

# ANNEX J

## ESF 10: HAZARDOUS MATERIALS & RADIOLOGICAL

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### **PROMULGATION STATEMENT**

Transmitted herewith is the ESF –10: Hazardous Materials & Radiological Annex to the Caddo Parish Emergency Operations Plan (EOP). This annex supersedes any previous Annex promulgated for this purpose. It provides a framework in which Caddo Parish and its political subdivisions can plan and perform their respective functions during an emergency when EOC activation is necessary.

This annex is in accordance with existing federal, state, and local statutes and understandings of the various departments/agencies involved. It has been concurred by the Caddo Parish Sheriff’s Office of Homeland Security and Emergency Preparedness (OHSEP), Louisiana Governor’s Office of Homeland Security and Emergency Preparedness and the Federal Emergency Management Agency. All recipients of this annex are requested to advise Caddo Parish OHSEP as to changes that might result in its improvement or increase its usefulness.

This annex will be annually reviewed by the Caddo Parish OHSEP Deputy Director.

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# ESF-10: Oil and Hazardous Materials Response

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## **I. PURPOSE AND SCOPE**

To coordinate the response of personnel and equipment to the scene of an incident in Caddo Parish involving hazardous materials. The purpose of such coordination is to control and minimize the potential catastrophic effects or threat to the health and safety of the public. This is achieved by using the resources of local, state and federal government as well as that of industry – separately, or in combination – dependent on the magnitude of the incident.

## **II. SITUATIONS AND ASSUMPTIONS**

### **A. Situation**

1. Many substances, which fall in the hazardous materials category, are being used, manufactured, or stored in or transported across Caddo and Bossier Parishes on a daily basis. Although the possibility exists that hazardous materials accidents at industrial sites could adversely affect the public, the greatest danger to the public is presented by the transportation of hazardous materials.
2. A hazardous material is any substance or material in a quantity or form that may be harmful or injurious to humans, domestic animals, wildlife, economic crops, or property, when released into the environment. Hazardous materials are classified in this annex as:
  - a. Chemical: Toxic, corrosive, or injurious substances because of inherent chemical properties.
  - b. Biological: Micro-organisms or associated products which may cause disease in humans, animals or economic crops and includes pathogenic wastes from medical institutions, slaughterhouses, poultry processing plants, and the like.
  - c. Radiological: Any radioactive substance emitting ionizing radiation at a level to produce a health hazard.
  - d. Explosive: Material capable of releasing energy with blast effect in a split second upon activation. The released energy usually damages or destroys objects in close proximity to the blast.
3. Caddo parish is located in the northwestern part of Louisiana, bordered by Arkansas to the north, Texas to the west, DeSoto Parish to the south, and Bossier Parish to the east.
4. Transportation of hazardous materials within Caddo Parish includes:
  - a. Highways: There are nine major highways radiating outward from the Shreveport Metropolitan Area. Major highways leading north include U.S. 71 and LA 1. Southbound highways connecting the metro area with central and south Louisiana include U.S. 71, U.S. 171, LA 1 and Interstate 49. Interstate 20 transects Shreveport eastward and westward connecting the area with Jackson, MS and Dallas, TX, respectively. Interstate 220

- bypasses Shreveport to the north of I-20. There are two southern bypasses around Shreveport, the Inner Loop Expressway (LA 3132) and Bert Kouns Industrial Loop Expressway (LA 526).
- b. Railroads: Ten railroad tracks operated by two companies radiate outward in all directions from Shreveport. Local rail lines include Kansas City Southern (KCS) and Union Pacific (UP). Rail line maps are on file at the Caddo Emergency Operations Center (EOC).
  - c. Airports: There are two major airports in Caddo Parish – Shreveport Regional Airport and Shreveport Downtown Airport. A private airfield, Naylor Airport, is located at 2121 Robson Road in Caddo Parish.
  - d. Water: The Red River is a navigable waterway. The Port of Shreveport-Bossier, located in extreme southeast Caddo Parish, ships and receives barge traffic carrying hazardous materials.
  - e. Pipeline: Numerous pipelines from a multitude of oil and gas pipeline companies radiate through Caddo Parish. Pipeline maps are on file in the Caddo Emergency Operations Center.
5. General: All modes of transportation have the potential to carry hazardous materials. The basic response by local officials to a hazardous materials incident in their jurisdiction will be basically the same whether the problem occurs at a highway, pipeline, rail, waterway or air transport.

The difference in response becomes apparent when levels of outside assistance are called upon, such as: Federal Railroad Administration, Louisiana State Police, Louisiana Department of Transportation and Development, U.S. Coast Guard or the Louisiana Department of Environmental Quality.

#### **B. Assumptions**

1. Caddo OHSEP will serve as the central data collection and distribution point for information related to this plan, such as covered facilities, facility coordinators, hazardous materials incidents, resources, spill notification, etc. This office will also implement the community Right-to-Know program for the LEPC. Individuals should direct questions about chemical hazards in Caddo Parish to Caddo OHSEP at 675-2255.
2. Experience has taught most officials dealing with hazardous material accidents that extreme caution must be exercised.
3. Incidents involving hazardous materials occur on a regular and ever increasing basis.
4. Numerous emergency service agencies at the federal, state and local levels will be called upon to assist in their area of expertise during a hazardous materials incident. Coordination of these agencies is of utmost importance.

### **III. CONCEPT OF OPERATIONS**

## **A. General**

1. All incidents involving the carrier of goods, materials, liquids, or freight of any kind should be regarded as incidents involving hazardous materials until proven otherwise.
2. The joint responsibility for dealing with hazardous materials incidents (on the local level) is shared by Caddo OHSEP, and corresponding fire department and/or sheriff's office for the affected jurisdiction. Mutual-aid assistance will be called upon when the need is determined by responding agencies.
3. Certain governmental agencies are required to respond to hazardous materials incidents. These agencies have responsibilities according to departmental guidelines. However, they are requested to coordinate their activities with Caddo OHSEP and the Sheriff's Office and Fire Services.

## **B. Phases of Emergency Management**

1. **Mitigation (Prevention)**
  - a. While the number of transportation lines that transport potentially dangerous materials is vast, the major transportation routes that these companies use have been defined.
  - b. Identify industrial sites that manufacture, store, or use extremely hazardous substances (EHSs).
  - c. Hazardous materials transportation routes have been designated by state law (Act 829) for Caddo Parish.
2. **Preparedness**
  - a. All fixed site operators have been instructed to make appropriate notifications of any incident having the potential for an off-site release and to provide the information about the incident in a written follow-up report within five working days as per section 304 of SARA (release notification).
  - b. Standard operating guidelines (SOGs) for response agencies have been written and tested by government and industry in Caddo Parish.
  - c. Emergency response personnel are trained in the identification of hazardous materials and the use of reference materials.
  - d. Evacuation routes and procedures have been identified and are available for use in the EOC.
  - e. Training in handling hazardous materials incidents is on-going and includes persons in the fields of fire suppression, health and medical, law enforcement, haz/mat response teams, etc.

3. **Response**
  - a. Area HAZMAT response teams with fire services, law enforcement, BAFB, etc., have been trained in the handling of hazardous materials and are available for response to local incidents.
  - b. Numerous emergency services will be called upon to assist in their area of expertise during a hazardous materials incident.
  
4. **Recovery**
  - a. The on-site lead agency, either the fire department, sheriff's office, or LA State Police, shall determine when the situation has been controlled and cleanup operations should commence.
  - b. Agencies such as the LA Department of Environmental Quality (DEQ) will be called upon to execute their authority and responsibility of over-seeing of cleanup operations. Local chemical cleanup companies have been identified and can provide the necessary services should the situation warrant.

**C. Required Hazardous Materials Planning Elements**

The following criteria are based on the Emergency Planning and Community Right-to-Know Act (EPCRA) minimum planning requirements as listed under documents NRT-1, NRT-1A, CPG-1 and CPG-1A.

**1. Abbreviations and Definitions**

See Appendix 5 to the basic Emergency Operations Plan (EOP) on page BP-5-1.

**2. Planning Factors**

- a. Scenarios that might develop from accidents at affected facilities or along transportation routes are included under separate cover in the Caddo LEPC Hazards Analysis Survey and/or facility Risk Management Plans (RMPs) on file at Caddo OHSEP.
- b. Facilities that possess extremely hazardous substances and the transportation routes along which such substances may move within Caddo Parish are included under separate cover in the Caddo LEPC Hazards Analysis Survey.
- c. Facilities that may contribute additional risks by virtue of their proximity to the above-mentioned facilities are included under separate cover in the Caddo LEPC Hazards Analysis Survey.
- d. Facilities that are subject to additional risks due to their proximity to facilities with extremely hazardous substances (EHSs), such as health care facilities, are included under separate cover in the Caddo LEPC Hazards Analysis Survey.
- e. Methods for determining that a release of an extremely hazardous substance (EHSs) has occurred and the area of population to be affected shall be according to the facility's standard operating guidelines

(SOGs) and in-house emergency plan. Facility leak detection devices range from automated leak detection sensors, audible alarms, computer notification, camera monitoring, first-on-the-scene, etc. When a potential emergency exists, facilities should notify proper emergency service departments for immediate assistance. Facilities detecting a release and are subject to SARA Title III release requirements should immediately make the appropriate local notification and to the State Emergency Response Commission (SERC) at a minimum. Other state and federal agencies may also need to be notified depending on the nature and amount of the release such as the LA Department of Environmental Quality (DEQ) and the National Response Center (NRC).

For large scale releases and releases occurring from other than fixed facilities, emergency services and Caddo OHSEP utilize a variety of plume dispersion models, computer programs, charts and maps to determine the areas likely to be affected. Units arriving first on the scene of a transportation incident shall assess the situation and determine the level of threat the incident poses. The Caddo EOC contains all the necessary information/equipment to determine release vulnerability zones and necessary warning equipment. Caddo OHSEP may also call upon the LA DEQ and Barksdale Air Force Base (BAFB) Bioenvironmental Section for air quality monitoring assistance.

- f. Major findings from the hazards analysis and RMPs consisting of “worse case scenarios” of fixed facilities, transportation incidents and other potentially dangerous situations that may occur as a result of a hazardous materials release are included under separate cover in the Caddo LEPC Hazards Analysis Survey.

### **3. Concept of Operations**

- a. The Caddo OHSEP Director is the designated community emergency coordinator for disaster related activities, including implementation of this annex and the overall community disaster plan. Disaster relief activities will be coordinated through the Caddo Emergency Operations Center.

Facilities reporting under Section 303 of SARA Title III must identify a facility emergency coordinator. This information is located on request forms, emergency plans, computer databases, etc., and kept on file at Caddo OHSEP and at the Emergency Operations Center (EOC). The facility emergency coordinator is responsible for implementation of the individual facility’s emergency plan.

- b. The nature, extent and location of the emergency will determine conditions under which local governments will coordinate response with

other parishes. For example, a hazardous materials incident occurring along a parish boundary may require emergency response and coordination efforts from both jurisdictions. In addition, there may be instances when special equipment, technical expertise or resource sharing may be requested from or by surrounding parishes or counties.

Caddo OHSEP has established an emergency management mutual-aid network of parishes and counties bordering Caddo Parish called the Ark-La-Tex Emergency Management Alliance. The Alliance consists of the following parish/county emergency management offices: Columbia County, AR; Lafayette county, AR; Miller County, AR; Bienville Parish, LA; Bossier Parish, LA; Caddo Parish, LA; Claiborne Parish, LA; DeSoto Parish, LA; Red River Parish, LA; Webster Parish, LA; Barksdale Air Force Base, LA; Bowie County, TX; Cass County, TX; Gregg County, TX; Harrison County, TX; Marion County, TX; Panola County, TX; Red River County, TX; City of Henderson, TX; City of Longview, TX; City of Marshall, TX; City of New Boston, TX; City of Texarkana, TX; East Texas Council of Governments; Red River Army Depot, TX; Texas Department of Health. Caddo OHSEP has emergency contact and resource availability lists on each of these jurisdictions. This information is kept on file in hard copy format and computer database at the Caddo Emergency Operations Center and OHSEP office. Caddo OHSEP will contact the corresponding parish or county emergency management office by telephone or radio to request use of needed resources.

#### **4. Instructions for Annex Use**

A list of organizations and titles of persons receiving this Annex or amendments and the date that the Annex was transmitted is located at the Caddo OHSEP administrative offices.

#### **5. Record of Amendments**

The Caddo Office of Homeland Security and Emergency Preparedness (OHSEP) and Caddo Local Emergency Planning Committee (LEPC) will be responsible for the maintenance and updating of this annex.

Any needed changes will be noted at LEPC business meetings and the annex will then be updated by Caddo OHSEP. The plan will be reviewed and modified on an on-going basis. All distributed updates should be noted on the Records of Changes to Plan in the basic EOP on page iii.

#### **6. Emergency Notification Procedures**

Procedures providing reliable, effective, and timely notification by the facility emergency coordinator, transporter or other regulated agencies to local, state, and federal emergency personnel that a release has occurred shall be based upon procedures established in each facility or transporter emergency plans.

These notification systems include telephone, radio or in-person immediately after determining that a release has occurred and meets EPCRA reporting requirements or emergency assistance is needed.

### **7. Initial Notification of Response Agencies**

When an emergency or potential emergency exists, facilities should notify emergency service departments for immediate assistance (9-1-1 in Caddo Parish). Facilities detecting a release and are subject to EPCRA Section 304 release requirements should immediately contact the Shreveport Fire Department (depending on the location of the incident) and the State Emergency Response Commission (SERC) at a minimum. Other state and federal agencies may also need to be notified depending on the nature and amount of the release such as the LA Department of Environmental Quality (DEQ) and the National Response Center (NRC).

Initial reporting of transportation accidents may be made by anyone witnessing or observing the situation via telephone, radio or in person to local emergency services. The local emergency manager will be notified of releases from major transportation related accidents by emergency services departments by way of radio, telephone or in person. In addition, activation of the Caddo Emergency Operations Center (EOC) may be requested by local emergency services. Additional assistance from response and support agencies will be coordinated through the EOC, 9-1-1 and on-scene command post.

### **8. Direction and Control**

- a. Methods and procedures to be followed by facility owners and operators to respond to a release of extremely hazardous substances are according to the facility's standard operating guidelines (SOGs) and in-house emergency plan.

However, these plans should be coordinated with the LEPC, OHSEP, and local fire department with jurisdiction over the facility. Once a facility plan is developed, it should be submitted to the LEPC and local fire department for reference before and/or during emergency situations. Caddo OHSEP has a listing of all facility emergency plans submitted to the LEPC on file at their administrative offices.

