



River Bend Station

After Action Report/ Improvement Plan

Drill Date - September 02, 2010

Radiological Emergency Preparedness (REP) Program



FEMA

Published September 30, 2010

This page is intentionally blank.

River Bend Station After Action Report/Improvement Plan

Published September 30, 2010

Contents

Executive Summary	3
Section 1: Exercise Overview	4
1.1 Exercise Details	4
1.2 Exercise Planning Team Leadership	4
1.3 Participating Organizations	5
Section 2: Exercise Design Summary	6
2.1 Exercise Purpose and Design	6
2.2 Exercise Objectives, Capabilities and Activities	6
2.3 Scenario Summary	6
Section 3: Analysis of Capabilities	7
3.1 Drill Evaluation and Results	7
3.2 Summary Results of Drill Evaluation	7
3.3 Criteria Evaluation Summaries	9
3.3.1 Support Jurisdictions	9
3.3.1.1 Our Lady of the Lake Regional Hospital	9
3.3.2 Private Organizations	9
3.3.2.1 Acadian Ambulance Service	9
Section 4: Conclusion	10
Appendix A: Drill Evaluators and Team Leaders	11
Appendix B: Acronyms and Abbreviations	12
Appendix C: Exercise Plan	13

This page is intentionally blank.

EXECUTIVE SUMMARY

On September 2, 2010, an out-of-sequence Medical Services drill was conducted for the River Bend Station (RBS), located near St. Francisville, Louisiana. Personnel from the U.S. Department of Homeland Security/Federal Emergency Management Agency (DHS/FEMA) Region VI, evaluated all activities. The purpose of the drill was to assess the level of preparedness of local responders to react to a simulated radiological emergency at River Bend Station. The previous medical drill at this site was conducted on December 10, 2008. The previous plume and ingestion exercise was conducted on June 8-9, 2010.

Personnel from the State of Louisiana, River Bend Station, Our Lady of the Lake Regional Medical Center and Acadian Ambulance Service participated in the drill. Cooperation and teamwork of all the participants was evident during the drill and DHS/FEMA wishes to acknowledge these efforts.

This report contains the final evaluation of the out-of-sequence drill. The participants demonstrated knowledge of their emergency response plans and procedures and adequately demonstrated them. There were no Deficiencies and no Areas Requiring Corrective Action (ARCAs) identified during the drill.

SECTION 1: EXERCISE OVERVIEW

1.1 Exercise Details

Exercise Name

River Bend Station

Type of Exercise

Drill

Exercise Date

September 02, 2010

Program

Department of Homeland Security/FEMA Radiological Emergency Preparedness Program

Scenario Type

Radiological Emergency

1.2 Exercise Planning Team Leadership

Lisa Hammond

RAC Chair

FEMA Region VI

Technological Hazards Branch Chief

800 N. Loop 288

Denton, Texas, 76209

940-898-5199

lisa.hammond@dhs.gov

Elsa Lopez

Lead Planner

FEMA Region VI

Technical Hazards Program Specialist

800 N. Loop 288

Denton, Texas, 76209
940-898-5308
elsa.lopez@dhs.gov

Cheryl Chubb
State Planner
Louisiana Department of Environmental Quality
Environmental Scientist
602 N. Fifth Street
Baton Rouge, Louisiana, 70802
225-219-3626
cheryl.chubb@la.gov

1.3 Participating Organizations

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

Support Jurisdictions

Acadian Ambulance Service

Our Lady of the Lake Regional Medical Center

Private Organizations

River Bend Station

SECTION 2: EXERCISE DESIGN SUMMARY

2.1 Exercise Purpose and Design

The DHS/FEMA Region VI Office evaluated the drill on September 2, 2010 to assess the capabilities of local emergency preparedness organizations in implementing their Radiological Emergency Response Plans and Procedures to protect the public health and safety during a radiological emergency involving River Bend Station (RBS). The purpose of this report is to represent the results and findings on the performance of the offsite response organizations during a simulated radiological emergency.

