaire, KI administration form, KI precaution leaflet, and a KI issue record if the decision to ingest KI is made. At 1342, the decision for EWs to ingest KI was made for those within a two mile radius of the plant. This information was immediately radioed to their EW in the area. EW in the EOC interviewed had a

basic knowledge of procedures for ingestion and recording the use of KI.

Criterion 3.d.1:
Traffic and access control was adequately demonstrated at St. Charles Parish. The parish has pre-identified 24 access control points and 63 traffic control points that are listed in the plan and procedures. These pre-identified points are indicated on both hard copy and projected image maps displayed in the emergency operations center (EOC). The EOC responders consulted and used these pre-identified points during the exercise to quickly establish traffic and access control points. St. Charles Parish does not have responsibility for controlling river, rail or air traffic in the emergency planning zone during an emergency; however, the EOC has the capability of communicating with the external authorities who control such traffic.

Shortly after the declaration of the Site Area Emergency at 1040, Waterford 3 evacuated all non-essential site personnel to the Monsanto Business Park in Luling. At 1101, the Law Enforcement Officer in the EOC directed a sheriff's deputy to set up a traffic control point at Louisiana Route 18 at the Monsanto Business Park to facilitate this site evacuation. This was the location demonstrated for the evaluator. Other traffic and access control points were simulated to be established when the protective action decision was made to evacuate protective action sections A1, B1, C1, D1, A2 and C2 at 1331. These were simulated to be complete by 1342.

The evaluator interviewed two St. Charles Parish Department of Public Works employees and one St. Charles Parish Sheriff's Office deputy at the demonstrated traffic control point. All emergency workers interviewed were wearing the appropriate radiation dosimetry and were familiar with their radiological reading, reporting and documenting requirements. They were also aware of the location of the emergency worker decontamination station where they would report at the end of their shift.

The public works employees described that they would retrieve control point barricades from their storage shed that was two blocks away. They indicated that the shed contained approximately 100 such barricades and 200 traffic cones and that resources were identified for obtaining additional barricades if necessary.

The sheriff's deputy was very familiar with his assigned role in conducting traffic and access control. He was aware of his responsibility to restrict access to the evacuated area to individuals showing proper identification. He stated that he would request authorization from the EOC for access by individuals whose identification he was

unfamiliar with. He had a copy of the Law Enforcement Service implementing procedure in his patrol car. He did not know the locations of reception and care centers for the general population who were evacuating nor did he have maps for distribution to evacuating personnel; however, he indicated that he would request this information via radio from the EOC if it was not already available to him.

Criterion 3.d.2:
In the event there is an incident at Waterford 3, St. Charles Parish has adquate equipment and manpower to deal with any type of impediment that may obstruct a major evacuation route. The parish has numerous units of heavy equipment, some obtained as a result of hurricane cleanup efforts. The equipment includes grappler trucks, excavators, bulldozers and chainsaws. Between the Sheriff's Department, Public Works, Water Works and Park & Recreation, they have 60 employees to provided support for clearing impediments to evacuation routes if needed. In addition, the 911 communications center maintains a list of four local wrecker companies they call on a rotating basis when their services are needed. All police vehicles also carry cones and flares to assist in directing traffic as needed.

Criterion 5.a.1:
The following alert methods are utilized by St. Charles Parish Emergency Operations Center (EOC) staff to alert their population in the 10-mile emergency planning zone: fixed sirens, helicopters fitted with alerting devices, St. Charles Parish hot-line, telephone alerting system, local government access channel (channel 6), school board radios, US Coast Guard for notification of ships along the Mississippi river, and alert teams equipped with portable sirens and public address systems. The notification component of the Alert and Notification System (ANS) consist primarily of pre-scripted Emergency Alert System (EAS) messages faxed and telephoned to the primary EAS station (WWL) in New Orleans.

The St. Charles Parish President assisted by the EOC Director has the responsibility for activating the ANS in the Parish. They activate the system after coordination with St. John the Baptist Parish President and EOC staff. The sirens are activated from the EOC after coordination with St. John the Baptist Parish so they both sound the sirens at the same time. EAS messages are also coordinated between the two Parishes and St. Charles Parish faxes and telephones the EAS station with the agreed EAS message.

At 0843, the St. Charles Parish Public Information Officer (PIO) called the EAS station and placed them on stand by. At 1307, the EOC received a protective action

recommendation (PAR) from the Utility recommending that the Parishes evacuate protective action sections A1, B1, C1, D1, A2, C2, and shelter in place all remaining protective action sections. At 1315, the EOC Director and Parish President discussed the PAR. At 1320, they discussed the PAR with their EOC staff, at 1329 they discussed with St. John the Baptist Parish President and staff and at 1331, the decision by both Parishes was to agree with the Utility PAR. They agreed to sound sirens at 1340, and issue the correct EAS message at 1342. The PIO then had the EAS message faxed to the EAS station and also telephoned and read the message to them to be recorded and repeated every 10 minutes until updated or cancelled. The EAS message contained the Federal Emergency Management Agency requirements as set forth in the Federal Register Volume 66, Number 177, September 12, 2001.

Criterion 5.a.3:
Per the extent of play agreement St. John the Baptist Parish was to demonstrate one exception area. St. Charles Parish did not demonstrate an exception area however the following information was obtained by interview with the Parish President and Emergency Operations Center (EOC) Director. The 10-mile emergency planning zone is divided into four quadrants, two in each Parish. Both quadrants in St. Charles Parish are uninhabited, mostly marshland, and persons in those areas would be there for recreational purposes. The Parish would use two helicopters with loud speakers to fly over the areas and notify anyone that may be there to evacuate the area since there had been an emergency at the Waterford 3. The Parish has agreements with three helicopter companies to provide helicopters for this purpose.