Fire department units and other emergency services responding to the scene of a hazardous materials incident will follow their own in-house standard operating guidelines (SOGs) and utilize the incident command system (ICS) upon arrival at the scene of a major incident. These departmental SOGs and ICS descriptions and flowcharts are kept on file at the Caddo OHSEP administrative office and the Caddo Emergency Operations Center (EOC). If the situation warrants, Caddo OHSEP will activate the appropriate EOC and enact the Caddo

Emergency Operations Plan.

- b. Levels of response code, conditions for each, and responsible organizations at each level are outlined in each departmental standard operating procedures (SOGs). These departmental SOGs are kept on file at the Caddo OHSEP administrative office and the Caddo Emergency Operations Center (EOC).

#### **9. Warning Systems and Emergency Public Notification**

Caddo OHSEP serves as the lead agency for conducting public warning/notification. Procedures providing reliable, effective and timely notification by the community emergency coordinator to persons designated in the emergency plan shall consist of various notification methods outlined in Annex A (EOC) to the overall Caddo Emergency Operations Plan. Procedures for warning the public that a release has occurred shall be according to procedures outlined in Annex C (Alerting and Warning) to the overall Caddo Emergency Operations Plan.

#### **10. Resource Management**

- a. Caddo OHSEP has many resources available at its disposal for use during emergency situations from all levels of government as well as from the private sector. Caddo OHSEP maintains a current listing of equipment and emergency contacts on Critical Data Forms (CDF).

This resource information, including data from EHS facilities, is compiled in resource manuals in hard copy format and in computer database at the Caddo Emergency Operations Center (EOC) and the OHSEP administrative office. (Also, see Annex L - Resource Management to the Caddo Emergency Operations Plan)

- b. Emergency response capabilities and expertise in the private sector that may be available to assist local responders, facility managers and transportation companies during emergencies is cataloged on resource forms and computer database and located in the Caddo Emergency Operations Center (EOC). The information can be quickly accessed and provided to emergency responders, facility managers or transportation companies. Contacting surrounding parishes and/or State OHSEP for mutual-aid assistance can access additional resources and technical expertise.

#### **11. Health and Medical**

- a. The methods and procedures to be followed by medical personnel to a release of hazardous substances are outlined in each emergency services standard operating guidelines (SOGs) in Caddo Parish. These departmental SOGs are kept on file at the Caddo Emergency Operations Center (EOC) and at the OHSEP Administrative Offices.

In addition, a mutual-aid agreement for emergency services within Caddo Parish in the event of a mass casualty incident (MCI) is located in Appendix 7 to Annex O (Health and Medical) of the Caddo Emergency Operations Plan. This agreement lists guidelines to be followed at the location of a hazardous and non-hazardous MCI site.

- b. The procedures for conducting health assessments upon which to base protective action decisions are outlined in each emergency service's standard operating guidelines (SOGs). These departmental SOGs are kept on file at the Caddo Emergency Operations Center (EOC) and the OHSEP administrative office. Additional health and protective action information may be obtained by contacting CHEMTREC, the chemical manufacturer, Caddo Health Unit and medical experts in the local community.

## **12. Personal Protection of Citizens**

The methods to determine the release of a hazardous substance shall be according to the facility's standard operating procedures (SOGs) and in-house emergency plan. Facility leak detection methods range from automated leak detection sensors, audible alarms, computer notification, camera monitoring, first on scene, etc. When a potential emergency exists, facilities should notify emergency services (911) for immediate assistance. Facilities detecting a release and are subject to EPCRA Section 304 release requirements should immediately phone the Shreveport Fire Department (depending on the location of the incident) and the State Emergency Response Commission (SERC) at a minimum. Other state and federal agencies may also need to be notified depending on the nature and amount of the release such as the LA Department of Environmental Quality and the National Response Center.

For large scale releases and releases occurring from other than fixed facilities, emergency services departments and Caddo OHSEP utilize a variety of plume dispersion models, computer programs, charts and maps to determine the areas likely to be affected. Units arriving first on the scene of a transportation incident shall assess the situation and determine the level of threat the incident poses. The Caddo EOC contains the necessary information/equipment to determine release vulnerability zones and necessary warning systems. Caddo OHSEP may also call upon the LA Department of Environmental Quality (DEQ) and Barksdale Air Force Base (BAFB) Bioenvironmental Section for air quality monitoring assistance.

## **13. Personal Protective Measures/Evacuation Procedures**

- a. Annex D (Evacuation) to the Caddo Emergency Operations Plan outlines procedures to follow during evacuations. Charts and maps of evacuation routes, hazard vulnerability zones, traffic flow, flood prone areas, etc. are kept on file at the Caddo Emergency Operations Center

(EOC) and the OHSEP administrative office. Caddo OHSEP also utilizes computer generated digitized mapping programs for emergency evacuation purposes.

The Caddo LEPC has developed informative brochures describing procedures to follow during hazardous materials incidents. These procedures include in-place sheltering, evacuation, protected breathing and how to receive emergency information. These brochures are free and distributed throughout the year to the public.

- b. The role of the affected facility in the evacuation decision-making process is to consult with emergency response agencies at the scene and the Emergency Operations Center (EOC) regarding product safety measures. Facility representatives may serve as product technical experts since they deal with the material on a daily basis and can provide valuable information to first responders and emergency coordinators. For an extended incident at a location, a facility representative should report to the Caddo EOC to aid in the public information and decision-making process.
- c. The procedures for providing security for evacuees and affected areas are according to the law enforcement agency's standard operating guidelines (SOGs). If an evacuation is necessary, local and state law enforcement will provide traffic control points, security for the evacuated residences/businesses, and assist with public notification. If additional manpower is necessary, local law enforcement may request Caddo OHSEP declare a State- of-Emergency and contact LA National Guard units for assistance. Copies of local law enforcement SOGs are on file at the Caddo Emergency Operation Center (EOC) and the OHSEP administrative offices. (Also see Annex G - Law Enforcement and Annex R - Military Assistance to the overall Caddo Emergency Operations Plan).

#### **14. Techniques for Spill Containment and Cleanup**

The allocation of responsibilities among local authorities, affected facilities, and responsible parties for spill containment and cleanup will be a shared initiative. Local emergency response agencies will be responsible for assessing the situation, containing the spill, and protecting life and property to the best of their abilities. Affected facilities will be responsible for consulting with emergency response agencies with regard to product information, safety measures, and containment and cleanup methods. It will be the responsibility of affected facilities and responsible parties to shoulder the costs associated with spill containment and cleanup efforts as well as other off-site impact matters. Emergency response occasionally requires that action is taken and cost incurred before responsible parties can be identified and contacted. In those instances, it is the accepted practice to take action

and seek redress later. There are various state and local laws and ordinances that allow for the recovery of expenses from responsible parties for expenses incurred from a hazardous materials release. For major releases, local response agencies and facility representatives will coordinate cleanup efforts with the LA Department of Environmental Quality, Louisiana State Police HazMat Response, and other federal and state regulatory agencies.

**15. Training**

- a. A current schedule for training programs for local emergency response and medical personnel is available at the Caddo OHSEP administrative office. Various hazardous material training programs are offered on a periodic basis at locations in Shreveport and statewide. Caddo OHSEP will disseminate information when these classes are offered and other specific information regarding the training classes. (Also see Annex P - Training and Education to the overall Caddo Emergency Operations Plan).
- b. The training requirements for all major categories of hazardous materials emergency response personnel, including the types of courses and the number of hours is as follows:
  - i. First Responder Awareness Level (4 Hours) - Individuals who are likely to witness or discover a hazardous substance release and who have been trained to initiate an emergency response sequence by notifying the authorities of the release.
  - ii. First Responder Operations Level (24 Hours) - Individuals who respond to releases or potential releases of hazardous substances as part of the initial response to the site for the purpose of protecting nearby persons, property, or the environment from the effects of the release. They are trained to respond in a defensive fashion without actually trying to stop the release. Their function is to contain the release from a safe distance, keep it from spreading, and prevent exposures.
  - iii. Hazardous Materials Technician (40 Hours) - Individuals who respond to releases or potential releases for the purpose of stopping the release. They assume a more aggressive role than a first responder does in that they will approach the point of release in order to plug, patch or otherwise stop the release of a hazardous substance.
  - iv. Hazardous Materials Specialist (24 Hours) - Individuals who respond with and provide support to hazardous materials technicians. Their duties parallel those of the hazardous materials technician; however, those duties require more directed or specific knowledge of the various substances they may be called upon to contain. The hazardous materials specialist would also act as the site liaison with Federal, state, local and other government

authorities in regards to site activities.

- v. On-Scene Incident Commander (24 Hours) - Individuals who will assume control of the incident site. They shall receive at least 24 hours of training equal to the first responder operations level in addition to other requirements as outlined in 29CFR1910.120.
- vi. Refresher Training - Those individuals who are trained in accordance with the levels listed in (1)-(5) of this section shall receive annual refresher training of sufficient content and duration to maintain their competencies, or shall demonstrate competency in those areas at least yearly.

Refer to Annex T, Terrorism for plans addressing the threat of terrorist incidents involving chemical and biological materials.

#### **IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES**

##### **A. Local Emergency Planning Committee**

This committee is primarily a pre-incident and post-incident committee charged with review of local hazardous materials response plans, exchange of information, and gathering of critical hazardous materials information to be shared with governments and citizens in Caddo Parish. The LEPC is responsible for the development and maintenance of the hazardous material- planning document that will be reviewed annually. They will coordinate this plan with adjacent parish LEPCs. The LEPC will also develop and implement a Community Right-to-Know program.

##### **B. Caddo Office of Homeland Security and Emergency Preparedness**

Caddo OHSEP is responsible for the activation of the Emergency Operations Center(s), coordination of support activity, technical advice, declaration of emergency when required, activating warning systems, and locating resources such as National Guard assistance, expert personnel, heavy equipment, etc.

In addition, Caddo OHSEP serves as the repository for the Caddo Local Emergency Planning Committee (LEPC) and manages the Community Right-to-Know material. These responsibilities include maintaining a reporting facility database that includes facility information, chemical inventory, storage locations and emergency plans. Caddo OHSEP will receive monthly release notification summaries from the Shreveport Fire Department. This information will be made available to the LEPC, emergency response agencies and the general public per Community Right-to-Know requirements. The CAMEO (Computer Aided Management of Emergency Operations) computer program will be utilized to manage this information. The MARPLOT computer mapping program and ALOHA plume dispersion model will also be utilized to plan for chemical emergencies.

**C. Facilities**

Facilities covered by SARA, Title III have the following responsibilities:

1. Provide annual chemical inventory forms (TIER Two) to the local fire department with jurisdiction over their facility and the SERC for Extremely Hazardous Substances (EHS) and OSHA hazardous substances in excess of the threshold planning quantity. NOTE: The SERC serves as the TIER Two repository for the Caddo LEPC.
2. Notify the LEPC of the name of the facility coordinator that can provide a liaison with local governments and the LEPC.
3. Develop in-house emergency plans and standard operating guidelines (SOGs) with Caddo OHSEP, the LEPC and their local fire department.
4. In emergencies, contact local response agencies immediately.
5. Notify the Shreveport Fire Department and SERC of any release of extremely hazardous substances or CERCLA hazardous chemicals in excess of reportable quantities.
6. Initiate other measures which may be required for the situation at hand following in-house plans and Standard Operating Guidelines (SOGs).

**D. HAZMAT Response Teams (Fire Depts. & Sheriff's Offices)**

The first arriving unit on the scene will assess the situation and determine what incident level exists and what precautions need to be taken.

1. Identify the hazardous material involved.
2. Conduct appropriate fire fighting, search and rescue, and containment operations as the situation permits.
3. Establish an on-site command post at a safe location.
4. Determine if population protection measures need be implemented (in-place shelter, evacuation, protected breathing, etc.)
5. Contact Caddo OHSEP to activate the Emergency Operations Center (EOC) or utilize public warning systems (such as the OEP FirstCall Telephone Warning System), if necessary.
6. If evacuation is necessary, determine the area to be cleared of the general populace in order to insure their safety as well as the safety of those members of the emergency services involved in the hazardous material incident. Contact Caddo OHSEP to arrange shelter operations with the American Red Cross.
7. Coordinate evacuation procedures and other on-site activities with EOC personnel.
8. Initiate other measures which may be required for the situation at hand following departmental Standard Operating Guidelines (SOGs).

**E. Law Enforcement**

Law enforcement is responsible for assisting with evacuation, crowd and traffic control, controlling access into the hazardous area, protection of

evacuated areas, escorting special equipment to the area and assisting designated persons having required technical knowledge in getting to the scene.

**F. Other City/Parish Departments**

Perform appropriate duties as outlined in the Basic Plan.

**V. DIRECTION AND CONTROL**

See basic plan.

**VI. CONTINUITY OF GOVERNMENT**

See basic plan.

**VII. ADMINISTRATION AND LOGISTICS**

1. The Emergency Operations Center is designated as the interfacing point for decision-making, coordination, administration, resource information exchange, and emergency response management.
2. The on-scene command post shall be established for all hazardous material incidents and shall follow procedures as set forth in standard operating procedures for command post operations.
3. All necessary records and reports will be maintained on each incident.

**VIII. AUTHORITIES AND REFERENCES**

1. Basic Plan
2. The Superfund Amendments and Reauthorization Act (SARA) of 1986, Title III, Emergency Planning and Community Right-to-Know Act (EPCRA).
3. The Louisiana Hazardous Materials Information Development, Preparedness and Response Act (HMIDPRA), as amended 1987.
4. Code of Federal Regulations (CFR) 1910.120, Hazardous Waste Operations and Emergency Response, Subpart H, Subpart Title - Hazardous Materials.