2.2 Exercise Objectives, Capabilities and Activities

Exercise objectives and identified Capabilities/REP Criteria selected to be exercised are discussed in the Exercise Plan (EXPLAN), Appendix C.

2.3 Scenario Summary

The drill scenario was developed to evaluate the response of drill participants to an incident requiring evacuation of the public from the Louisiana portion of the 10-mile Emergency Planning Zone surrounding the River Bend Station. The drill scenario provided for the evaluation of the Our Lady of the Lake Regional Medical Center and Acadian Ambulance Service's ability of transportation and treatment of a contaminated injured individual.

SECTION 3: ANALYSIS OF CAPABILITIES

3.1 Drill Evaluation and Results

Contained in this section are the results and findings of the evaluation of all jurisdictions and functional entities that participated in the September 2, 2010 drill to test the offsite emergency response capabilities of state and local governments in the 10-mile EPZ surrounding the River Bend Station.

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

3.2 Summary Results of Drill Evaluation

The matrix presented in Table 3.1, on the following page, represents the status of all exercise evaluation area criteria that were scheduled for demonstration during this exercise by all participating jurisdictions and functional entities. Exercise criteria are listed by number and the demonstration status is indicated by the use of the following letters:

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

D - Deficiency assessed

A - ARCA(s) assessed or unresolved ARCA(s) from prior exercise(s)

N - Not Demonstrated (Reason explained in Subsection 4.2)

Table 3.1 - Summary of Drill Evaluation

DATE: 2010-09-02 SITE: River Bend Station, LA M: Met, A: ARCA, D: Deficiency, P: Plan Issue, N: Not Demonstrated		AAS	OOL
Emergency Operations Management			
Mobilization	1a1		
Facilities	1b1		
Direction and Control	1c1		
Communications Equipment	1d1		
Equip & Supplies to support operations	1e1	M	M
Protective Action Decision Making			
Emergency Worker Exposure Control	2a1		
Radiological Assessment and PARs	2b1		
Decisions for the Plume Phase -PADs	2b2		
PADs for protection of special populations	2c1		
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
Implementation of KI decision	3b1		
Implementation of protective actions for special populations - EOCs	3c1		
Implementation of protective actions for Schools	3c2		
Implementation of traffic and access control	3d1		
Impediments to evacuation are identified and resolved	3d2		
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		
Activation of the prompt alert and notification system - Fast Breaker	5a2		
Activation of the prompt alert and notification system - Exception areas	5a3		
Emergency information and instructions for the public and the media	5b1		
Support Operations/Facilities			
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	M	M

3.3 Criteria Evaluation Summaries

3.3.1 Support Jurisdictions

3.3.1.1 Our Lady of the Lake Regional Hospital

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

3.3.2 Private Organizations

3.3.2.1 Acadian Ambulance Service

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

SECTION 4: CONCLUSION

Based on the results of the drill, the offsite radiological emergency response plans and preparedness for the State of Louisiana and the affected local jurisdictions are deemed adequate to provide reasonable assurance that appropriate measures can be taken to protect the health and safety of the public in the event of a radiological emergency. Therefore, 44 CFR Part 350 approval of the offsite radiological emergency response plans and preparedness for the State of Louisiana site-specific to River Bend Station will remain in effect.

APPENDIX A: DRILL EVALUATORS AND TEAM LEADERS

DATE: 2010-09-02, SITE: River Bend Station, LA

LOCATION	EVALUATOR	AGENCY
Our Lady of the Lake Regional Hospital	Bill Bischof Elsa Lopez *Tim Pflieger	DHS/FEMA DHS/FEMA DHS/FEMA
Acadian Ambulance Service	*Linda Gee	DHS/FEMA
* Team Leader		