The Parish also has procedures to use back up route alerting should they have a siren failure. During this exercise there was no controller injects stating a siren had failed. The Parish EOC Director advised they would utilize fire and Sheriff vehicles with loud speakers to notify the public in the area of a siren failure to leave the area since there was an emergency at Waterford 3.

Criterion 5.b.1:
St. Charles Parish had only one protective action decision therefore they only issued one Emergency Alert System (EAS) message. The EAS station had been notified to continue to repeat the one EAS message every 10 minutes until updated or cancelled. The Public Information Officer was prepared to issue additional EAS messages if required.

The Public Inquiry hotline (rumor control) is handled at the Emergency News Center.

The Parish monitored the EAS radio station and television station broadcasts for accuracy. The Parish did not issue any press releases from their Emergency Operations Center.

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

a. MET: 1.a.1, 1.c.1, 1.d.1, 1.e.1, 2.a.1, 2.b.2, 2.c.1, 3.a.1, 3.b.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. Charles Parish School Board

Criterion 3.a.1:

The St. Charles Parish EOC Director, acting on behalf of the Parish President, is responsible for dispatching emergency workers (EWs). For this exercise, a bus driver was dispatched out-of-sequence to evacuate students from the Eual J. Landry Middle School. In the St. Charles Parish EOC, the radiological technicians worked off their plans and procedures while preparing the EOC and responding to the needs of EWs for the protection against the risk of radiolgocal exposure. They conducted an inventory of dosimetry, potassium iodide (KI) and checked dosimeters in preparation for distribution.

After the Alert notification, the radiological technician moved to the receiving point, West Bank Bridge Park, to distribute dosimetry to the EWs. The EWs included public works personnel and the bus driver demonstrating the school evacuation. A thorough briefing was conducted which covered wearing an electronic dosimeter and a simulated thermoluminescent dosimeter (TLD). The radiological technician assisted the bus driver to properly complete all the necessary forms as required in the plans and procedures. The radiological technician also reminded the bus driver how to wear and read the dosimeters, and discussed the turnback value of 1. He also reminded all EWs to record initial readings and record readings again when departing from the West Bank Bridge Park to begin their mission. And lastly, the bus driver was reminded to record readings every 30 minutes for the duration of the event.

Through observation, the bus driver knew where the EW Decontamination Station was located, and also understood if he received any exposure he should report this to his supervisor. Additionally, he understood he would be directed to this location to be checked for contamination, and return his dosimetry and exposure card.

Criterion 3.c.2:
During the Alert, an out-of-sequence protective action for the schools was initiated. The objective for the demonstration was to mobilize a school bus and driver to the Eual J. Landry Middle School and simulate an evacuation for 106 students and 12 staff members. This was initiated by the EOC Director requesting the Transportation Officer to notify the bus driver and an escort through the Law Enforcement Officer. During an interview, the Transportation Coordinator verified the Parish transportation resources which include 130 buses, 130 drivers and 15 special needs buses. The communications room was equipped with a dedicated phone with direct lines programmed to all the schools located within the parish. In addition, all the parish buses are equipped with radios and are able to communicate with their dispatcher and the Emergency Operations Center (EOC). In the event an incident occurred at Waterford 3, the EOC staff had the ability to quickly contact school officials to implement protective actions. Additionally, the School's Emergency Coordinator had the St. Charles Parish Schools Emergency Response Plan for Fixed Nuclear Facility Accidents on hand.

At 0945, the School Services Officer contacted the Eual J. Landry Middle School Emergency Coordinator to implement the emergency plan, and requested mobilization of the bus and driver to the school. For this demonstration, the bus driver was first dispatched to the Landry School. At this location, the bus driver was given instruction to proceed to the West Bank Bridge Park to be briefed and pickup dosimetry. A thorough radiological briefing was conducted at this location. Sufficient quantities of electronic dosimeters, TLDs and documentation forms were distributed. After the briefing was conducted, the bus driver was assisted with recording his readings. In accordance with the extent of play, the bus driver was not directed to a Reception Center for this demonstration; however, was verbally provided the address and location of the Alario Reception Center and the EW decontamination centers. The driver was not given a map; however, was familiar with the locations, and wrote the addresses on his paperwork.

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

a. MET: 3.a.1, 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

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

Criterion 1.a.1:
The St. John the Baptist Parish Emergency Operations Center (EOC) adequately demonstrated effective procedures to alert, notify, and mobilize emergency personnel and activate facilities in a timely manner. Located at 1801 West Airline Highway, La Place, Louisiana, the EOC is a well equipped and spacious turn-key facility where the St. John the Baptist Sheriff's Department maintains a continuous dispatch operation and serves as the Parish 24 hour warning point.

The initial "Alert" notification from Waterford 3 was received at 0826 by a dispatcher via the Operational Hotline, followed by a facsimile (FAX) transmittal of the notification form verifying the information. The dispatcher received the FAX at 0832 and followed procedure by notifying the EOC Director and Deputy Director by telephone, and then issuing at 0837 the "All Call" pager notifications via the dispatcher's computer to the EOC staff. Further telephone notifications were made to the Parish Fire Departments. The EOC was declared operational at 0854 with all key staff positions occupied.

After the EOC activation, Waterford 3 provided voice notification and FAX verification of the Site Area Emergency (SAE) at 1054 and General Emergency (GE) Emergency Classification Levels at 1310. The EOC Communications Officer received and distributed these notifications, and all current information received was regularly updated on a large status board.

Criterion 1.c.1:
The St. John the Baptist Parish Emergency Operations Center (EOC) staff adequately demonstrated the ability of key personnel with functional roles to provide direction and control to that part of the overall response effort for which they were responsible. The EOC Director position was staffed by 0846 by the St John the Baptist Parish Emergency

Preparedness Director, with the Deputy Director serving as EOC Chief of Staff. The Parish President was readily available, being located in an office adjacent to the EOC. All EOC key staff positions were occupied by 0854.