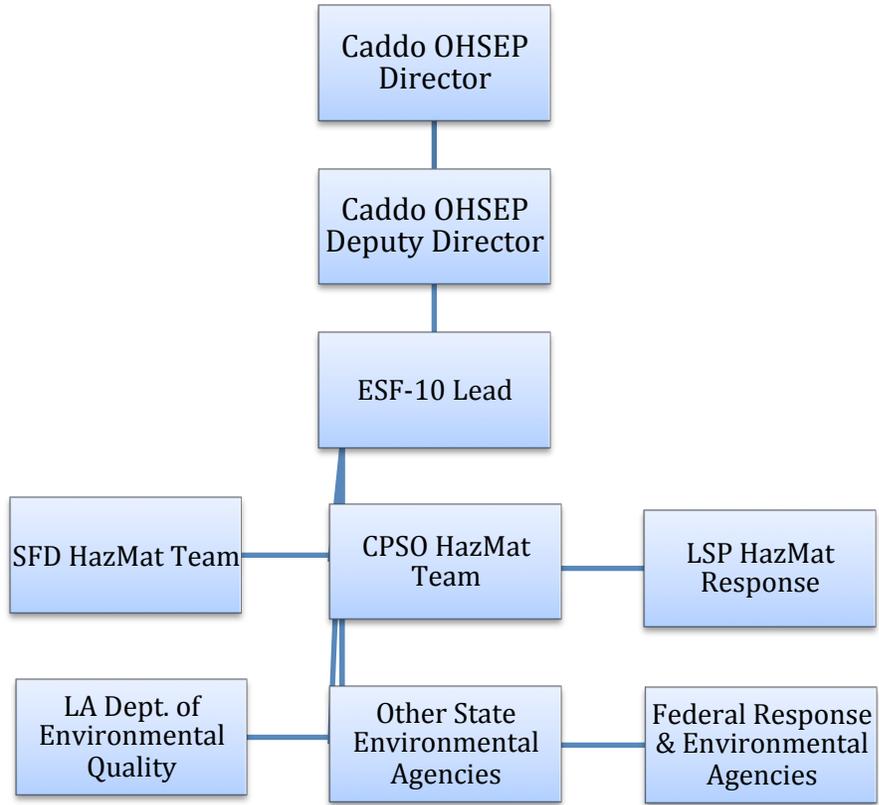
**IX. APPENDICES TO ANNEX J**

1. Organizational Chart
2. HAZMAT Accident Flow Chart
3. Incident Levels
4. Title III Major Information Flow Requirements
5. HAZMAT Response Checklist
6. Pipeline Emergencies
7. Railroad Accidents
8. Telephone Directory
9. HAZMAT Release Reporting Form
10. WIPP Transportation Accident Plan
11. Standard Operating Guidelines (SOGs)
12. Radiological Protection

### 13. LEPC Plan

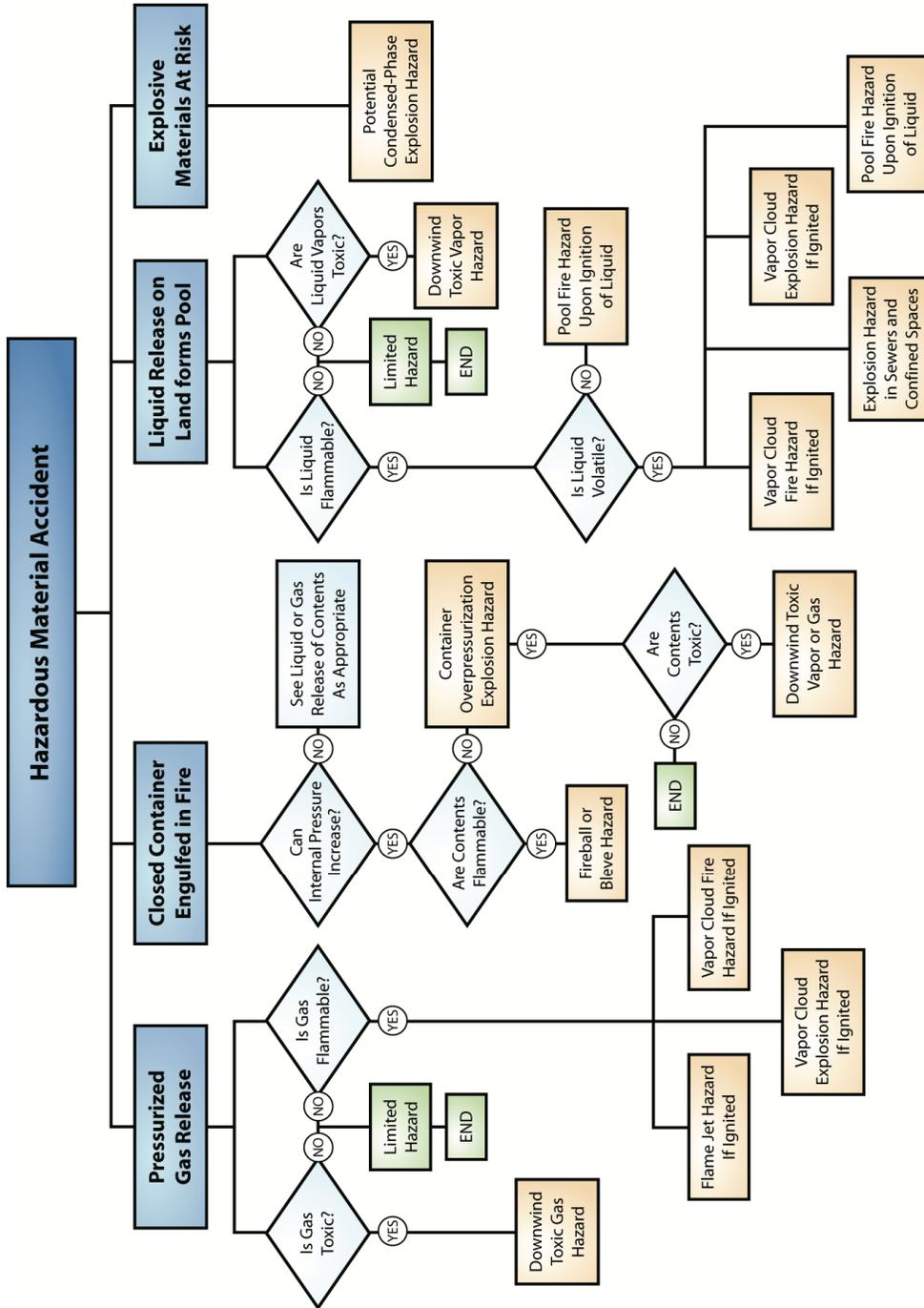
# Appendix 1 – Organizational Chart

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# Appendix 2 – HazMat Accident Flow Chart



## Appendix 3 – Incident Levels

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Hazardous materials incidents will, of course, vary in magnitude and severity. As the situation escalates so do the demands placed upon the resources of the community. In order to help identify some of the predictable expectations for response, it is necessary to identify the basic levels depending upon the scope, complexity, probable duration, and potential impact. There are:

### **I. LEVEL I INCIDENT**

1. Limited scope, quantity, and hazard of material
2. No evacuation
3. Minimal potential impact

### **II. LEVEL II INCIDENT**

1. Intermediate scope, quantity, and hazard of material
2. Limited evacuation
3. Possible extended operation

### **III. LEVEL III INCIDENT**

1. Large scope
2. Long duration
3. Long or large scale evacuation
4. Potential for high impact



## Appendix 5 – HazMat Response Checklist

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WARNING: Hazardous materials incidents pose significant dangers to the health and safety of response personnel and other persons in the affected area. Gather as much information as possible during the initial notification and provide details to the responding units. The information and warnings you transmit may save lives and facilitate a more effective response.

The following is provided by the Caddo Local Emergency Planning Committee as a generic checklist for emergency services to follow in the event of a hazardous material release: (Note: refer to departmental Standard Operating Guidelines (SOGs) for specific activities to be performed at the scene of a hazardous materials emergency.)

1. Dispatch law enforcement unit immediately to assess the situation. (Law enforcement unit indicated since police cars on patrol are usually able to respond more quickly.)
2. Dispatch patrol car(s) to secure the area. Warn all units against approaching the scene from downwind side without wearing proper protection.
3. Alert fire department, advising of current situation as known.
4. Dispatch hazardous materials response team. Provide all available information.
5. As hazardous materials team is responding, relay information being gathered by first responding units.
6. Alert emergency medical services. Advise of any known injuries. Do not dispatch to scene without guidance from hazardous materials response team—effects of spill could harm uninformed responding personnel. Avoid exposing any personnel to hazard; rescue units that do respond should halt at a safe distance until given the okay to approach the scene.
7. Notify other governmental units as necessary (Caddo OHSEP, public works, water & sewer, mutual-aid assistance, military assistance, etc.). Activate Emergency Operations Center if needed. Have population warning systems on stand-by.
8. Notify federal, state and local hazardous material regulatory agencies as needed (EPA, DEQ, NRC, CHEMTREC, LEPC, LSP, etc.).
9. If evacuation is needed, notify Caddo OHSEP for coordination of shelter activities with the American Red Cross and other relief agencies.
10. Notify news media if streets or sections of the community will be closed to public during the emergency. Broadcast media can assist in advising citizens to avoid the danger area.
11. Alert hospitals, as appropriate, so they may prepare to treat victims of exposure to specific hazardous material.
12. Coordinate with CHEMTREC for assistance in incident management.
13. Scene management:
  - a. Detect hazardous materials presence.

- b. Estimate potential harms without intervention - identify the potential impact of the situation.
  - c. Choose the response objectives - i.e., evacuation if needed.
  - d. Identify action options to control release.
  - e. Perform best option.
  - f. Evaluate progress - set up command post activities.
14. Clean-Up
- a. Consider disposal methods and arrangements.
  - b. Get expert advice.
  - c. Segregate materials.
  - d. Remove toxic materials from clothing and equipment.

If there is a threat to the water or wastewater systems, be sure to contact the public utilities departments and follow procedures outlined in Annex Q (Public Works/Utilities). If a railroad right-of-way is involved, refer to Appendix 6 - Railroad Accidents in this Annex. If radioactive material is involved, refer to Appendix 11 (Radiological Protection). If weather concerns affect the incident, the on-site commander or Emergency Operations Center should be in immediate contact with the National Weather Service (NWS) Office in Shreveport (refer to listed and unlisted telephone numbers for the NWS in the Caddo OHSEP Emergency Telephone Directory under separate cover).

Hazardous materials spills must be reported to the appropriate authorities. Notification reports, and/or communication with CHEMTREC, will often summon federal and state technicians to assist with the incident.

Much has been written about response to hazardous materials incidents. With the increase in technological development and use of chemicals, every community is subject to an incident by virtue of the materials being transported back and forth across the country. This is especially true with regard to Louisiana, which has a large chemical manufacturing industry.

Information about incident management, health hazards, medical treatment, evacuation requirements and other aspects are contained in the North American Emergency Response Guidebook.

The United States Department of Transportation (DOT) publishes the book. Updates to the guidebook are printed every three years. It is available free of charge by contacting the Louisiana State Police Right-to-Know Unit or Caddo OHSEP.

A copy of this invaluable book should be kept in every emergency response vehicle. The Bureau of Explosives of the Association of American Railroads and the U.S. Coast Guard publish other valuable resources. Hazardous materials computer programs, such as CAMEO (Computer Aided Management of Emergency Operations), are available from the National Safety Council.

Emergency assistance is available for any kind of hazardous materials incident. This

invaluable support is available through CHEMTREC at 1-800-424-9300.

Clean up of hazardous materials is a specialized field. State or federal personnel assisting on-scene can advise emergency responders regarding this matter. They may assume responsibility for arranging the clean up. The ultimate responsibility for paying for the clean up usually rests with the party responsible for the spill.

Hazardous materials incidents can be very dangerous. The threat to life and property and the environment is high. Extreme care should be taken when dealing with these particular types of incidents. There should be no confusion about coordinating the initial response. Directions should be very clear, even to someone not familiar with normal response to this type of emergency.

**EMERGENCY CONTACT (HAZARDOUS MATERIALS COORDINATORS):**

- A. Barksdale AFB Bioenvironmental**  
456-6730/456-2151
- B. Barksdale AFB Disaster Preparedness**  
456-2851/456-2151
- C. Barksdale AFB Fire Department**  
456-1117/456-2151
- D. Caddo OHSEP**  
675-2255
- E. Shreveport Fire Department**  
673-6740
- F. Caddo Parish Sheriff's Office**  
681-1118/675-2170
- G. LA Dept. of Environmental Quality**  
676-7476
- H. LA State Police – Troop “G” Bossier City**  
741-7411

## Appendix 6 – Pipeline Emergencies

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The Pipeline Group distributes the following material as recommended safety precautions for public emergency response agencies to take in the event of a pipeline emergency.

- I. Validate the emergency phone call by returning the call promptly. Do this even when the caller is a pipeline company employee.
- II. Call the pipeline company dispatcher. Their phones are manned 24 hours a day, 365 days a year. The dispatcher will direct emergency procedures and suggest what you can do. Your call will be validated.
- III. Do not call pipeline company personnel other than the emergency number. Local pipeline company employees are instructed to call the dispatcher in the event of a pipeline emergency.
- IV. Determine the wind direction on your way to the site.
- V. Upon arrival at the emergency site, do not drive into any vapor cloud. Park vehicles at a safe distance from the vapor clouds or fires. Turn off engines. Stay away from vapor cloud - **DO NOT WALK INTO IT.**
- VI. Evacuate everyone from the danger area to an UPWIND location.
- VII. Provide medical help to those who need it.
- VIII. Barricade the emergency area so that people will not enter it. Blockade any highway that passes through or near it.
- IX. **ELIMINATE ANY SOURCES OF IGNITION** if there is a vapor cloud - sources such as: engines, electric motors, pilot lights, burn barrels and smoking materials.
- X. Maintain contact with the pipeline company personnel until they arrive. The person in charge will identify himself.
- XI. Do NOT attempt to extinguish any primary fire source until pipeline company employees arrive and their representative directs this action. Perimeter fires may be extinguished at your discretion.
- XII. Request additional emergency assistance from other public response agencies when you need it.
- XIII. If a railroad passes through the emergency area, contact the railroad and request that they stop movement of trains through the area until notified that the area is safe.
- XIV. Determine if the vapor cloud is moving or expanding in size. The vapors will tend to flow to low areas. Keep people away from nearby low spots if the vapor cloud is at a nearby high elevation.
- XV. Do not put water or other chemicals on vapor cloud unless directed to do so by pipeline company personnel.
- XVI. Do not attempt to ignite the vapor cloud. A pipeline company employee using a flare gun will usually do this dangerous procedure.
- XVII. If the engine on your vehicle stops unexpectedly, do not attempt to start it until you are certain it did not stop due to a lack of oxygen.
- XVIII. A pipeline company employee will tell you when the emergency is over.

For additional information, including 24-hour contacts, pipeline maps, and emergency procedures refer to The Pipeline Group Emergency Response Manual located in the Caddo Emergency Operations Center (EOC).

## Appendix 7 – Railroad Accidents

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### **I. GENERAL**

Any time railroad tracks pass through a jurisdiction there is the potential for a railroad incident. Depending to the circumstances, response will be similar to that for a major motor vehicle accident and/or mass casualty incident (MCI). See Annex O (Health and Medical) and Annex I (Fire Services) with possible complications covered in this annex (Hazardous Materials Response). The difference in response will be based upon possible difficulty in reaching the scene.

### **II. RESPONSE PROCEDURES**

Upon notification of a railroad accident, response procedures should direct that law enforcement and fire service units be dispatched immediately to assess the situation. At the same time, notification should be made to the railroad of the situation, giving as much detail as possible. Railroad engineers often have good communications with traffic controllers, but formal notification should be made to assure their awareness. Railroad officials will arrange for tracks to be closed to eliminate the risk of another train entering the accident area. The responsible railroad will send representatives to the accident site to assist in the management of the emergency and to coordinate the clean up and re-opening of the tracks.