APPENDIX B: ACRONYMS AND ABBREVIATIONS

Acronym	Meaning
ARCA	Areas Requiring Corrective Action
DHS/FEMA	Department of Homeland Security/Federal Emergency Management Agency
DLR	Dosimeter of Legal Record
EPZ	Emergency Planning Zone
EXPLAN	Exercise Plan
KI	Potassium Iodide
OLOL	Our Lady of the Lake Regional Medical Center
ORO	Offsite Response Organization
PIC	Pocket Ion Chamber
PPE	Personal Protective Equipment
RBS	River Bend Station
REA	Radiation Emergency Area
REP	Radiological Emergency Preparedness
RP	Radiation Protection Technician
RSO	Radiation Safety Officer

APPENDIX C: EXERCISE PLAN

RADIOLOGICAL EMERGENCY MEDICAL DRILL SCENARIO

FOR

RIVER BEND STATION

OUR LADY OF THE LAKE REGIONAL MEDICAL CENTER

AND

ACADIAN AMBULANCE SERVICE

RDRL-EP-10MS1DRIL

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

I PURPOSE

This simulated radiation medical emergency is being conducted in order to exercise the emergency medical response at River Bend Station and the secondary medical support facility, Our Lady of the Lake Regional Medical Center and Acadian Ambulance Service. The basic objective is to assess the ability of the plant staff to respond effectively to a radiation medical emergency within the plant and to test the ability of hospital and ambulance emergency service to handle contaminated and injured patients.

II PROPOSED SCHEDULE

DATE:	September 2, 2010
TIME:	6:30 AM (Start time at River Bend Station)
LOCATIONS:	River Bend Station & Our Lady of the Lake Regional Medical Center
INJURY/ILLNESS:	Fall victim conscious and bleeding

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

III EVALUATION AREAS AND EXTENT-OF-PLAY-OFFSITE

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 operation. (NUREG-0654, H.7, 10; J.10.a, b, e J.11; K.3.a)

Locations

Our Lady of the Lake Regional Medical Center and Acadian Ambulance Service

Extent of Play

The ambulance crew should be knowledgeable on how to acquire dosimetry kits and potassium iodide (KI) during a declared emergency. The ambulance crew will discuss the method of obtaining dosimetry kits and KI from the parish when an emergency has been declared at the nuclear power plant. The discussion can be accomplished by interview with the evaluator. In accordance with the scenario for this evaluation, the utility will provide necessary dosimetry to the ambulance crew.

“Correction-on-the-spot” will be applicable for this demonstration.

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

Our Lady of the Lake Regional Medical Center and Acadian Ambulance Service

Extent of Play

Dosimeters and a simulated DLR (dosimeter of legal record) will be issued to participating ambulance crew members by River Bend Station plant personnel. Hospital personnel will be issued dosimeters and DLRs at the hospital. Ambulance crew members will be prepared to discuss the method by which they would acquire dosimetry kits from the ambulance in the event of a declared emergency.

“Correction-on-the-spot” will be applicable for this demonstration.

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

EVALUATION AREA 6: SUPPORT OPERATION/FACILITIES

Sub-element 6.d--Transportation and Treatment of Contaminated Injured individuals

Criterion 6.d.1: The facility/ORO has the appropriate space, adequate resources, and trained personnel to provide transport, monitoring, decontamination, and medical services to contaminated injured individuals. (NUREG-0654, F.2; H.10; K.5.a, b; L.1, 4)

Locations

Our Lady of the Lake Regional Medical Center and Acadian Ambulance Service

Extent of Play

The ambulance service will pre-stage at the River Bend Training Center to facilitate a security check prior to the drill for entrance into the protected area. The ambulance will pick up the victim inside the protected area. Removal of victim's clothing will be simulated.

At the hospital, decontamination will be demonstrated to the evaluators using methods contained in the hospital procedure. These methods could include soap and water, wipes, or tape. Intrusive bioassay samples will be simulated. No actual surgical procedures, X-ray, drawing of blood samples, etc. will be conducted.

"Correction-on-the-spot" will be applicable for this demonstration.

Onsite Objectives

1. Demonstrate the use of emergency teams - onsite first aid (medical).
2. Demonstrate the capability to communicate with all appropriate emergency personnel at facilities and in the field.

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:

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

Preparedness, Training and Exercises. Acceptable locations/activities for “on-the-spot-correction” are clearly indicated in the extent of play portion under each criterion.