The EOC Director maintained effective control over staff activities and ensured noise discipline so that the facility was calm and orderly at all times. The initial staff briefing was conducted at 0853, with briefings held at regular intervals or whenever plant conditions changed. There was effective coordination with Waterford 3, the State EOC, and St. Charles Parish, particularly when it became necessary to issue the Emergency Alert System (EAS) messages or activate the sirens. At 1310, Waterford 3 declared a General Emergency where upon there was effective coordination between the Parishes via the Parish President's Conference Call between the Parishes in approving the Protective Action Decision (PAD).

Criterion 1.d.1:
Communications for St. John the Baptist Parish is adjacent to the Emergency Operations Center (EOC) and is a well equipped and staffed area. They have communications on a local 800 MHz and state wide 700 MHz systems. These systems are used daily as are the other Parish radios.

These radios give the communication room the ability to talk to Fire, Police, Sheriff and Emergency Medical (EMS) throughout St. John the Baptist Parish, as well as the state. The Parish also has VHF and UHF radios available, that are used for Parish operations and to control the warning sirens. These warning sirens are tested the first Thursday of every month. The communications room is equipped with three types of telephones, land-lines, cell and satellite. The satellite phones are used for emergency communication with the State EOC and the Louisiana Department of Environmental Quality – Environmental Radiation Laboratory.

The primary means of communication between Waterford 3 and the communities is the dedicated Hot Line. This system connects both parishes with the state agencies and the plant. This allows for quick information sharing and confirmation of updates.

The communications room has the ability to monitor and record seven television stations and they also have the capability to monitor the weather using three different weather systems.

Also adjoining the EOC is the area used by the Plantation Volunteer District Radio Club

(PVDRC) who monitor the warning point and provide around the clock coverage of their equipment, if necessary.

A Message Tracker was assisted by two volunteers who ensured that all message traffic was handled without delay. A notification checklist was used to show what agencies were notified, when they were notified, when the EOC was activated, and at each emergency classification level change of status.

Criterion 1.e.1:
The St. John the Baptist Parish Emergency Operations Center (EOC) is equipped with two overhead projectors with screens and one wall that consists of a status board that lists protective action decisions, wind strength and direction, stability factors and release types. Next to the status board there is a diagram of the processes at Waterford 3. The EOC has two plume projection maps and an Emergency Notification Checklist. A wall size aerial photograph of the parish completes the supporting equipment.

A storage room, adjacent to the EOC, houses the dosimeters and potassium iodide (KI). All boxes have an inventory sheet and contents listing. The Radiological Officer pulled inventory from this room for issuing to responders and field workers.

Inventory of the dosimeters revealed a quantity of 40 Electronic Alerting Dosimeters (EAD), 200 0-5 R (ArrowTech 725), and 100 0-200 R (CDV-742). A sample of each type of dosimeter was visually inspected.

Inventoried survey meters included eight, 0-200 mR/hr Ludlum 3 with alpha, beta, and gamma detectors and ten, 0-20 mR/hr Johnson GM 110 with pancake probe; however, operational checks for the survey meters were not demonstrated during this exercise. Personnel protective equipment included Thermoluminescent Dosimeters (TLDs), 600 badges, personal gamma radiation monitors, eight Gamma RAE, and Canberra DOSIMAN individual electronic dosimeters (115 badges). Dates for scheduled recalibration are July, 2009 for the ArrowTech 725's and the CDV-742's. The Electronic Alerting Dosimeters (EAD) require recalibration in October, 2009 with the TLDs due in January, 2010. All dosimeters were labeled as required.

All equipment is rotated out and calibrated, using a Cesium-137 source, through the Governor's Office of Homeland Security and Emergency Preparedness.

The KI is stored with 14 tablets per pack and inventory shows 114 packs, equaling to

2016 tablets in storage. This supply of KI will expire in August 2013. The state does not permit issuance of KI to the public. The quantity of KI in stock is sufficient for the emergency workers in St. John the Baptist Parish.

There is a sufficient inventory of cones and barricades for Traffic Control Points (TCPs) within the parish. Equipment is carried in the trunk of Sheriff's Department vehicles with additional cones and barricades available through either the City or Parish Public Works Departments.

Criterion 2.a.1:
The St. John the Baptist Emergency Operations Center (EOC) Director and EOC staff successfully demonstrated the protective response options found in the St. John the Baptist Parish Standard Operating Procedure (SOP) Decision Making Attachment 7. The SOP was reviewed and discussed during the Alert Emergency Classification Level (ECL) in preparation for an elevated ECL.

The St. John the Baptist EOC Operations Staff Officer and the Radiological Officer (RO) reviewed the St. John the Baptist Parish Radiological Exposure Control SOP and discussed what protective actions would be implemented for emergency workers. Protective Action Guides (PAGs) for emergency workers are listed in Attachment 10 to the Radiological Exposure Control SOP. This attachment lists the various exposure limits at which an emergency worker may perform certain actions.

Attachment 11 to the Radiological Exposure Control SOP discusses the New Method Total Effective Dose Equivalent (TEDE) equivalent return values. The RO was observed contacting the Louisiana Department of Environmental Quality (LDEQ) for revised exposure limits.

The Radiological Exposure Control SOP, Attachment 7, lists the policy for consideration of potassium iodide (KI) distribution to emergency workers. The RO was observed referring to the SOP in preparation for the possible distribution of KI.

Upon notification to distribute KI to emergency workers within the 2-mile zone around Waterford 3, the EOC Director consulted with the RO and other EOC staff. The Public Works Officer and Law Enforcement (LE) Officer confirmed that St. John the Baptist Parish emergency workers were assisting St. Charles Parish LE at the traffic and access control points in the 2-mile zone. The RO implemented procedures to distribute KI to the LE Officer for distribution to the field officers.

Criterion 2.b.2:
The St. John the Baptist Parish Director of Homeland Security and Emergency Preparedness made the Protective Action Decision (PAD) during the exercise in conjunction with the recently elected Parish President.