Each hazardous materials response team within Caddo Parish should develop and maintain Standard Operating Guidelines (SOGs) describing basic steps to be taken upon being notified of a railroad emergency in their jurisdiction. There should be no confusion about coordinating the initial response. Directions should be very clear, even to someone not familiar with normal response to this type of emergency.

### **III. ASSOCIATION OF AMERICAN RAILROADS**

The Association of American Railroads has available a staff of specialists in handling tank leaks, derailments, environmental problems, hazardous materials and other concerns related to rail transportation. These experts also assist in technical response to emergencies that involve other forms of transportation when appropriate. Their services are available through CHEMTREC at 800-424-9300.

### **IV. EMERGENCY CONTACTS**

#### **A. Kansas City Southern Railway Company**

4601 Blanchard Highway  
Shreveport, LA 71107  
Dispatch Office: 676-6028 (24 Hours)  
Special Agent: 676-6080

#### **B. Union Pacific Railroad**

7420 Bert Kouns Industrial Loop  
Shreveport, LA 71129

Yardmaster on Duty  
686-6884 (24 Hours)  
Special Agent: 687-1713

- C. Federal Railroad Administration**  
Railroad Safety Inspector: 686-5052  
Washington, D.C.: (800) 724-5995

## Appendix 8 – Telephone Directory

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- I. **CHEMTREC**  
**1-800-424-9300**  
Chemical Transportation Emergency Center  
Washington, D.C.
  
- II. **CHEM-TEL, INC.**  
**1-800-255-3924**  
An Emergency Response Communication Service  
Washington, D.C.
  
- III. **NATIONAL RESPONSE CENTER (NRC)**  
**1-800-424-8802**  
Washington, D.C.
  
- IV. **MILITARY SHIPMENTS: (U.S. DEPARTMENT OF DEFENSE)**
  - A. **U.S. Army Operations Center**  
**1-703-697-0218**  
(Explosives/ammunition incidents)
  
  - B. **Defense Logistics Agency**  
**1-800-851-8061**  
(All other dangerous goods incidents)
  
- V. **POISON CONTROL CENTER (PCC)**  
**1-800-256-9822**  
Monroe, LA
  
- VI. **LOUISIANA EMERGENCY RESPONSE COMMISSION (LERC)**  
**1-225-925-6595**  
Louisiana State Police HAZMAT Response Unit  
Baton Rouge, LA
  
- VII. **CADDO LEPC**  
**675-2255**  
Local Emergency Planning Committee  
Caddo Office of Emergency Preparedness  
Shreveport, LA
  
- VIII. **LA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ)**  
**1-225-342-1234**  
Hazardous Materials Spills (24 Hours)  
Baton Rouge, LA

**IX. U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)**

**1-800-887-8063**

EPA Region VI

Dallas, TX

# Appendix 9 – Hazmat Release Reporting Form

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Courtesy Call ( ) Reportable ( ) Parish \_\_\_\_\_ LSP Incident # \_\_\_\_\_ Date  
Time \_\_\_\_\_

Caller's Name: \_\_\_\_\_ Notified: \_\_\_\_\_  
Occurred: \_\_\_\_\_

Caller's Phone # ( \_\_\_\_\_ ) Secured: \_\_\_\_\_  
Incident Location: \_\_\_\_\_ Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_  
Company: \_\_\_\_\_ Address: \_\_\_\_\_  
Chemical Released: \_\_\_\_\_ Qty: \_\_\_\_\_ RQ: \_\_\_\_\_  
Hazard Class: \_\_\_\_\_ ID: \_\_\_\_\_ EHS ( ) Solid: \_\_\_\_\_ Liquid: \_\_\_\_\_ Gas: \_\_\_\_\_

Did Material Go Offsite? Yes: \_\_\_\_\_ No: \_\_\_\_\_ Released to: Land: \_\_\_\_\_ Water: \_\_\_\_\_ Air: \_\_\_\_\_ Any Off-Site  
Protective Action? Yes: \_\_\_\_\_ No: \_\_\_\_\_ Road Closure: \_\_\_\_\_ Shelter: \_\_\_\_\_ Evacuation: \_\_\_\_\_

Wind Direction: \_\_\_\_\_ Wind Speed: \_\_\_\_\_ Temperature: \_\_\_\_\_  
Precipitation: None: \_\_\_\_\_ Rain: \_\_\_\_\_ Hail: \_\_\_\_\_

Sleet: \_\_\_\_\_ Snow: \_\_\_\_\_

Fire: Yes: \_\_\_\_\_ No: \_\_\_\_\_ Injuries: Yes: \_\_\_\_\_ No: \_\_\_\_\_ # \_\_\_\_\_ Fatalities: Yes: \_\_\_\_\_ No: \_\_\_\_\_ # \_\_\_\_\_

Details: \_\_\_\_\_

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## FOR LEPC USE ONLY:

Emergency Operations Center (EOC) Activated? Yes ( ) No ( )

Response Agencies Notified? SFD @ 675-2137 ( ) Time: \_\_\_\_\_ SPD @ 675-2165 ( ) Time: \_\_\_\_\_

CPSO @ 675-2170 ( ) Time: \_\_\_\_\_ Caddo Fire District: \_\_\_\_\_ ( ) Time: \_\_\_\_\_

VFD: \_\_\_\_\_ ( ) Time: \_\_\_\_\_

Telephone Warning System Activated? Yes ( ) No ( ) Responsible Party: \_\_\_\_\_

Other Warning System/Public Information System Activated? EAS ( ) Cablewarn ( ) NOAA Weather  
Warning Radio ( ) News Media ( )

If Evacuation Ordered, Shelter Set-Up At: \_\_\_\_\_

Roads Closed: \_\_\_\_\_

# Appendix 10 – WIPP Transportation Accident Plan

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## **I. GENERAL**

The U.S. Department of Energy (DOE) began shipments of transuranic “TRU” radioactive waste to the Waste Isolation Pilot Plant (WIPP) site in Carlsbad, New Mexico on March 26, 1999. The material is transported in specifically designed shipping containers. “Transuranic” means heavier than uranium, which is the heaviest naturally occurring element. Much of the transuranic waste that will be disposed of at the WIPP was left from DOE research and the production of nuclear weapons. Currently, the waste is stored at 33 DOE sites located throughout the United States. Because it will be transported across more than 9,000 miles of highway in 31 states en route to the WIPP, the transuranic waste shipments must be carefully monitored and safely conducted at all times.

Most of the transuranic wastes coming to the WIPP will consist of clothing, tools, rags and other similar items contaminated with trace amounts of radioactive elements, mostly plutonium. The waste will be shipped to the WIPP in “Transuranic Package Transporters” known as TRUPACT-IIs. The TRUPACT-II container received a Certificate of Compliance in 1989 from the Nuclear Regulatory Commission. Transuranic wastes have long half-lives and require safe transportation, handling and disposal. At the WIPP, transuranic wastes will be stored 2,150 feet beneath the earth’s surface in the middle of a bedded-salt formation that has remained stable and free of ground water for 225 million years. The National Academy of Sciences (NAS) concluded “The system proposed for the transportation of transuranic waste to WIPP is safer than that employed for any other hazardous material in the United States today and will reduce the risk to very low levels.”

The WIPP transportation plan was developed in full compliance with Department of Transportation regulations, which allow individual states to designate primary and alternate in-state transportation routes for WIPP shipments.

## **II. TRANSURANIC WASTE**

Transuranic Waste has an atomic number greater than 92 (uranium), it is primarily an alpha emitter, has a half-life greater than 20 years, and has a concentration greater than 100 nanocuries per gram of alpha waste (activity).

Almost all the transuranic waste (TRU) waste that will be transported to and disposed of at the WIPP, consists of everyday items such as rags, rubber gloves, shoe covers, cloth lab coats and plastic bags. Heavier items may include valves, pumps, motors, tools and laboratory glass. This is trash, contaminated with transuranic elements such as Plutonium (Pu), Curium (Cm), Americum (Am) and Californium (Cf) just to name a few.

### **A. Contact Handled Waste (CH)**

Contact handled transuranic waste is defined as TRU waste whose external contact dose rate does not exceed 200 mrem per hour (exposure rate on the outside of the drum). Transuranic waste consists of items contaminated with amounts of transuranic not economically feasible to recover. All waste received by the WIPP have been created by nuclear defense activities.

**B. Remote Handled Waste (RH)**

Remote handled transuranic waste is defined as packaged TRU waste whose external surface dose rate exceeds 200 mrem per hour (exposure rate on the outside of the drum).

For WIPP, there is an upper limit of 1000 rem per hour at contact with the internal container. This type of waste will be transported in heavy casks similar to the type used for spent fuel transport. Only 5% of the RH waste may exceed 100 R/hr.

The types of waste material will be identical between CH and RH waste with the designation dependent on the external dose rate.

NOTE: It is not expected that any RH waste shipments will be transported through Caddo Parish until the years 2003 or 2004. Only 3% of waste at WIPP will be RH waste.

**C. Restricted Liquids**

The total volume of the residual liquid in a payload container (RH or CH) shall be less than one volume percent of the payload container (i.e., 1% liquid). Radiography or visual examination shall be used to determine the presence of liquids and to estimate the quantity of liquid in retrievable – stored waste.

NOTE: In other words, if there is liquid on the ground at a WIPP shipment accident site – it is not radioactive. Liquid waste is not acceptable at the WIPP!

**D. Mixed Waste**

Mixed waste is radioactive waste co-contaminated with hazardous chemical constituents as defined in federal law. CH and RH-TRU waste shall contain hazardous constituents only as co-contaminants with transuranics. All CH and RH-TRU mixed waste exhibiting corrosive, reactive, or ignitable characteristics shall be treated to remove the hazardous characteristic.

NOTE: 96-98% of arriving TRU waste at WIPP is solid mixed waste. Nothing in the TRUPACT-II container will BLEVE. There is no labeling or placarding required for the chemical components – the amount is not enough to meet federal requirements.

**E. Prohibited Materials**

CH and RH-TRU waste payloads shall contain no explosives, corrosives or compressed gases. In a rare event that a package received at WIPP does not meet the acceptance criteria, the package may be shipped back to the generator site for repackaging (as defined in 40 and 49 CFR).

**III. PACKAGING**

**A. Type A Packaging**

Type A packages must be able to protect their contents from all normal conditions of transport: in other words, they must be able to withstand extensive rainfall, drops, stacking (compression) and penetration by a dropped weight.

Type A containers used at WIPP are 55-gallon drums, ten drum overpack, the pipe overpack or standard waste boxes. They will be used to hold waste inside the TRUPACT-II or the HALFPACK

**B. Type B Packaging**

The TRUPACT, HALFPACK and RH-72B Cask are Type B packages that will be used in the transport of radioactive materials. To meet Nuclear Regulatory Commission (NRC) certification standards, a Type B package must meet a series of stringent tests conducted on the container (transport accident conditions):

1. A drop from a height of 30 feet onto an unyielding surface.
2. A drop onto a steel spike from 40 inches to test puncture resistance.
3. Exposure to jet fuel fire at a temperature of 1,475 degrees Fahrenheit for a minimum of 30 minutes.

These tests show that the container would hold its seal and prevent release of radioactivity to the atmosphere. The tests are conducted on the most vulnerable point of the container.

**C. RH Waste Packaging**

The RH canister is made of mild steel that will be approximately 3/8" thick. Inside of the canister there will be three 30 or 55 gallon metal drums. There may be additional one-gallon pails containing the waste inside the drums. The canister can be loaded direct with items too large for drums. The maximum exposure rate at the surface of the canister is limited to 1,000 rem/hr. The canister, containing drums, is welded shut and qualifies as a Type A package.

**D. RH Shipping Cask**

The Remote Handled (RH) cask is constructed of an outer skin of approximately 1 1/2 inches of stainless steel, followed by approximately 2 inches of lead, with an inner skin of 1 inch of stainless steel. The end plug is

8 1/2 inches of stainless steel held in place by 18 stainless steel bolts with recessed heads. Each shipment of remote handled waste will contain only one cask. The cask is placed on the trailer between two large impact limiters. The weight of the cask will be limited to a legal load as defined by the Department of Transportation for total over the road weight.

**E. RH-TRU Transportation**

Remote handled shipments will be transported in a package known as the RH-72 B Cask. Remote handled shipments will account for approximately 3% of the total volume of waste at WIPP. Remote handled waste emits more gamma radiation than contact handled waste and therefore must have heavier shielding for transportation. The waste is inside drums, within a canister, inside the cask. This container and transportation system is designed to shield personnel and the environment from penetrating gamma radiation that is produced by the RH-TRU waste. One RH-72B Cask will be carried on a specifically designed flatbed trailer.

**F. TRUPACT-II**

The container is called Transuranic Packaging Transporter Model 2, or TRUPACT-II. It is a Type B Package, certified by the NRC, and meets the U.S. DOT safety requirements. It is double-contained, non-vented, and constructed of stainless steel. The weight of the TRUPACT II is 12,700 lbs. empty and 19,265 lbs. loaded.

**G. HALFPACK**

The HALFPACK will be a NRC certified Type B container. The concept behind the HALFPACK is the ability to carry heavier loads without the use of dunnage.

The payload will be one Standard Waste Box, one 7-Pack of 55-gallon drums or four 85-gallon overpack drums. The gross weight is estimated at 17,500 lbs, including payload. This container is currently undergoing review of the testing and evaluation of the data by the NRC.

**H. “U”-Shaped Tie-Downs – TRUPACT-II/HALFPACK**

Each TRUPACT-II/HALFPACK has four “U” shaped tie-downs hold them in place on the trailer. The tie-down U-bolts (an integral part of the trailer) are not as strong as the tie-down lugs (an integral part of the TRUPACT-II/HALFPACK). Tie-down lugs, by NRC regulation, which are part of the package must be able to withstand 10 times the weight of the package in the forward direction, 5 times in the lateral direction and 2 times in the vertical direction. The aggregate total of the tie-downs must be able to withstand one and one-half times the weight of the package. A visual check of these tie-downs at the scene of an accident should be made to ensure they are still intact. If the tie-down is obviously broken, deformed or missing, keep all personnel clear. This is to prevent injury in case the TRUPACT-

II/HALFPACK should fall and roll. NOTE: The TRUPACT- II/HALFPACK will float – it is a pressurized container!

#### **IV. TRANSPORTATION**

##### **A. Routes (See Attachment 1 Map)**

The TRU waste transportation route through Caddo Parish will be on Interstate 20 (westbound loaded and eastbound empty). The TRU waste truck will take the Interstate 220 By-Pass through Shreveport (westbound loaded and eastbound empty).

The selection of routes was based on U.S. Department of Transportation (DOT) regulation 49 CFR 177.825 (Routing and Training Requirements for Radioactive Materials). Interstate highways and their alternates were used, when available, based on their safety features and the directness of their routes. States can designate alternate routes provided that they follow established DOT regulations.