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

EXERCISE CONTROLLERS/EVALUATORS

Norman Tison	Control Room	2789
John Standridge	Plant site (Radiological response)	721-0887
Fred Hurst	Plant site (First Aid Team)/Ambulance	324-6020
Gil Cosnett	Our Lady of the Lake Regional Medical Center	1-856-261-5760

EXERCISE OBSERVERS

Cheryl Chubb	Hospital
Greg Gothard	Hospital
Ji Wiley	Ambulance

ONSITE PHONE NUMBERS

Shift Manager	2776 --OSM/Communicator Console 2789
RP	2771

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

NARRATIVE SCENARIO

Approximate Time:

0630

Location:

65' Level, Radwaste Building

Description:

An individual investigating radiation alarms in the Radwaste Building near Phase Separator Tank TK-6B slips, and falls while climbing on maintenance scaffolding. During the fall, he hits a sharp object and is injured and contaminated with spilled resins and water. The individual will be found on the floor by a co-worker, conscious, and bleeding slightly from a leg wound. The individual will be carried from the contaminated area by the co-worker in an attempt to seek help at the RCA control point. The individual, however, collapses prior to reaching the RCA control point. The control room is then called for assistance.

Expected actions:

When contacted, the operations shift manager should implement the steps of ADM-0060, First Responder Emergencies. The First Responders should be contacted and RP support requested.

The first aid team responding to the call should perform an assessment of the patient's condition and treat any life-threatening injuries. Based on the individual's condition and vital signs, the responding First Responders should make the decision to transport without decontamination. The control room should be contacted to arrange for ambulance and hospital support based on ADM-0060.

Radiation protection should monitor radiological exposures for both the responders and the patient. Contamination controls which do not impact care of the patient should be employed. Consideration should also be given to the path the patient took from the original accident scene.

While awaiting ambulance arrival, the first aid team should perform the necessary actions to prepare the patient for transport. Assistance should be requested for patient transfer and the Primary Access Point (PAP) should be informed to prepare for ambulance arrival. RP should assist in planning the patient move to the ambulance pick up point.

Upon arrival of the ambulance, a turnover of patient medical and radiological conditions should be provided to the ambulance personnel. RP should arrange for two technicians to provide radiological coverage for the patient and medical personnel while in route and at the hospital.

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

The onsite portion of the drill will be evaluated by Emergency Planning and Training department personnel. The individual will be transported to the hospital where FEMA will observe hospital activities in accordance with the stated objectives.

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

Pre-Staging:

The ambulance will be pre-staged near River Bend Station to help ensure expedited entry into the security area. This will allow for an arrival time at Our Lady of the Lake Regional Medical Center at approximately 8:15 AM.

Scenario Timeline

0700 Ambulance enters River Bend Station

0735 Ambulance departs site

0815 Ambulance arrives at Our Lady of the Lake Regional Medical Center

0930 Drill Terminated

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

CONTROLLER MESSAGE

Message: **ACCIDENT SCENE-CONTROLLER**

Number:-# 2

Time: 0630

//

THIS IS A DRILL

CONTROLLER: Call Control Room ask for OSM EXT. 2299

//

Report of finding the victim; First Call

This is (state your name)

(Victim's name)- has fallen and requires medical help. He is currently located in the 123" T-tunnel near the RCA control point. He was injured in the Radwaste Building near Phase Separator Tank TK-6B. He is conscious and bleeding from a leg wound. He may be contaminated.

NOTE: **Second Call** should be made by First Responders on status of victim and request for ambulance.

Victim is conscious; bleeding slightly from a leg wound.