The State of Louisiana policy is to not issue potassium iodide (KI) to the general population. During this exercise only one PAD was issued and this PAD was coordinated with St. Charles Parish. At 1331, both Parish Directors, St. John the Baptist and St. Charles Parish, agreed to evacuate areas A1, B1, C1, D1, A2, C2, and to shelter-in-place the remaining response areas. Both St. John the Baptist and St. Charles Parishes agreed to sound the warning sirens at 1340. St. Charles Parish released the Emergency Alert System (EAS) message for both parishes at 1342 following the sounding of the sirens.

Due to a radiological release that was in progress at the Waterford 3 Steam Electric Station, a PAD was developed based on the plant's recommendation.

Criterion 2.c.1:
The St. John the Baptist Parish Emergency Operations Center (EOC) successfully demonstrated the ability to plan and consider protective action decisions for special populations. The responsibility for such decision rests with the Parish President. The EOC Director for the Parish was delegated this authority for the exercise. He was assisted by the Health and Medical Officer, the School Services Officer, and the Law Enforcement Officer. These three special needs populations were effectively notified of the precautionary protective actions by St. John the Baptist EOC staff.

The Health and Medical Officer at the EOC contacted the hospitals and nursing homes in the parish at 0900 with the current Alert Emergency Classification Level (ECL). Patient census was verified at 0930. He notified the Transportation Officer of the required number of ambulances needed if an evacuation were ordered in accordance with guidelines in the EOC Standard Operating Procedure (SOP) Attachment 7 Decision Making.

The School Services Officer contacted the school Superintendent of the four schools where summer school programs were in session and local day care centers' representatives that an Alert ECL was in effect and discussed precautionary protective actions. He requested a count of the student population and transportation needs if

relocation was required. This information was provided to the Transportation Officer. The Superintendent and day care centers were notified as the ECL changed to Site Area Emergency and General Emergency.

The Law Enforcement Officer contacted the jail to determine the status and prison population and notified officials of the possibility of a protective action for the special population.

Criterion 3.a.1:
The St. John the Baptist Parish successfully implemented emergency worker exposure control during the exercise. The evaluator was able to determine the extent of knowledge of exposure levels through the use of interview of the Emergency Operations Center (EOC) Operations Staff Officer and observation of the Radiological Officer (RO).

The RO has primary responsibility for demonstrating this criterion and was observed reviewing Radiological Exposure Control Standard Operating Procedure (SOP) and EOC SOP Decision Making throughout the exercise. Upon activation of the EOC at 0826, the RO solicited the dosimeter needs of the various functions represented at the EOC. At 0906, the RO and assistant began inventorying and assembling dosimeter kits for distribution. At 0916, the RO distributed simulated Thermoluminescent Dosimeter (TLDs) to all EOC staff. The RO assumed responsibility for the required 30 minute dosimeter readings for the EOC. During the exercise it was observed that the RO and several other agency staff members issued reminders to field staff to read and record dosimeter readings using the proper forms found in Radiological Exposure Control SOP Attachment 4a every 30 minutes. The RO demonstrated basic knowledge and understanding of the radiation exposure limits prescribed in the SOP.

At 0928, it was observed that the RO notified the EOC Operations Staff Officer that the field survey indicated a dosimeter shortfall and would contact the appropriate state agency. Contact was made by phone and the use of WEB EOC to report a dosimeter shortfall. A verbal reply was received from the state at 0932 that the preferred method was WEB EOC and that if that was not available a fax or phone call would suffice. The RO confirmed with the Staff Officer that an entry had been made in WEB EOC. At 1025, the RO advised that the state had responded via phone call to the shortage of dosimeter request and would process through WEB EOC. At 1240, the state responded through WEB EOC to the request for additional dosimetery.

At 0932, the RO and assistant distributed calibrated dosimeters to the EOC staff

agencies for distribution to the field based on estimates found in SOP Attachment 2. Implementation procedures for General Emergency began at 1310. The RO called LDEQ for turn back values at 1313 and was advised to use values found in the last message until values could be calculated. At 1339 LDEQ contacted the RO with appropriate turn back values.

At 1340, the RO requested estimates from Law Enforcement (LE), Public Works, and Fire staff in the event the distribution of KI was ordered. At 1343, the EOC Director implemented the distribution of KI for field staff performing emergency functions within the 2-mile radius of the plant. At 1343, based on the personnel count from the LE and Public Works Officers, the RO issued KI to the LE Officer for field distribution.

Exercise terminated at 1419. RO requested individual dosimeter report forms and KI distribution forms be collected from all emergency workers.

Criterion 3.b.1:
It is the policy of the State of Louisiana not to issue potassium iodide (KI) to the general population. KI is made available to Emergency Workers (EW) and to special populations that are unable to evacuate.

The EW KI is maintained at the St. John the Baptist Parish Emergency Operations Center (EOC). The Radiological Officer (RO) advised there was sufficient KI available for the EW's stored at the EOC; however, the Department of Health and Hospitals (DHH) would have to deliver additional KI for special populations.

By procedure EW's are not initially issued KI when they are dispatched from the EOC. The decision to ingest KI is made by DHH. A message is then sent from the State EOC informing the parish of this decision. The Parish Director of Emergency Preparedness, who acts in behalf of the Parish President, has to agree upon the decision before the RO would have KI delivered to the EW's in the field.

The RO advised the parish has a KI Issued Form they use to maintain a record of who has been given KI and when it was ingested. The EW's are required to sign a KI Notification and Consent Form, that explains the reason for taking KI, the dosage and the time period which the KI should be taken, and lists any possible side effects of KI. The EW's are then given a KI Drug Facts Form and are required to sign an Iodine Sensitivity Questionnaire.

During the exercise the EOC received an order to ingest KI at 1343, but the affected areas were not located within St. John the Baptist Parishes response area. The RO advised his staff was prepared to administer KI should this area change.