##### **B. Shipping Papers**

Shipping papers are always carried in the driver's side door pocket, usually in a metal folder. At the top of the paper should read "Straight Bill of Lading." The shipping papers may also include a "Uniform Hazardous Waste Manifest." The shipping information can be retrieved from TRANSCOM (computer tracking system) if not readily available from truck.

NOTE: TRANSCOM sites for Louisiana are located at the Office of Homeland Security and Emergency Preparedness, State Police Office and the Department of Environmental Quality. All three terminal sites are in Baton Rouge.

The shipping papers contain information on the shipment being transported to WIPP:

1. Origin (consignee)
2. Destination (consignor)
3. Identification of the radioactive material
4. Proper shipping name including the identification number (UN or NA)
5. Emergency Telephone Numbers

When looking for documentation about the shipment, headings like "Bill of Lading" or "Radioactive Materials Shipment Record" are helpful."

##### **C. Radioactive Labels**

Labels are placed on packages. 49 CFR 172.406 (e) states that packages must have labels placed "on two sides (other than the bottom) of each non-bulk package containing a radioactive material." The contact-handled TRUPACT-II is an example of a package, also the standard waste boxes and drums. A "Radioactive I" label will be all white with contents and the isotope listed

(plutonium, curium, americium, etc.). It will also reflect the activity level of the package. A “Radioactive II and III” label is a yellow on top and white on the bottom with content, activity and transport index listed. The transport index is the radiation reading at one meter from the surface of the package.

**D. Transportation Index**

1. Radioactive White I  $<.05$  mrem/hr (no exposure at 1 meter)
2. Radioactive Yellow II  $.05$  mrem/hr  $\leq 50$  mrem/hr
3. Radioactive Yellow III  $50$  mrem/hr  $<RL$

Placarding is based on labeling, which is based on radiation level and/or curie/becquerel content. A placard is required if one or more packages are labeled Yellow III, i.e. the surface dose rate is greater than 50 mrem/hr or the transport index is equal to or greater than 1.0. The transport index is a good indicator for determining the external radiation hazard of an undamaged package and a good starting point for determining whether damage has occurred. Transport index is defined as the non-dimensional number (rounded up to the first decimal place) placed on the label of a package to designate the degree of control to be exercised by the carrier during transportation.

**E. Empty label**

Upon return to the generator site, the TRUPACTs or the HALFPACT will have an empty label on the package. Even though the TRUPACT-II or the HALFPACK will be labeled “empty” and will contain no radioactive materials, it may contain loading pallets or empty drums for use at the generator sites.

**F. Radioactive Placard**

The standard placard for radioactive material is yellow on top, white on the bottom, with black lettering and a black radiation symbol in the yellow portion. In the bottom corner is the United Nations number “7”, denoting radioactive materials. The standard radioactive placard, placed on a white background with a black border, denotes that the shipment is a Highway Route Controlled Quantity (HRCQ) placard is based on curie content and isotope. 49 CFR 172.504 states that placards must be in plain view and displayed on the rear of the transport vehicle, each side of the transport vehicle, and on the front of the transport vehicle or trailer.

**G. The Emergency Response Guidebook**

The Department of Transportation’s 1996 North American Emergency Response Guidebook provides guidelines for emergency responders to use for all types of hazardous materials, including radioactive materials. Remember that this is only a guide and should not take precedence over local standard operating procedures. The Emergency Response Guidebook recommends that CHEMTREC should be called for emergency assistance at 1-800-424-9300. However, for specific information on transuranic waste, it is recommended that the first responder call the State Radiological Safety Office first through the

Louisiana Department of Environmental Quality (Radiological Division) and follow their instructions. Remember the guidebook is a guide only. It can assist first responders in making decisions, but should not be considered a substitute for your own knowledge, judgment or experience. The guidebook has recommendations that are the most likely to apply in the majority of cases and does not represent recommendations that are adequate or applicable in all cases. The North American Emergency Response Guidebook is intended to assist first responders at an incident site to make an informed decision to the type of hazard involved and what initial precautions to take. In order to effectively use the Emergency Response Guidebook, the first responder should become familiar with it prior to any emergency.

#### **H. Recommendations For A WIPP Shipment**

If the TRUPACT-II is labeled “EMPTY” or is not damaged in an accident, the first responder should use GUIDE 161 (low-level radiation). Guide 161 is the least restrictive guide for radioactive materials. Use this if you are sure that there has been no release of contents.

If you are unsure of the condition of the TRUPACT-II or there is evidence to indicate that a breach of contents has occurred, Guides 163 or 165 should be used and the guidelines followed (see shipping papers). When applying this to the worst-case contact handled accident, this guide will reduce the possible exposure to the first responder to as low as reasonably achievable. All accidents involving remote handled TRU waste will call for the use of Guide 165.

NOTE: Guides 161, 163 and 165 state “Priorities for rescue, life-saving, first aid, and control of fire and other hazards are higher than the priority for measuring radiation levels.”

#### **V. TRANSCOM TRACKING SYSTEM**

The TRANSCOM Tracking System (satellite) provides near real-time tracking of shipments. The System provides communications between the carrier, DOE, states and tribal governments. The System provides emergency response information and a permanent record of shipment information.

WIPP shipments will be enhanced by the use of a satellite tracking system. It can track a vehicle 24 hours a day, seven days a week. State and tribal governments have been provided access to the system by use of a compatible computer, modem, software and training provided by the DOE free of charge. Information available from TRANSCOM includes:

1. Cargo information
2. Emergency notification telephone numbers
3. Emergency response information (DOT ERG)
4. Truck location
5. Advance shipping schedule

NOTE: If TRANSCOM has a failure, drivers are required to call in every two hours or every 100 miles, at each stop, if delayed or at the state border. TRANSCOM sites for Louisiana are located at the Office of Homeland Security and Emergency Preparedness, State Police Office and the Department of Environmental Quality. All three terminal sites are in Baton Rouge.

## **VI. INITIAL RESPONDER ACTIONS**

### **A. Recognition**

Many haz/mat events are not clearly reported as haz/mat incidents. They may be reported as a traffic accident, medical aid call, or a fire call. The initial call may hide the real haz/mat problem. It is important to look for clues that will help determine if hazardous materials are involved.

Recognition clues include:

1. Location and occupancy
2. Container shapes and sizes
3. Markings and color
4. Placards and labels
5. Shipping papers
6. Other clues and signs

### **B. First Operational Thought**

In order for first responders to effectively carry out their duties, protection and safety of the first responder must be foremost. The first actions of the first responder should always be SIN:

1. SAFETY first and always.
2. ISOLATE and deny entry.
3. NOTIFICATIONS.

Avoid tunnel vision. Slow down and assess the approach. In a haz/mat incident, a “quick kill” approach may result in injury or death to responders.

### **C. Control the Scene**

Actions by the first responder should contribute to the “solution” not the problem. There must be a positive safety attitude. There must be a safe approach (upwind, uphill and upstream). You must isolate the hazard. Notifications must include directions for a safe response location (staging area).

Safety must be top priority for the first responder and the public through the recognition of the hazardous materials. Protection of the environment should be achieved to prevent the spread of the material(s). Isolate the haz/mat to control the entry point, control the perimeter and control access. Make the

proper notifications. Establish the initial command post and the staging area in a safe location. Contribute to effective and efficient haz/mat response.

**D. Accident Notification**

Typically, the drivers will notify the local authorities of an accident involving the WIPP truck. The WIPP's tracking and communication system makes notification to several entities simultaneously possible. If truck communications are down, drivers will ask passing motorist to call the local police. Usual notification of an incident begins with a local person calling 9-1-1 and reporting that an accident or problem exists.

Notifications may include:

1. The State Hazardous Materials Office (1-225-925-6595)
2. The National Response Center (1-800-424-9300)
3. CHEMTREC (1-800-424-9300)
4. Local law enforcement, fire or haz/mat response team (9-1-1)
5. Others as outlined in the state emergency response plan

**E. Training**

The WIPP transportation plan instructs first responders to do as much as they are trained to do – no more – no less. WIPP transportation first responder's classes have been conducted for city/parish/state/federal response agencies along the transportation routes. Additional training and exercises can be requested by contacting the United States Department of Energy.

**F. Rescue Responsibilities**

For a radiological shipment incident, rescue should not be withheld due to the presence of radioactive materials – if this is the only hazard identified. Personal protective equipment and self-contained breathing apparatus provide excellent protection against alpha and beta radiation from a WIPP shipment. Victim carries and extrication procedures should be implemented and the victim moved to the edge of the "hot zone." Monitor for radiation if the victim's condition allows time for it, otherwise package and transport to the nearest medical facility designated for haz/mat.

**G. Radiation Protection Factors**

1. **Time**  
The less time spend near the source the less radiation received.
2. **Distance**  
The greater the distance from the source the less radiation received.
3. **Shielding**  
The more materials between you and the source the less radiation received.

NOTE: Radioactive material is an internal hazard. Always use respiratory protection when you suspect a release. The most readily available protection for first responders is SCBA.

#### **H. Incident Command**

Haz/mat events require establishing command early, as mandated by 29 CFR 1910.120 (i.e., establish safe response location). Command should be established early to reduce the chaos and aid scene management. Command may be “Single” or “Unified.” The first arriving responder can help command by doing the following:

1. Establish “Temporary Command” formally (including staging area).
2. Setup “Temporary Command Post” in a safe location.
3. Manage the scene until designated IC arrives for briefing (must have a Safety Officer).

### **VII. IDENTIFICATION AND HAZARD ASSESSMENT (IDHA)**

Identification can be very simple for one hazard or a very long and complex process. It is necessary for the protection of life (responders and the publics), the environment and property.

Basic five-step IDHA technique:

1. Identify the substance.
2. Assess all hazards the substance presents.
3. Assess physical and chemical properties.
4. Assess variables and modifiers.
5. Assess behavior and outcomes.

All further actions will be based on the Identification and Hazard Assessment.

### **VIII. FIRST RESPONDER ACTION PLANS**

#### **A. Law Enforcement**

\_\_\_\_\_ First operational thought “Safety”. \_\_\_\_\_ Isolate the hazard and control the scene.

\_\_\_\_\_ Notification of proper agencies (dispatcher, radiological response teams, fire department, medical personnel, etc.).

\_\_\_\_\_ Rescue and isolate victims if in immediate danger (if WIPP radiation is the only hazard).

\_\_\_\_\_ Establish a temporary command and staging area.

Assess the incident and request appropriate resources. Determine the need for protective actions (e.g. rescue, evacuation or shelter-in-place). Identify the product and product characteristics if it can be done safely (i.e. at a safety distance). If

contamination is suspected, detain all personnel/witnesses entering or leaving the exclusion (hot) zone until they are surveyed. Establish a command post and notify other responding agencies of the location. Appoint a “Safety Officer”. Follow all local standard operating guidelines. Coordinate activities with Caddo Office of Emergency Preparedness, the Louisiana State Police Hazardous Materials Unit and the Department of Environmental Quality – Radiation Control Section.

## **B. Fire Services**

- \_\_\_\_\_ First operational thought “Safety”.
- \_\_\_\_\_ Isolate the hazard by establishing an exclusion (hot), contamination reduction (warm) and support (cold) zones.
- \_\_\_\_\_ Notify additional response units as needed.
- \_\_\_\_\_ Fire fighting, rescue and emergency care of victims can be performed prior to the measurement for radiation (if WIPP radiation is the only hazard).
- \_\_\_\_\_ Establish command and staging areas.
- \_\_\_\_\_ Report to the appropriate area for assignments or direction.

The use of structural turnout clothing or aluminized turnouts and self-contained breathing apparatus (SCBA) provide excellent protection from WIPP alpha and beta radiation sources. Always work in pairs (required by OSHA). Nothing should be removed from the exclusion (hot) zone except the victims. This could spread contamination. ANY equipment that is taken into the radiation area, including SCBA, hoses, rescue tools, etc., must be left in the outer edge of the exclusion (hot) zone or at a designated location. Access into the exclusion (hot) zone is to be limited to those persons necessary to control the incident.

## **C. Emergency Medical**

- \_\_\_\_\_ First operational thought “Safety”.
- \_\_\_\_\_ Isolate the hazard by establishing an exclusion (hot), contamination reduction (warm) and support (cold) zones (if not already done).
- \_\_\_\_\_ Notify additional response units as needed.
- \_\_\_\_\_ Rescue and emergency care of victims can be performed prior to the measurement for radiation (if WIPP radiation is the only hazard).
- \_\_\_\_\_ If contamination is suspected, package the patient (wrap in a sheet or blanket) to prevent spread of contamination when the patient is passed to the ambulance for transport.
- \_\_\_\_\_ Establish command and staging areas (if not already done).
- \_\_\_\_\_ Report to the appropriate area for assignment or direction.

Personnel providing medical care in the exclusion (hot) zone should wear appropriate protective clothing equipment as directed by local protocol. Base treatment on injury. No special treatment of the injury is necessary due to the presence of radioactive materials. Do not delay life support if victims cannot be moved or in order to assess contamination status. Move victims away from the

radiation hazard area, using proper patient transfer techniques to prevent further injury. Notify the emergency room of a possible contaminated patient.

#### **D. Ambulance Crews**

\_\_\_\_\_ Victims should be monitored at the edge of the exclusion (hot) zone for possible contamination only if they are medically stable.

\_\_\_\_\_ If DECON is necessary, remove the contaminated victim's outer clothing.

\_\_\_\_\_ Move the ambulance cot to the clean side of the control line and unfold a clean sheet or blanket over it. Place the victim on the covered cot. Do not remove the victim from the backboard if one was used.

\_\_\_\_\_ If possible, the victim should be transported by personnel who have not entered the exclusion (hot) zone.

\_\_\_\_\_ Ambulance personnel attending the victims should wear gloves and available respiratory protection.

Transport the victims to areas designated by the hospital. The hospital should be given additional, appropriate information, and the ambulance crew should ask for any special instructions the hospital may have. The ambulance and crew should not return to regular service until the crew, vehicle and equipment have undergone monitoring and necessary decontamination by the radiation safety officer. Personnel should not eat, drink or smoke at the accident site, in the ambulance, or at the hospital until the radiation safety officer has released them.

#### **E. Emergency Dispatch**

\_\_\_\_\_ First operational thought "Safety".

\_\_\_\_\_ Question the caller/rp is there a chemical or other hazard involved in this request for help.

\_\_\_\_\_ If this is a haz/mat call, can the caller/rp give a description of the hazard involved (liquid on the ground, strong odor in the air, visible vapor or cloud in the air, etc.).

\_\_\_\_\_ Is there a diamond shaped sign on the truck or building and what are the numbers on that sign (placards or labels).