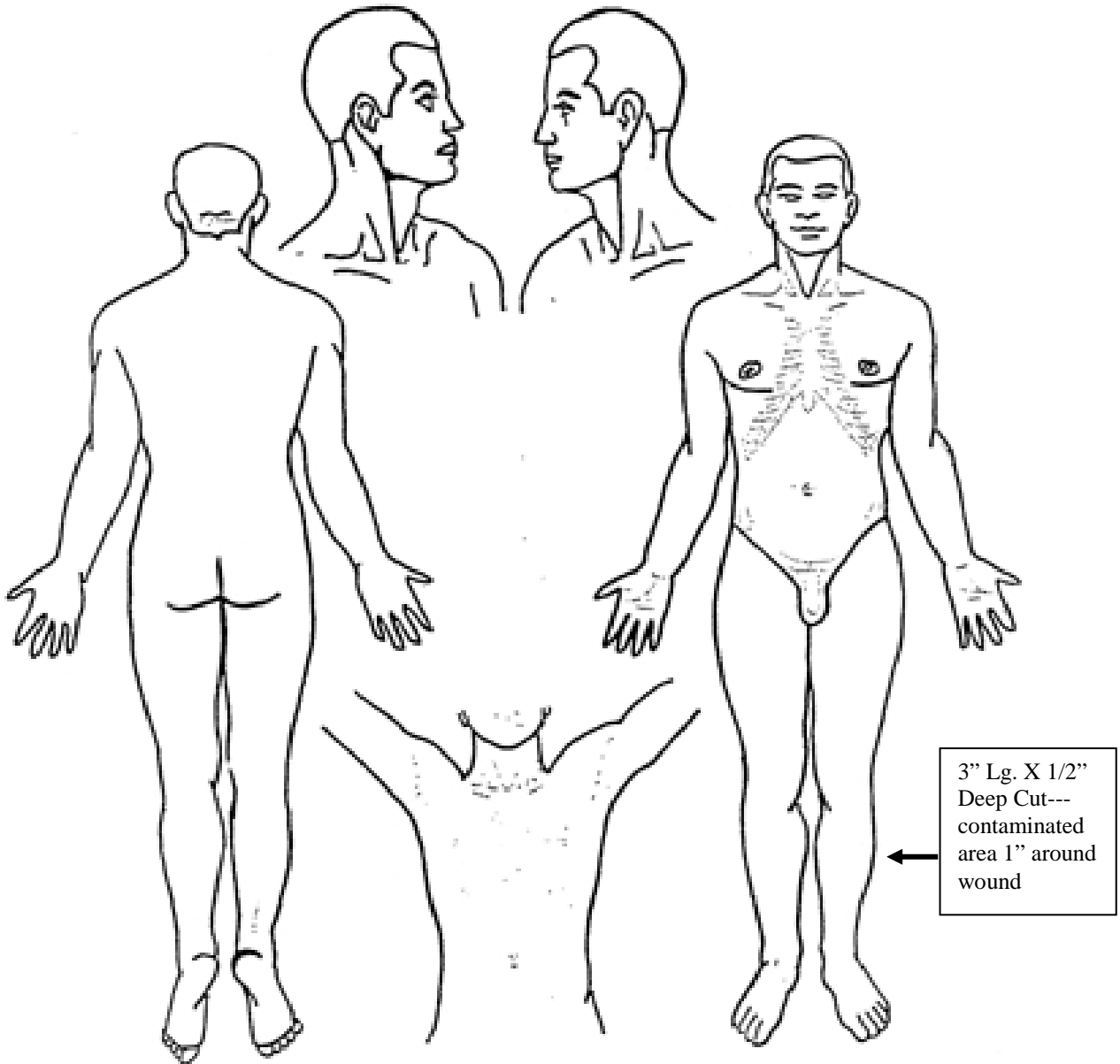
//

THIS IS A DRILL

//

RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

ANATOMICAL DIAGRAM



RIVER BEND STATION
2010 MEDICAL EMERGENCY RESPONSE EVALUATED DRILL
EVALUATION AREAS AND EXTENT-OF-PLAY (EOP) AGREEMENT & ONSITE OBJECTIVES

ATTENTION

THERE WILL BE AN ONSITE
MEDICAL DRILL TODAY

9/2/10

ACADIAN AMBULANCE SERVICE
WILL BE ONSITE

This page is intentionally blank.