Criterion 3.d.1:
St. John the Baptist Parish adequately demonstrated the establishment of appropriate traffic and access control and the provision of accurate instructions to traffic and access control personnel. The Site Area Emergency declaration of 1054 prompted the EOC Director to inform the staff to review their respective procedures and initiate any necessary actions. The EOC Law Enforcement representative from St. John the Baptist Parish Sheriff's Department established the Traffic Control Points via a telephone call to his Traffic Supervisors, who in turn coordinated the necessary activity on the roads with their personnel on duty. The Radiological Officer and Law Enforcement representative coordinated a dosimeter check at 1100 for all units in the field. Traffic Control Points are pre-identified within procedures included in the Emergency Response Plan, and were established within a two-mile radius of the Waterford 3 facility.

The field demonstration of a Traffic Control Point was accomplished via interview of a Sheriff's Department Traffic Supervisor and a Patrol Officer. All Sheriff's Department patrol officers are aware of their responsibilities for restricting and controlling access to affected areas and practice Traffic Control Points on a regular basis due to exercises and actual events associated with the chemical industry present in the area. The Traffic Supervisor maintains coordination with the Law Enforcement representative in the EOC for information regarding Decontamination Center locations, dosimeter readings, reception/registration center locations, and other radiological emergency related instruction for further communication to the patrol officers on duty. Maps identifying the location of the reception/registration centers would be given to the traffic control point officers when they picked up their dosimeters at the EOC.

Criterion 3.d.2:
St John the Baptist Parish adequately demonstrated the ability to identify and resolve impediments to evacuation. The St. John the Baptist Parish Sheriff's Office has the primary responsibility of Traffic and Access Control Points (T/ACPs) in the Parish during any event that could prompt an evacuation of the general population. All patrol vehicles are equipped with flares, reflective vests, and flashlights. Through cooperation with local chemical industry, a donated portable electronic sign is available to display to motorists current emergency information or instructions. Maps identifying T/ACP locations are available within the Sheriff's Department radiological emergency procedures for traffic

control, but were not observed during the interview. Further discussion revealed that maps are picked up at the EOC along with dosimeters and other supplies and instructions by the Traffic Supervisor for further distribution to deputies on duty.

The out-of-sequence demonstration was accomplished via interview with a Sheriff's Department Traffic Supervisor in the EOC parking lot. It is apparent that T/ACP procedures are well understood by the Sheriff's Deputies and are practiced regularly. Several wrecker services are kept on rotation and used for everyday incidents such as traffic accidents. Communication channels between local chemical industry, transportation companies, public safety agencies, and the dispatch center are exercised regularly for both drills and actual events. If additional resources such as barricades or heavy equipment such as bulldozers or cranes are needed, the Traffic Supervisor coordinates with the Law Enforcement, Public Works, and/or Transportation representatives in the EOC during activations or through the dispatch center under normal operating conditions to deploy additional Parish resources. As a last resort, Sheriff's Deputies may clear roadway impediments with push-bumper equipped patrol vehicles.

Criterion 5.a.1:
St. John the Baptist Parish utilizes the following systems to alert the public: a fixed siren system, telephone calls to certain facilities, field warning teams and a helicopter outfitted with a public address system.

At 1310, St. John the Baptist Parish was notified the Waterford 3 Steam Electric Station had declared a General Emergency. A Protective Action Recommendation (PAR) was developed to evacuate response areas A1, B1, C1, D1, A2, C2 and shelter in place all remaining protective action sections. Both St. John the Baptist and St. Charles Parishes Emergency Operations Centers (EOC) and their respective Public Information Officers (PIO) discussed the situation and agreed to make a Protective Action Decision (PAD) that would agree with the Waterford 3 PAR at 1331. Both parishes agreed to sound their warning sirens at 1340. The Parish Warning Officer(WO), simulated sounding the sirens by using the test mode. The PIO simultaneously faxed an Emergency Alert System (EAS) message to St. Charles Parish to forward to WWL EAS radio station at 1342 for broadcast every 10 minutes.

There were no problems noted during the transmission of this message. The EAS message contained all the required elements of the Federal Register notice and the FEMA Guidance Memos.

Criterion 5.a.3:
There are portions of St. John the Baptist Parish that contain standing water and have limited access. These areas are swampland and have no ability to support sirens. The inaccessible areas are alerted by use of a helicopter with a fitted sound system that allows them to broadcast warnings to any population that may be in one of these remote areas. The Emergency Operations Center (EOC) determines what areas require alerting during the Protective Action Decision (PAD) process.

A contracted helicopter company, MYU was dispatched to the local airport at 0903 and arrived at 0935. The sound system took approximately five minutes for one person to install and the route alerting could have begun immediately. St. John the Baptist Parish has three contracted helicopter companies that can be used, one primary and two backup. MYU is the primary service used.

Due to the increased number of people living across the road from the airport and the distance the sound system travels, the speakers were tested on the ground in an attempt to not upset or scare the public. The speakers were pointed away from the populated area and the alert message started. The sound was clear and loud. The script conforms to guidance and the message cycle takes 3 minutes.

The helicopter arrived and the alerting was completed in 42 minutes, under the required 45 minute time limit. The alert area flown was Zone A and flying of the route took exactly 30 minutes. The route was run in a series of legs that were flown with the assistance of a GPS that had the route preloaded. The pilot identified each leg of the route as we flew at an altitude of 500 feet at 60 mph.

Criterion 5.b.1:
St. John the Baptist Parish did not receive any additional Protective Action Recommendations (PAR) from the Waterford 3 Steam Electric Station; therefore, no additional instructions were issued. The parish monitored the following stations: WAFB, channel 9; WWL, channel 4; WDSU, channel 6; WVUE, channel 8; WGNO, channel 26; and cable channel 15, where emergency information can be posted if needed. The Emergency Alert System (EAS) radio station is monitored routinely.