\_\_\_\_\_ Notify responding units of the information received and the need for additional caution upon approaching the site.

If time allows, the dispatcher may look up the hazard in the Emergency Response Guidebook or other referenced materials. Once the first responding unit is at the call, a safe response location for additional units should be established.

### **IX. DECONTAMINATION, DISPOSAL AND DOCUMENTATION (DDD)**

Although the probability of a release of radioactive materials from a TRUPACT-II is remote, the emergency responders' concern about potential contamination of themselves or victims is valid. The goal (purpose) of contamination control is to prevent the spread of contamination to individuals or to the other objects. Should

any radioactive materials leave the exclusion (hot) zone, additional personnel, property and the environment may be in jeopardy of exposure to radiation.

#### Decontamination

1. Purpose - To prevent the spread of contamination.
2. When - Any time contamination is suspected.
3. What – People (victims and responders, equipment, etc.)
4. How – Only general guides based on factors of events.

#### **A. Field Decon Setup**

The first step in contamination control (decon) is to establish (if necessary) and setup an area where the first responder may step from the exclusion (hot) zone to the contamination reduction (decon or warm) zone. It is the “exit corridor” from the exclusion zone. The scope of the incident, nature of the hazard and number of personnel involved will dictate the size of the area to be designated as the contamination reduction zone. Agencies must develop their own decon plans and procedures depending on their resources and needs.

Questions that must be answered prior to setup:

1. Can decon be conducted safely?
2. Are the resources available for the immediate decontamination of personnel and equipment?
3. Can the equipment be decontaminated?
4. Can the equipment available detect the hazard?

Site selection:

1. Ideal site is upwind, uphill and upstream of the incident.
2. An area large enough and flat enough to allow for a safe decon.

#### **B. Decontamination Procedure**

1. Departmental protocols and procedures must be followed.

If available, field decon should be accomplished for radiation under the direction of person(s) trained in radiation monitoring.

2. Primary decontamination may be as simple as removing the outer layer of clothing.

Special care should be taken to avoid transferring contamination during this process.

3. Monitor

If found to be clean, proceed to the medical station. If found to be contaminated, proceed to secondary decon.

### **C. Secondary Decontamination**

1. Secondary decontamination requires the use of warm water and mild soap.

Caution: scrubbing may cause abrasions to the skin, which could add to the absorption of the hazard. Be aware that liquids can mask an alpha particle making it hard to detect with an instrument. All liquids and materials used must be captured and packaged as a hazardous material until properly surveyed.

2. Monitor

If found to be clean, proceed to the medical station. If found to still have contamination, repeat secondary decon procedure.

3. Medical evaluation should be completed on all personnel who have entered the exclusion (hot) zone.

### **D. Injured Accident Victims**

Field decontamination of injured persons prior to transport to the hospital is generally not recommended. If contamination is suspected, you can isolate the hazard by packaging the patient in a blanket or sheet (cover all of the patient except the head). Treat the patient injuries – not the contamination. The first responders who enter the exclusion (hot) zone should pass the packaged patient across the line to a pair of EMS personnel who have not been in the hot zone. The ambulance transporting the patient should notify the hospital and follow their directions for dealing with a possible contaminated patient. The ambulance should remain out of service until it has been surveyed.

### **E. Decon Tips/Guides**

For a WIPP incident, gross decon for the first responder and the victim that do not require immediate medical attention can be accomplished by the removal of the outer layer of clothing.

Performance of even a gross decon in adverse weather may not be possible and alternate arrangements should be outlined in departmental standard operating guidelines. If you transport a patient without doing a decon, notify the hospital before arrival of the possible contamination and follow their directions for bringing the patient into the hospital.

1. Initial planning, training and SOPs are important.
2. Establish a decon team under a decon leader.
3. Ensure the decon team has the proper tools.
4. Ensure the decon team observes safety guidelines.
5. Know the extent of the contamination and need for thoroughness.
6. Protect the decon team with the proper clothing level.
7. Remember that everything used in decon is now considered contaminated.

**F. Disposal – Not the Job of the First Responder**

Funding for a haz/mat clean-up will start with the responsible party. For a WIPP shipment, the transportation contractor is responsible for clean-up and disposal of any radioactive materials that have been released from a TRUPACT-II.

Under the direction of the Incident Commander the transportation contractor will:

1. Give clean-up the highest priority.
2. Provide a qualified clean-up contractor to safely conduct the disposal effort.
3. Remain under the direction of the Incident Commander until it is agreed that the site has been returned to normal.

If additional funding is necessary, the situation would require the activation of the Price-Anderson Act.

**G. Documentation**

Documentation and reporting helps managers understand the hazardous materials problem. It provides a means of training in “lessons learned.” Documentation is the only way that response agencies will be able to recover the costs associated with the hazardous materials incident. Time, resources and damage must be recorded for payment. Documentation will be the legal evidence necessary to recover costs. Documentation must include who, what, when, where, how and why.

**X. ADDITIONAL INFORMATION**

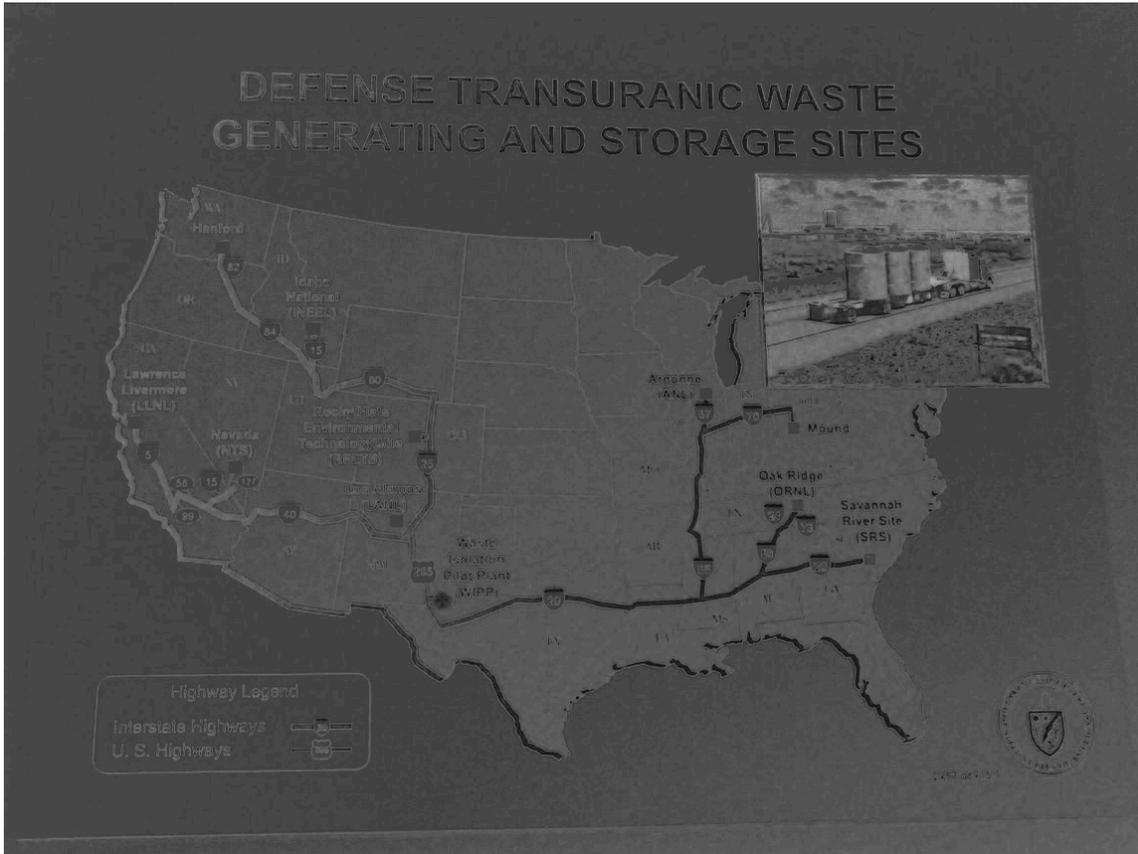
For more information on the Waste Isolation Pilot Plant (WIPP) and the National Transuranic Program contact:

WIPP Information Center  
Waste Isolation Pilot Plant  
P.O. Box 3040  
Carlsbad, NM 88221  
1-800-336-WIPP  
<http://www.wipp.carlsbad.nm.us>

**XI. ATTACHMENTS**

1. TRU Waste Highway Routes

**Appendix 10: Attachment 1 – Tru-Waste Highway Route Map**



## Appendix 11 – Standard Operating Guidelines

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Standard Operating Guidelines (SOGs) for departments/agencies/organizations listed in this annex will be developed by the respective departments listed herein and kept on file in the Caddo Emergency Operations Centers (EOCs). Updates should be forwarded to Caddo OHSEP on a routine basis.

# Appendix 12 – Radiological Protection

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## **I. PURPOSE**

This appendix provides Caddo Parish with an effective radiological protection program and outlines the organization, personnel, equipment and procedures necessary to protect citizens from the potentially devastating effects of a nuclear incident(s). This appendix discusses weapons effects monitoring and plotting procedures, radioactive material (fallout) ingestion pathway and decontamination plans. In addition, this appendix addresses peacetime nuclear accident response, detection and decontamination procedures.

## **II. SITUATION AND ASSUMPTIONS**

### **A. Situation**

Caddo Parish have been designated a risk area by the federal government, primarily for the reasons of Barksdale Air Force Base and certain industrial locations. Caddo Parish could receive thermal and blast effects from a nuclear detonation, radioactive fallout or other peacetime radiological incident. For these reasons, a RADEF system should be operational to afford maximum protection to the citizens of this jurisdiction.

### **B. Assumptions**

1. By properly organizing and developing a RADEF program, the number of casualties from a nuclear attack or peacetime radiological incident will be significantly reduced.
2. Adequate facilities, equipment, and trained personnel will be available to collect, evaluate, and disseminate necessary data, including weapons effects report, meteorological data, plume path and fallout patterns.

## **III. CONCEPT OF OPERATIONS**

### **A. General**

The most important function of a RADEF program is developing a RADEF reporting network. This includes weapons effects reporting and plotting fallout from radioactive releases or other sources of radioactive contamination. These stations collect data on nuclear incidents, such as weapons detonations and radioactive spills or releases, and the hazards that accompany them.

Related activities include assessing damage and monitoring radiation on a continuous basis. An integral aspect of the recovery effort following a nuclear detonation or incident is decontaminating people, facilities, property, animals, and crops to reduce related health hazards.

### **B. Phases of Management**

1. **Mitigation (Prevention)**
  - a. Establish a RADEF program.
  - b. Designate a RADEF officer.
  - c. Identify agencies to be used in RADEF activities.
  - d. Develop RADEF training program.
  - e. Acquire radiological monitoring equipment.
  - f. Develop a RADEF reporting network.
2. **Preparedness**
  - a. Select and train RADEF personnel.
  - b. Train support personnel.
  - c. Train Emergency Operations Center (EOC) RADEF staff.
  - d. Conduct RADEF exercises.
  - e. Maintain, calibrate, and repair radiological monitoring equipment.
  - f. Establish priorities for decontaminating facilities.
  - g. Conduct public information and education programs on radiological hazards and protective actions.
  - h. Acquire special (aerial monitoring) or other monitoring equipment.
3. **Response**
  - a. Activate EOC RADEF staff.
  - b. Deploy RADEF teams to prearranged locations with monitoring equipment.
  - c. Deploy aerial monitoring units, if appropriate.
  - d. Activate RADEF reporting network; i.e., weapons effects or radiological incident reporting stations network.
  - e. Intensify public education and information programs on radiation safety.
  - f. Activate specialized medical teams to handle radiation exposure injuries.
4. **Recovery**
  - a. Continue ground and aerial surveillance.
  - b. Initiate decontamination activities.
  - c. Continue public information and education about radiation safety and self-help decontamination procedures.
  - d. Continue damage assessment.

#### **IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES**

##### **A. Caddo OHSEP Director**

1. Coordinate all RADEF activities.
2. Designate a Radiological Defense Officer.
3. Develop legislation, ordinances, etc., to facilitate and support RADEF program.

##### **B. Radiological Officer**

1. Establish RADEF planning team.
2. Develop RADEF plan.
3. Establish weapons effects or nuclear incident reporting system.
4. Establish an analysis and damage assessment capability.
5. Provide monitoring equipment.
6. Develop comprehensive RADEF communications capability.
7. Establish comprehensive RADEF training program.

**C. Fire Service/Law Enforcement/Hazmat Teams**

1. Assist in monitoring.
2. Assist in decontamination activities.

**D. Military Support**

1. Provide additional monitoring teams and instruments.
2. Provide communications to augment RADEF reporting net.
3. Provide transportation for monitoring teams.
4. Provide aircraft for aerial monitoring equipment.
5. Provide decontamination equipment.

**E. County Agents/Agricultural Service**

1. Provide information to public on effects of radiation on crops, land and livestock.
2. Provide inspection and decontamination of crops, land and livestock.

**F. Public Works/Engineering**

1. Develop techniques for upgrading shelters.
2. Provide monitors for field activities involving public works personnel.
3. Assist in decontamination activities.

**G. Health Units**

1. Develop public information and education programs on effects of radioactive contamination on food and water.
2. Inspect food and water sources for contamination.
3. Supervise decontamination activities.

**H. Medical Services**

1. Advise public about proper treatment for exposure to radiation and radioactivity.
2. Provide medical care for radiation-related injuries and/or exposure.

**V. DIRECTION AND CONTROL**

The RDO is responsible for coordinating all RADEF activities within Caddo Parish. The RDO will establish operations within the Caddo EOC, supervise plotting, damage assessment, and decontamination operations; and be responsible for advising EOC personnel on necessary protective measures to ensure continuous emergency operations. All reports regarding radiological levels throughout the

jurisdiction and predictions for subsequent radioactive fallout will be given to the RDO, evaluated, and recommendations furnished to the Caddo OHSEP Director.

#### **VI. CONTINUITY OF GOVERNMENT**

In the event the RDO is unable to serve for any reason, the following personnel are the designated alternates in the order specified: first alternate - Fire Chief for the affected jurisdiction, second alternate - Assistant Fire Chief for the affected jurisdiction, third alternate - parish health unit director. Assistance may be requested from BAFB and other military units as the situation allows. (See Annex R - Military Assistance)

#### **VII. ADMINISTRATION AND LOGISTICS**

In order to conduct efficient Radiological operations prior to and during an emergency, standard operating procedures (SOP's) for reporting and evaluating radiological intelligence information must be established. In general, all two-way transmission of this information must be made by the best means of communications available (See Tab 2 to this Appendix).