The Public Information Officer (PIO) kept in contact with rumor control, by telephone for updates and any media briefing that were conducted at the Emergency News Center. All inquiries were handled at the front desk, located in the lobby of the Emergency

Operations Center by information supplied by the Parish PIO. These lines are not equipped to handle any other language other than English.

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

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

4.2.3. Private Jurisdictions

4.2.3.1. EAS Radio Station WWL

Criterion 5.a.1:
Activities associated with primary alerting and notification of the public were completed in a timely manner at radio station WWL in New Orleans, following the initial notification by St. Charles Parish and St. John the Baptist Parish EOCs by fax of an emergency situation. In accordance with the State and Parish plans and procedures, St. Charles Parish provides EAS notification to the primary EAS station on behalf of St. Charles and St. John the Baptist Parishes. Initial notification is by fax from St. Charles Parish EOC. The initial instructional message to the public included the elements required by current FEMA REP Guidance.

The primary Emergency Alert System (EAS) radio station for the Waterford 3 Emergency Planning Zone (EPZ) is WWL 870-AM in New Orleans. The WWL studios are located in Suite 800, at 400 Podras Street, New Orleans, LA. This is a 24-hour station which provides the EAS activation mechanism for eight additional broadcast outlets in the area, including its own FM affiliate.

The Control Room is staffed 24/7 by at least one technician which monitors the EAS equipment. The only telephone which rings audibly in the control room is the EAS message phone. In addition to the ring, a light flashes over the console and a message scrolls under the light. The EAS messages are received on a dedicated fax in the News

Room, which is adjacent to the control room. The Control Room technician alerted the News Room staff to the incoming EAS fax.

WWL is the Local Primary #1 (LP-1) station and the Primary Entry Point (PEP), (previously called President's Entry Point) station for southeast Louisiana. Federal law requires the 30 radio stations linked in the PEP network to take over programming during a major disaster or emergency to get the President's message out to the public. When WWL broadcasts an EAS message it is simulcast by WWL-FM 105.3, WWL AM 24/7 and WWL-HD 105.3, Digital Simulcast WWL-FM 24/7 which is relayed by WLMG 101.9 FM, Co LP-1, and all PEP stations, including: WWWL 1350 AM, WKBU 95.7 FM and WEZB 97.1 FM.

At 1334, a call was received in the Control Room from St. Charles EOC informing WWL that an EAS fax was being sent. At 1341, the Public Information Officer at St. Charles began reading the EAS message, which was simulated being broadcast live over the air. The message was completed at 1348. The message was recorded for rebroadcast after a 10 minute delay, as requested by the EAS message. At 1342, the joint fax was received from St. Charles EOC and St. John the Baptist EOC.
At 1353 the EAS fax was received from St. Charles EOC.

WWL participated in the national implementation of the new EAS system in 1997 by purchasing the digital technology, encoders and decoders, that enable them to record EAS messages for repeat broadcast. Since that date they have purchased additional hardware and software that has expanded their ability to record all such messages regardless of length. Through the automation of the transfer of information from State and local governments to broadcast stations and finally to the public, the public can be notified much faster and more efficiently. There is a built-in redundancy to ensure reception of emergency messages by the public.

Their current system functions in automatic or manual mode. Under the automatic mode, State and local governments may transmit emergency instructions to the public through radio, television and cable stations on a 24-hour basis without the broadcast industry staff's presence or intervention. All EAS messages contain a unique code imbedded in the EAS digital header signal. If the imbedded codes in the EAS equipment match the codes of the incoming message from the government office, the message will be aired automatically.

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

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
ACP	Access Control Point
ALARA	As Low As Reasonably Achievable
ANS	Alert Notification System
ARCA	Areas Requiring Corrective Action
DAC	Dose Assessment Coordinator
EAD	Electronic Alerting Dosimeters
EAS	Emergency Alert System
ECL	Emergency Classification Level
ENC	Emergency News Center
EOC	Emergency Operations Center
EOF	Emergency Operations Facility
EPA	Environmental Protection Agency
EPZ	Emergency Planning Zone
ESF	Emergency Support Function
EW	Emergency Workers
FEMA	Federal Emergency Management Agency
FMT	Field Monitoring Team
GE	General Emergency
GOHSEP	Governor's Office of Homeland Security and Emergency Preparedness
HOO	Headquarters Operations Officer
LC	Logistics Coordinator
LDEQ	Louisiana Department of Environmental Quality
LE	Law Enforcement
NRC	Nuclear Regulatory Commission
OM	Operations Manager
PAD	Protective Action Decision
PAR	Protective Action Recommendations
PAS	Protective Action Section
PEP	Primary Entry Point
PIO	Public Information Officer
PVDRC	Plantation Volunteer District Radio Club
RAC	Regional Assistance Committee
REP	Radiological Emergency Preparedness
RO	Radiological Officer
RPT	Radiation Protection Technicians
SAE	Site Area Emergency
SEC	Secretary Designee
SEL	Senior EOF Liaison
SEOC	State Emergency Operations Center
SHO	State Health Officer
SO	Senior Officer
SOP	Standard Operating Procedure

TCP	Traffic Control Point
TEDE	Total Effective Dose Equivalent
TLD	Thermo-Luminescent Dosimeter
TR	Technical Representative
UCG	Unified Command Group