#### **VIII. PLAN DEVELOPMENT AND MAINTENANCE**

The RADEF plan will be developed by the RDO in cooperation with the emergency program manager, with guidance from the Caddo OHSEP Director and executive Council. The RDO will review the RADEF plan at least annually, updating it as necessary. The plan will be tested periodically through an emergency operations simulation involving all elements of the RADEF team. The RADEF Officer will inventory, or cause to be inventoried, all radiological monitoring instruments and kits, and other radiological or RADEF equipment, including communications equipment. All equipment will be checked and calibrated no less than biannually.

#### **IX. AUTHORITIES AND REFERENCES**

See Basic Plan

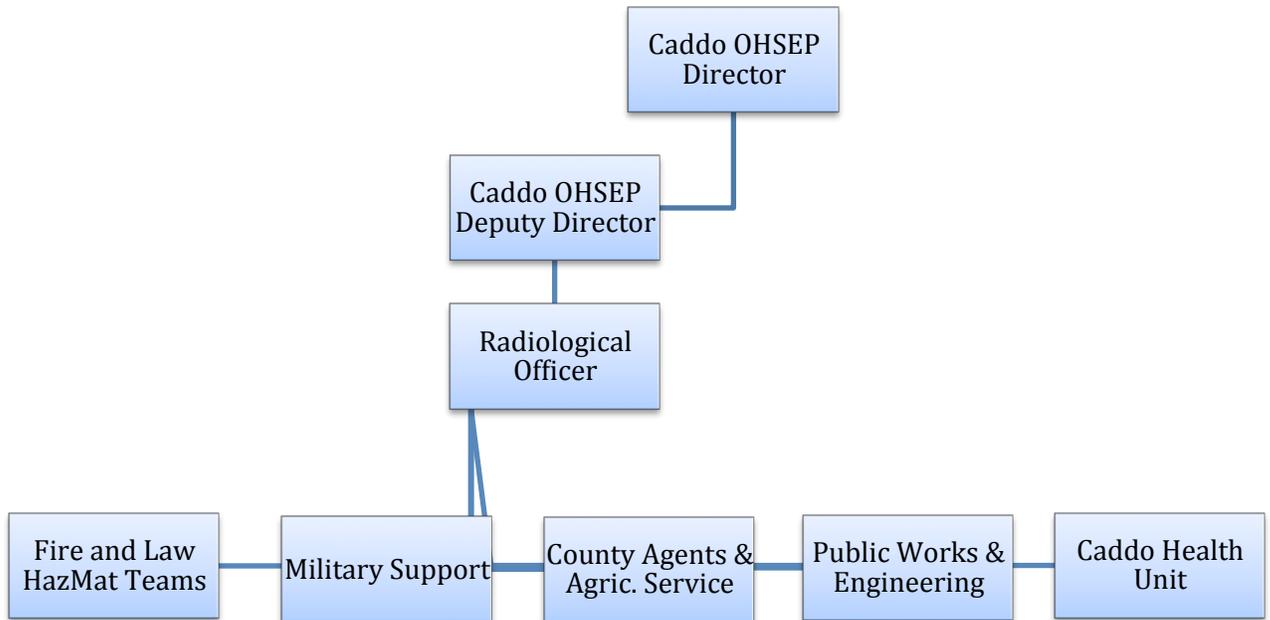
1. Federal Emergency Management Agency. Guide for the Design and Development of a Local Radiological Defense Support System. Washington: FEMA, 1981.
2. Federal Emergency Management Agency. The Radiological Defense Support System. Washington: FEMA, 1982.
3. Federal Emergency Management Agency. Task Analysis for Radiological Monitors. Washington: FEMA, 1982.
4. National Council on Radiation Protection and Measurements. Radiological Factors Affecting Decision-Making in a Nuclear Attack. Washington, 1974.
5. Office of Civil Defense. Handbook for Radiological Monitors. FG-E-5.9. Washington: OCD, 1963.

#### **X. TABS TO APPENDIX (12)**

1. RADEF Organizational Chart
2. EOC Standard Operating Guideline

3. Accidents Involving Radiological Material
4. Enemy Attack: Real or Threatened
5. Radiological Expansion for Crisis Relocation
6. Radiological Monitoring Teams: Assessment and Protective Actions

**Appendix 12: Attachment 1 – Organizational Chart**



## ***Appendix 12: Attachment 2 – EOC Standard Operating Guideline (SOG)***

### **I. PURPOSE**

To establish operational procedures for the radiological team in the EOC during emergency operations involving the possibility of or an actual attack situation.

### **II. RESPONSIBILITIES**

During nuclear emergency situations, the Radiological Officer (RO) will be responsible to the Director, through the Chief of Operations, for the timely accomplishment of his/her duties.

### **III. ORGANIZATION**

The EOC 1. 2. 3. 4. 5. 6. 7.

Radiological Team should consist, as a minimum, of the following: One qualified Radiological Officer

1. One qualified Assistant Radiological Officer
2. Two Monitor Chiefs
3. Two Analysts
4. Four Plotters
5. One Decontamination Officer
6. An individual familiar with meteorology

### **IV. EQUIPMENT, SUPPLIES, AND PREPARATION**

1. A supply of administration supplies such as paper, pencils, forms, etc. will be kept in the EOC to allow operations 24 hours per day over a period of 14 days. This will consist of, but not be limited to, the following:
  - a. Radiation Exposure Record for all EOC personnel.
  - b. Radiological Reporting Log Forms.
  - c. One official map of the United States with acetate overlay.
  - d. One official Louisiana map with acetate overlay.
  - e. One official map of Caddo and Bossier Parishes with acetate overlay.
  - f. Three maps of Shreveport and Bossier City with acetate overlay.
  - g. One Region VI map with acetate overlay.
  - h. One RAWIN Station Vector overlay.
  - i. One roll of RAWIN data plotting maps.
  - j. One RADEF Operational Kit.
  - k. A supply of grease pencils for marking on acetate overlays.
2. A list of all monitoring stations with names and addresses of personnel trained as monitors will be maintained and kept current by the RO at all times.
3. The entire EOC Radiological Team will be thoroughly familiar with Part E, Chapter 5 and annexes thereto, of the Federal Civil Defense Guide,

and especially with "Guidance for Computing Equivalent Residual Dose (ERD)".

## **V. PROCEDURES**

### **A. Normal Peacetime Readiness**

1. Prepare attachments and SOGs for this appendix as needed.
2. Review and update radiological plans and SOGs periodically.
3. Maintain current data on radiological monitors, stations, and equipment available in this risk area.
4. Establish means of communications and reporting procedures for fixed and mobile radiological monitoring stations.
5. Determine how requirements for radiological personnel and equipment will be met at time of relocation.
6. Establish nuclear detonation (NUDET) reporting procedures.
7. Determine what additional radiological personnel, training, and equipment will be necessary for crisis relocation operations.

### **B. Increased Readiness**

1. Complete any unfinished normal readiness plans and actions.
2. Obtain and distribute necessary additional radiological equipment.
3. Begin accelerated training of Radiological Monitors.
4. Ensure that radiological equipment and communications are in place and ready to operate.
5. Test radiological communications system and monitoring equipment.

### **C. Pre-Attack (Crisis)**

Upon activation of the Caddo EOC on proper authority, after warning is received that an attack is possible or imminent, the Radiological Officer (RO), after reporting to the Chief of Operations, will:

1. Call to duty the EOC Radiological Team, inform them of the situation and arrange work shifts to allow 24 hour per day coverage.
2. Alert and order to duty stations all fixed station monitors and arranges for each station to pick up a walkie-talkie mobile radio unit.
3. Alert and call to duty stations all Shelter Monitors.
4. Have all radiological instruments tested and distributed as required.
5. Prepare all supplies and equipment for radiological operations and ascertain readiness.
6. Check out all communications, radio and telephone, between the EOC and the fixed monitoring stations and shelter.
7. Notify the Chief of Operations when all is ready.

### **D. Survival**

1. Upon receipt of verified information of an actual attack upon the nation, the RO will:
2. Notify all his personnel giving them all available information.
3. As further reports arrive, as soon as possible, commence all plotting and analyzing operations.
4. Make timely reports to the State Headquarters when required (See following paragraph VII).

5. Receive, plot, and analyze all radiological reports from Monitors.
6. Keep the Chief of Operations informed at all times of the situation.
7. When required, monitor the EOC for radiation and maintain ERDs on all EOC personnel.

**E. Post Attack (Recovery)**

Following the attack the RO will:

1. Continue to receive radiation information from Monitors, analyze, and plot this data as during the attack situation.
2. Continue reports to the State EOC, keeping them informed of any changes in radiation intensity.
3. Keep the Chief of Operations informed at all times of the radiation situation.
4. Using RAWIN data received from the NWS, attempt to predict the immediate future conditions.
5. Determine when it is safe for the sheltered to leave their shelters.
6. Assist the Decontamination Officer in recovery operations.
7. Ascertain that he receives all personnel ERDs from all shelters in order to assist medical personnel for future medical treatment.
8. Determine safe as well as dangerous areas for the information of recovery and decontamination teams.

**VI. AERIAL MONITORING**

1. Within 24 to 48 hours following the attack, the State Radiological Officer may request aerial monitoring within certain boundaries in our two-parish area. A formal agreement exists between the LA Office of Homeland Security and Emergency Preparedness (LOHSEP) and the LA Civil Air Patrol that authorizes aerial monitoring utilizing CAP aircraft. In the event it is deemed necessary, the Caddo-Bossier OHSEP Director may request from the State SARDA Director aerial monitoring missions from the State EOC.
2. Precise instructions will be given to the CAP by the State SARDA Director regarding routes, course legs or points to be monitored and times for monitoring. Specific guidance and information will include the following:
  - a. A clear and concise statement of mission.
  - b. Available information on the area to be surveyed including limits, ground dose rates (if known), source of contamination, terrain, and weather.
  - c. Time of departure and return, routes, and alternate routes to the area and maximum and minimum altitudes authorized by the Federal Aviation Administration (FAA).
  - d. Approximate ground speed and time interval between readings.
  - e. Maximum permissible dose rate and dosage for mission including action to be taken in the event limits are exceeded.
  - f. Manner of reporting the information obtained on the survey

(radio, airdrop during flight, telephone, or other means after landing). If possible, the pilot will be supplied with a walkie-talkie mobile unit tuned to the frequency of base station KYQ415 to enable the receipt of on -the-spot reports.

3. All aerial monitoring missions must be approved by the State SARDA Director.
4. Upon receipt of aerial monitoring radiation information, the RO will plot and analyze the data and attempt to identify the locations of the safe areas as well as the hazardous areas.

## ***Appendix 12: Attachment 3 – Accidents Involving Radiological Material***

### **EMERGENCY ASSISTANCE FOR RADIATION INCIDENTS**

#### **LA DEQ – RADIOLOGICAL EMERGENCY RESPONSE**

**(225) 765-0160**

#### **TWENTY-FOUR (24) HOUR NUMBER**

### **I. PURPOSE**

It is the purpose of this appendix to provide guidance relative to procedures to be followed should an accident involving radioactive materials occur. It must be emphasized that the preliminary responsibility for such action in our local area lies with the LA Board of Nuclear Energy, Division of Radiation Control, located in Baton Rouge, LA. The Caddo Office of Homeland Security and Emergency Preparedness (OHSEP) Radiological Officer (RO) or his/her assistant can only assist the Radiation Control Division.

### **II. SITUATION AND ASSUMPTIONS**

#### **A. Situation**

The peacetime use of radioactive materials has been expanded over the past several years to such an extent that they are now extensively employed in many fields beneficial to mankind. Naturally, such expansion has resulted in more radioactive materials being transported all over the nation by truck, train, and aircraft. Therefore, it is required that appropriate safety measures be taken to protect the general public.

#### **B. Assumptions**

Generally, the probability of exposure to radiation resulting from a transportation accident is rather remote. However, the safe handling of such materials following an accident does require the presence of individuals who are specifically trained in radiological procedures to minimize accidental radiation exposure from improper handling.

### **III. RESPONSE GUIDELINES**

#### **A. Caddo OHSEP**

In the event the Caddo Office of Homeland Security and Emergency Preparedness receives notification of an accident involving possible or actual radioactive materials, the Radiological Officer (RO) or his/her assistant will be immediately notified.

1. Obtain the following information
  - a. Name of person making the notification
  - b. Telephone number
  - c. Exact location of accident
  - d. Time accident happened
  - e. What type of radioactivity is expected
  
2. Inform the person making notification of the accident to take security

measures by isolating the accident scene and keeping people away, preferably upwind from the material and at least 200 feet away.

3. Contact the LA Radiation Control Division (RCD) by phone and provide information about the incident. The RCD will probably request a personal investigation on the part of the RO who may comply.
4. After conducting an on-scene investigation and informing security personnel of the hazards (if existing), return to OHSEP Headquarters and again contact the RCD and inform them of the investigation.
5. The RO may act only on instructions from the RCD and will not take any action on his own.

#### **B. Emergency Response Agencies**

1. Notify Caddo OHSEP, who in turn, will contact the Radiological Officer (RO) and other state and federal agencies.
2. Isolate the incident area. Rescue injured and initiates any needed emergency medical treatment. Detain all concerned until Radiological (HAZ/MAT) Monitoring Team arrives. Team will check all personnel for radioactive contamination with their instruments. This is a highly technical field, and competent hazardous material professionals must perform this work. No material or equipment should be removed from the scene without being surveyed by the monitoring team. Fire can be fought, following hazardous materials precautions, with minimum dispersal of water or material runoff. No food or beverages should be consumed in the incident area.
3. The Radiological (HAZ/MAT) Monitoring Team will test for radiological contamination and effect decontamination where necessary. The Radiological Monitoring Team will come under the command of the incident commander or official-in-charge at the site.
4. Depending on the magnitude of the incident, request Caddo OHSEP to activate the Emergency Operations Center (EOC). Law enforcement will be needed for security of the area. Public works departments may be needed for debris clearance. Evacuation may be necessary. Before any victims of an incident involving radioactive materials, such as a highway accident, are taken to hospitals for treatment, be sure EMS Transportation Officer notifies hospital personnel that radioactivity may be involved. Victims and equipment should be decontaminated at the scene prior to transport if at all possible (See Annex O - Health & Medical, Appendix 12 - Radiation Emergency Medical Guidelines).
5. Do not clear the scene or assume the incident is closed until radiological defense experts have given their clearance.
6. Radiological incidents should be reported to the federal government. Notification can be made through the National

Response Center (NRC). The NRC can arrange for technical and/or on-site assistance if needed. The NRC telephone number is 1-800-424-8802 (24 hours).

7. CHEMTREC assistance is available for radiological material information and guidance. The CHEMTREC telephone number is 1-800-424-9300 (24 hours).