APPENDIX 2

EXERCISE EVALUATORS AND TEAM LEADERS

DATE: 2009-06-24, SITE: Waterford 3 Steam Electric Station, LA

LOCATION	EVALUATOR	AGENCY
Governor's Office of Homeland Security and Emergency Preparedness	Ernie Boaze *James Hickey	ICF ICF
Louisiana Department of Environmental Quality Headquarters	Ernie Boaze	ICF
Louisiana Department of Environmental Quality EOF	*Nan Calhoun	DHS/FEMA
Waterford 3 Emergency News Center	*Bill Bischof Tim Pflieger	DHS/FEMA DHS/FEMA
St. Charles Parish Emergency Operations Center and Traffic/Access Control Point	Linda Gee *Al Lookabaugh Bill Maier	DHS/FEMA ICF NRC
St. Charles Parish School Board	Linda Gee	DHS/FEMA
St. John the Baptist Parish Emergency Operations Center and Traffic/Access Control Point	Bill George *Mike Goldsworthy Cherie Kittle Sam Williams	DHS/FEMA DHS-FEMA Dept. of Transportation FEMA Region 6
EAS Radio Station WWL	*Carl McCoy	ICF
* Team Leader		

APPENDIX 3

Waterford-3 SES
Extent of Play
2009

Revision 6
5/18/09

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

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

Extent of Play

ARCAs None

EVALUATION AREA 1: EMERGENCY OPERATIONS MANAGEMENT

Sub-element 1.c - Direction and Control

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

Locations

State EOC, LDEQ HQ, LDEQ EOF, St. Charles Parish EOC, St. John the Baptist 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, ENC, St. Charles Parish EOC, St. John the Baptist 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

ENC, St. Charles Parish EOC & T/ACP, St. John the Baptist Parish EOC & T/ACP

Extent of Play

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

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

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

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

Extent of Play

Special facilities include schools, hospitals, nursing homes, and jails located within the 10-mile EPZ. Lists of these facilities are identified in Parish procedures.

KI can be considered as an option for those special facilities (excluding schools) whose populations are not able to evacuate immediately.

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.

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

St. Charles Parish EOC & T/ACP, St. Charles Parish School Board, St. John the Baptist Parish EOC & T/ACP

Extent of Play

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.

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.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 is maintained. (NUREG-0654, J.10.e)

Locations

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

Extent of Play

If the scenario does not warrant a discussion on the administration of KI to emergency workers and institutionalized individuals, then the criteria shall be accomplished through an interview with the 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

St. Charles Parish School Board

Extent of Play

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.

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.

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

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

St. Charles Parish T/ACP, St. John the Baptist Parish T/ACP

Extent of Play

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

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

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.

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)

Locations

St. Charles Parish T/ACP, St. John the Baptist Parish T/ACP

Extent of Play

Controller interject may be used to initiate the demonstration for this criterion, and this activity may be conducted out-of-sequence.

Resources to assist with the removal of impediments are identified in Parish procedures.

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 5: EMERGENCY NOTIFICATION & PUBLIC INFORMATION

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

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

Locations

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

Extent of Play

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

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

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

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

Extent of Play

One St. John 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.

The demonstration of this element may be performed prior to the actual scenario event sequence with the permission of the evaluator.

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

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

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 4

STATE OF LOUISIANA

OFFSITE SCENARIO

FOR

WATERFORD 3 STEAM ELECTRIC STATION

June 24, 2009

Participating Organizations

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

Narrative Summary

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 Office of 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

The sequence of events hypothesized in this exercise package is provided to test the integrated emergency response capability of organizations established to protect the public should an actual emergency occur. In order to achieve a sequence of events that will mobilize these emergency organizations in fulfillment of the objectives of this exercise, the scenario must contain incredible plant situations, unlikely equipment failures and failure sequences, and improbable operator actions. It is stressed that offsite personnel (e.g. the public) should not be misled into believing that an event causing the radiological consequences postulated by this scenario could occur. The following is a summary of these events:

A. Initial Conditions

The plant is operating at 100% power for the past 450 days and is toward the end of core life. RCS Boron is 180 ppm. BAMT 'A' is at 5850 ppm. BAMT 'B' is at 5725 ppm. ESI is +0.03. Steam Generator #1 has a tube leak of 1.5 gpd. The 'AB' Bus is aligned to the 'B' side. Safety Index is 10.0. Protected Train is 'A'. The Operations Spotlight issues are (will be taken from actual Operations turnover data). Approximately 100-200 gallons of PMU addition will be required to maintain 100% power over the next 12 hours. 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.

OP-901-521, Severe Weather and Flooding subsection E1 has been implemented and is complete to step 8.0. Flooding is not anticipated on the Nuclear Plant Island at this time. Currently there is no precipitation. Waste Tank 'A' is on recirc due high suspended solids.

B. Summary of Events

At 07:55, the exercise will commence.

At 08:05, wind speed increases significantly, and at 08:10 a tornado strikes in the area of the Turbine Building causing structural damage to the southwest exterior portion of the Turbine Building. The Outside Watch notifies the Control Room that a tornado has damaged the Turbine Building.

Activation of the TSC at the backup location is not an objective of this Exercise. If the Control Room Envelop is still in the recirc mode, then a contingency cue card will be issued to bring the Control Room out of isolate to allow normal staffing of the TSC. The SM/EC declares an ALERT based on EP-001-001, Recognition and Classification of Emergency Conditions Initiating Condition (IC) HA6, EAL #2, “Natural and destructive phenomena affecting the plant VITAL AREA” EP-001-020, Alert is implemented. The emergency condition is announced to station personnel. The Onsite (TSC & OSC), Nearsite (EOF), and Offsite (ENC) Emergency Organizations are mobilized. The Corporate Emergency Center (CEC) is mobilized and staffed. State and local government agencies, Waterford 1 & 2 and the NRC are notified. There are no Protective Action Recommendations (PARs) required at this time.

At 08:35 Annunciator CP-36, Cabinet ‘L’, Window L-3, WASTE TANKS ROOM SUMP LEVEL HI is received in the Control Room. The Control Room should refer to Annunciator Response Procedure and dispatch an NAO to investigate the problem with the Waste Management System. The NAO observes local indication on the Waste Management Panel that Waste Tank ‘A’ level is decreasing and the in service Waste Tank ‘B’ is increasing. The NAO enters the Waste Tank Pump Room to investigate the problem with the waste tank. Upon entering Waste Tank Pump ‘A’ room, he observes a leak on the outlet flange of Waste Tank Pump ‘A’. Water is running onto the floor and into the sump. The pump should be secured and Radiation Protection actions implemented to mitigate the spread of contamination. Preparation should be made to repair the leaking pipe flange.

At 09:05, the "B" Turbine Building Component Cooling Water (TCCW) Pump will trip, causing the backup TCCW pump to start. This will not pose a serious problem at this time. When the loss of power on the "B" side occurs, later in the scenario, the loss of TCCW will cause the instrument air and station air compressors to heat up if the "A" TCCW

pump has not been restored to service or potable water hooked up to air compressors.

At 09:40, Annunciator CP-2, Cabinet H, Window L-5, REACTOR PWR CUTBACK SINGLE CHANNEL TROUBLE is received. I & C personnel should be notified to troubleshoot the Reactor Power Cutback System. Once it is determined that the Cutback System is not functional, the Control Room personnel should refer to OP-004-015, Reactor Power Cutback System. Loss of Turbine Trip and Loss of Load trip should be enabled.

At 09:55, annunciator CP-1, Cabinet E, Window B-3, Turbine Thrust Bearing Excessive Wear alarms. The Control Room staff should obtain maintenance/engineering assistance and determine the alarm is due to an annunciator card failure.

At 10:35, a generator Excitation system failure results in a Main Generator trip. On the trip the 'B' OCB is slow to open, Offsite Power is lost, the Reactor trips, Startup Transformer 'A' Motor Operated Disconnect opens on Sudden Pressure relay action due to voltage spike. Both Emergency Diesel Generators start, but the 'A' EDG trips on Generator Differential and the 'B' EDG trips on Overspeed. This results in a Station Blackout. After approximately fifteen minutes the EC or EOF Director, declares a Site Area Emergency based on Emergency Plan Implementing Procedure EP-001-001, Recognition and Classification of Emergency Conditions, SS1, "Loss of all offsite power and loss of all onsite AC power to essential busses, EAL #1." There are no PARs required for this declaration. 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 personnel in the Protected Area will evacuate to the station parking lots and a small number of pre-designated personnel will evacuate to the selected offsite assembly area.

If not already performed, transfer of responsibilities for command and control, offsite does assessment and communications from the TSC to the EOF will be initiated.

A Nuclear Auxiliary Operator should be dispatched to investigate the 'A' and 'B' EDGs. The NAO will find that EDG 'A' tripped on Generator Differential and will be unavailable for the duration of the drill. Once it is recognized that an overspeed trip has occurred on the 'B' EDG, then the overspeed trip should be reset and the diesel restarted to power up the 'B' side safety bus.

At approximately 11:25, an RCS leak occurs at approximately 60 gpm.

At approximately 11:45, EFW Pump 'A/B' trips on overspeed due to the trip lever arm being out of adjustment. The trip lever may be reset by a mechanical repair team or the NAO.

At approximately 12:10, a large break Loss of Coolant Accident is initiated releasing radioactive primary coolant into the Containment.

At approximately 12:40, Containment penetration #23 fails, releasing radioactivity into the annulus. As annulus pressure increases, the Shield Building Ventilation System will cycle between recirculation and exhaust to control the annulus at a negative pressure. This results in a release to the atmosphere via the plant stack.

When the Containment failure is identified, the EOF Director declares a General Emergency based on Emergency Plan Implementing Procedure EP-001-001, Recognition and Classification of Emergency Conditions, FG1 (EAL's FCB4/FCB1, RCB1/RCB3 and CNB4/CNB6), "Loss of ANY two Barriers AND Loss or Potential Loss of Third barrier " OR, AG1, EAL's #2 or #3, "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". The minimum Protective Action Recommendation (PAR) at a General Emergency is for evacuating Protective Response Areas A1, B1, C1, D1 (2 - mile radius) and A2 and C2 (5 miles downwind) and sheltering all remaining protective response areas.

At 13:10, the 'B' Component Cooling Water pump trips on overcurrent due to faulty phase 'C' relay that is repairable. The 'AB' Component Cooling Water Pump should be aligned to replace the 'B' CCW Pump or Emergency Diesel Generator 'B' will eventually trip due to overheating.

At 13:15 the wind direction changes and is now coming from 55 degrees. Due to the wind shift, the PARs will change to evacuating Protective Response Areas A1, B1, C1, D1 (2 - mile radius) and A2, C2 and D2 (5 miles downwind) and sheltering all remaining protective response areas. State and local government agencies, Waterford 1&2 and the NRC are notified.

When, in the opinion of the Lead Controller, the exercise objectives have been demonstrated and continuing the exercise will provide no additional benefit, the exercise will be terminated. The Lead Controller will coordinate the termination of the exercise with the State Controllers to ensure ample opportunity has been provided to demonstrate the offsite objectives. When the exercise is terminated, area critiques will begin.

METEOROLOGICAL SCENARIO OUTLINE AND DATA

The meteorological scenario selected for the Waterford 3 SES June Evaluated Exercise has been prepared to meet the overall objectives of the drill.

The meteorological scenario assumes the following:

- At 8:45, due to a tornado condition, wind from southeast (140 degrees) at approximately 40 miles per hour at the meteorological towers and moderately unstable meteorological conditions (Stability Class B) until 9:05.

- At 10:00, the wind is from the southeast (140 degrees) at 6.7 miles per hour and slightly stable meteorological conditions (Stability Class E).

- At 13:15, the wind shifts from the southeast (55 degrees) at 6.7 miles per hour and slightly stable meteorological conditions (Stability Class E) for the remainder of the exercise.

The choice of this meteorology provides for the desirable measurable levels of radiation downwind to meet offsite objectives.

The meteorological data presented in this section includes:

1. Simulated general forecasts from the National Weather Service

2. Simulated computer printouts from the plant's meteorological system.