#### **IV. SUMMARY**

Local emergency response agencies will maintain more detailed standard operating guidelines (SOGs) for response to radiation incidents than are included in this appendix. Standard Operating Guidelines should use a format that will make it easy to find the information and guidance needed. There should be no confusion about coordinating the initial response. Directions should be very clear, even to someone not familiar with normal response to this type of emergency. Response plans should be kept simple, remembering that immediate concerns are the initial response steps and those elements that should not be overlooked during the response.

## ***Appendix 12: Attachment 4 – Enemy Attack: Real Or Threatened***

### **I. GENERAL**

The possibility of an enemy attack seems highly remote to most people. Yet, the threat must not be ignored. There are three primary aspects of this potential disaster to consider: an actual nuclear attack, an actual conventional weapons attack, and a threatened attack resulting in a national mobilization.

### **II. NUCLEAR ATTACK (ACTUAL)**

If an actual nuclear attack occurs, there is little that can be done but take shelter and wait. If an attack is expected, the country will be notified through the National Warning System (NAWAS). The warning will be relayed to every local government through that system, with direction to warn the public through local warning methods (i.e., news media, public address systems, CD CAN, cable interrupt system, NOAA weather warning radio, etc.). Simultaneously, commercial-broadcasting stations will be notified and the Emergency Alert System (EAS) will be activated.

Public reaction can be expected to range from disbelief to panic. A staggering number of people will be at-risk as a direct result of their lack of knowledge of what to do. In many cases, they will look to their elected officials for direction...if there is time. Since Shreveport/Bossier City is considered to be a risk area, Crisis Relocation Plans (CRP) will be implemented by Caddo OHSEP to evacuate as much of the local populace to host parishes/counties as possible before the actual attack occurs (See Annex C-2 Crisis Relocation Plan under separate cover for more information).

### **III. CONVENTIONAL WEAPONS ATTACK**

There is the possibility of an enemy attack using conventional weapons. Such an attack could be staged by a foreign power or by an insurrectionist group. Initial response will probably be undertaken by local law enforcement agencies reacting to an apparent criminal behavior. If the activity is identified as being some sort of enemy action, the Federal Bureau of Investigation (FBI) must be notified. If the incident is beyond the control of local officials, assistance should first be requested from mutual-aid law enforcement agencies.

If the problem is overwhelming, a call to the Caddo OHSEP will result in coordination with the GOHSEP for state police, National Guard and federal forces. State police can react quickly. Unless there are troops on duty, the National Guard will be limited in immediate response capability. (Note: there are always some full-time members of the National Guard available. With proper authorization, the state headquarters can provide some rapid support from additional guard units that could at least stabilize the situation.)

If an armed insurrection is occurring, the governor could request the President to send in active military troops who maintain readiness conditions all over the globe. Upon receiving assistance, response procedures would probably convert to management of a civil disturbance or a mass casualty incident.

#### **IV. ENEMY ATTACK (THREATENED)**

If world tensions indicate a possible military confrontation between the United States and one or more unfriendly countries, the President may order a national mobilization. Under such circumstances, military support would be greatly diminished or no longer available to local government. Military reserves, possibly including the National Guard, would be under federal control. Their resources would not be available to local government, even to support response to a natural disaster that may occur at the same time. Many of the local area citizens, members of the military reserves or National Guard, would no longer be available as local resources. This group of people may include critical employees of local government, hospitals, schools, and supportive resource organizations. This diminished resource condition may inhibit response to routine emergencies and disaster situations.

Under national mobilization caused by international tensions, the President may call for the country's Crisis Relocation Plan (CRP) to be implemented. Since Shreveport is considered to be a risk area, the CRP will be implemented by Caddo OHSEP to evacuate as much of the local populace to host parishes/counties as possible before the actual attack occurs (see Annex C-2 Crisis Relocation Plan under separate cover for more information).

#### **V. SUMMARY**

Local emergency response agencies will maintain more detailed standard operating guidelines (SOGs) for response to enemy attack and related incidents than are included in this appendix. Annex C-2 (Crisis Relocation Plan), under separate cover, should be consulted for additional information. Departmental standard operating guidelines should use a format that will make it easy to find the information and guidance needed. There should be no confusion about coordinating the initial response. Directions should be very clear, even to someone not familiar with normal response to this type of emergency. Response plans should be kept simple, remembering that immediate concerns are the initial response steps and those elements that should not be overlooked during the response.

## **Appendix 12: Attachment 5 – Radiological Expansion For Crisis Relocation**

### **I. PURPOSE**

To outline the operation of the Radiological Protection System during a Crisis Relocation contingency. This is not intended to replace Standard Radiological Reporting Procedures, but will add to the plan, in-shelter monitoring capability wherever available shelter exists.

### **II. GENERAL**

1. Crisis relocation will occur when world tension increases to the extent that probable or imminent attack upon the United States is evident. Since national defense predicts that any attack would be by the use of nuclear weapons, the population must be dispersed to locations less likely to be target areas and in the best available shelter.
2. Additional radiation detection equipment will be programmed and made available to local Radiological Officers to the host areas for distribution to shelters in their area.

### **III. RADIOLOGICAL PROTECTIVE ACTIONS**

1. The Basic Plan of Radiological Monitoring and Reporting will continue as outlined in the referenced annex.
2. A quantity of Shelter Radiation Detection Kits will be stored at strategic locations in Host Areas and will be available to shelterees at or near the occupied shelters. In the event that a shortage of Shelter Radiation Kits occurs, Personal Dosimeter Chargers will replace them.
3. Radiation detection equipment will be stockpiled in quantities according to the following ratio of shelter occupancy:

<b>Shelter Capacity</b>	<b>Number of Kits Authorized (In Spaces):</b>
50-1,000	1
1,001-3,000	2
3,001-6,000	3
6,001-10,000	4
10,001-15,000	5
15,001-25,000	6
25,001 or more	7

### **IV. MONITORING EQUIPMENT STORAGE**

Total Available Spaces: \_\_\_\_\_  
Total Kits Authorized: \_\_\_\_\_  
Total Kits on Location: \_\_\_\_\_

#### **A. Storage Location Contact**

Caddo OHSEP

1144 Texas Avenue  
Shreveport, LA  
24 Hour Phone: (318) 675-2255

**B. Inventory**

1. 10 CDV-777 Training Response Kits which include:
  - a. 1 CDV-700 (Survey Meter)
  - b. 1 CDV-715 (Survey Meter)
  - c. 4 CDV-742 (Dosimeters)
  - d. 1 CDV-750 (Dosimeter Charger)
  
2. 20 CDV-138 Dosimeters

## **Appendix 12: Attachment 6 – Radiological Monitoring Teams: Assessment And Protective Actions**

### **I. PROCEDURES FOR RADIOLOGICAL EMERGENCIES**

The principle of “As Low As Reasonably Achievable” (ALARA) is the basis for all personnel protective actions at the scene of a radiological incident. To meet that goal, certain procedures should be followed when handling an emergency involving radioactive materials.

The following four checklists detail these procedures:

#### **A. Checklist #1 - Field Operation Protocols**

1. Approach site with caution.
2. Use binoculars to survey scene from a safe distance.
3. Look for evidence of hazardous materials.
4. If radiation hazard is suspected, position personnel, vehicles, and Command Post at a safe distance (200-300 feet) Upwind of the site. Use CDV-700 as you approach the scene to survey for elevated levels of radiation (above 1mR/hr).
5. Establish Control Zone.
6. Notify proper authorities and hospitals:  
NOTE: See Emergency Telephone Directory located in the EOC for a complete listing of emergency agencies.
  - a. Caddo OHSEP
  - b. Radiological Officer
  - c. Law Enforcement Agencies
  - d. Fire Services
  - e. Hospitals/Medical Centers
  - f. Mutual Aid (i.e., BAFB Bioenvironmental, Disaster Preparedness Office, Base Fire Department, etc.)
  - g. LA Department of Environmental Quality
  - h. LA Office of Homeland Security and Emergency Preparedness
  - i. CHEMTREC
  - j. LA Division of Radiation Control
  - k. National Response Center
7. Put on protective gear
  - a. Standard turnout gear will protect from alpha and beta contamination. SCBA will protect from breathing in these airborne and contact contaminants. There is no protective gear that will protect against exposure to gamma radiation.
  - b. If entering a hot zone, it is advisable to double glove and use shoe covers.
  - c. HazMat teams may have additional protection, such as Level A suits.
  - d. Use dosimeters and survey meters if immediately available.
  - e. Typical anti-contamination clothing consists of heavy duty, close weave, cotton twill single piece coveralls. These are effective in preventing most contamination from penetrating to under-clothes and the skin.

- f. A second pair may be worn over the first pair to allow removal of highly contaminated clothing while maintaining a second level of contamination prevention and modesty during field decontamination procedures.
  - g. Button slits and flaps and any small tears should be covered with tape. Plan for ease of removal by ending taped areas with a tape fold tab.
  - h. Shoes or high-top rubber boots should be worn; shoe covers should be used when available. Be aware that covers and contaminated shoes or boots will be discarded after the incident. Coveralls should be taped around the boots or shoe covers.
  - i. Head coverings such as a surgeon's cap or cloth or plastic hood should be used to prevent contamination of the scalp and hair.
  - j. Gloves, either work gloves or rubber medical gloves, should be two layers deep. The inner gloves are worn under the sleeves of the coveralls with the outer gloves overlapping the sleeves and the joint should be taped
8. Determine if there are injured victims.
  9. Assess and treat life-threatening injuries immediately.
    - a. Do not delay advanced life support if victims cannot be moved or to assess contamination status.
    - b. Perform routine emergency care during extrication procedures.
  10. Move victims away from the radiation hazard area, using proper patient transfer techniques to prevent further injury.
    - a. Stay within the controlled zone if contamination is suspected.
  11. Expose wounds and cover them with sterile dressings.
  12. Victims should be monitored at the control line for possible contamination. Decontaminate if possible or mark contaminated areas.
    - a. Radiation levels above background indicate the presence of contamination.
      - Greater than 2 times background
      - Background levels will vary dependent on locations in country.
    - b. Remove the contaminated accident victims' clothing and place in marked plastic bag.
  14. Move the ambulance cot to the clean side of the control line and unfold a clean sheet or blanket over it.
    - a. Place the victim on the covered cot and package for transport.
    - b. Do not remove the victim from the backboard if one was used.
  15. Package the victim by folding the stretcher sheet or blanket over and securing him or her in the appropriate manner.
    - a. The victim should be transported by personnel who have not entered the controlled area.
    - b. Ambulance personnel attending victims should wear gloves.
  16. Before leaving the controlled area, rescuers should remove protective gear at the control line.

17. Transport the victims to the pre-notified hospital emergency department.
  - a. The hospital should be given additional, appropriate information, and the ambulance crew should ask for any special instruction the hospital may have.
18. Follow the hospital's radiological protocol upon arrival.
19. The ambulance and crew should not return to regular service until the crew, vehicle, and equipment have undergone monitoring and necessary decontamination by radiation safety officer at the hospital.
20. Personnel should not eat, drink, smoke, etc., at the accident site, in the ambulance, or at the hospital until they have been released by the radiation safety.

**B. Checklist #2 – Establishing Exclusion Zones**

1. Consider BOTH contamination and exposure control.
2. The exclusion zone (“hot zone”) will include the area closest to the incident where contamination is present and actual response activities (i.e., fire suppression, victim extrication, etc.) occur. It is recommended that exposure rates at the exclusion control line not exceed 2 mR/hr.
3. The contamination reduction zone (warm zone) is the area where field decontamination occurs. It is recommended that exposure rates at the contaminated control line not exceed 1 mR/hr. It is at this line that personnel will leave behind contaminated clothing and equipment.
4. The support zone (“cold zone”) is the area used to stage equipment and resources. It is free from contamination and the exposure rates are of a background level. The command post (CP), public information officer and observers will be stationed beyond the support control line, with no access to the general public.
5. Each zone should be large enough to accommodate all necessary personnel and equipment, and to allow ample space to perform tasks. Your State guidance on exposure rates should be followed for each zone, or use recommendations as noted.
6. If a radiological incident occurs inside a building, it will be necessary to monitor rooms adjacent to the area of the incident if they are or could be occupied. This would include rooms above and below the incident.

**C. Checklist #3 – Determining If an Accident Victim Is Contaminated**

1. Perform an operational check of the survey instrument CDV-700, keeping the probe shield open.
  - a. The CDV-700 cannot determine contamination from alpha or low- energy beta radiation. Therefore, if you suspect contamination with radioactive

material that emits alpha or low-energy beta particles, handle the victim as contaminated.

2. Set range selector switch to the most sensitive scale (X1).
3. Using the proper procedure, determine the background radiation level (away from possible radiation area).
4. When necessary, adjust the range of the instrument by moving the selector switch.
5. Holding the probe about 1 inch from the patient, systematically survey the patient from head to toe on all sides.
  - a. Avoid touching the probe to any contaminated surface.
  - b. You could place probe in plastic bag or rubber glove to protect from possible contamination.
  - c. Move the probe slowly-approximately 1-inch per second.
  - d. Pay particular attention to wounds, body orifices, hands, face, hair, bottom of shoes, etc.
  - e. An increase in count rate or radiation level above the previously determined background level indicates the presence of contamination with materials emitting gamma or high-energy beta radiation.
6. Note contaminated areas to be reported to the hospital emergency department.
  - a. Do not delay or hinder emergency medical care to survey victims for contamination.
  - b. Do not move or turn a victim to perform a radiation survey if movement is medically contraindicated.
7. Monitoring is done from head to toe, paying careful attention to monitor slowly. Use headphones so that monitoring can be done consistently (same pace and distance). Be careful to monitor the underarm and sides, the hands, the insides of the legs, cuffs, and shoe bottoms and be sure to monitor both the front and back of the subject. Take care not to touch the probe to the person, and to protect the detector from contamination. (Probe should be covered with a plastic bag.)

#### **D. Checklist #4 – Procedure for Leaving a Contaminated Area**

1. While still in contaminated area:
  - a. Remove protective clothing except inner shoe covers and inner gloves.
  - b. Discard clothing and trash into appropriate barrels.
2. Stepping onto step-off pad:
  - a. Remove one shoe cover and place foot on step-off

- pad.
  - b. Repeat for other shoe cover.
  - c. Discard shoe covers.
  - d. Remove and discard gloves.
3. While in clean area:
- a. Perform contamination survey.
  - b. Put on street clothes.
4. Health physics personnel (if available) should direct field decontamination of emergency responders.
- a. However, if they are unavailable, contaminated emergency responders are packaged and transported to the hospital emergency department for decontamination.

# Appendix 13 – LEPC Plan

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## LEPC Compliance

### I. Facilities and transportation routes of Extremely Hazardous Substances (EHS):

#### A. Facilities

In Caddo Parish there are 844 facilities that contribute to or are at greater risk due to their proximity to EHS facilities. A complete list of these 844 facilities and their physical addresses are available for viewing on the E-Plan website.

There are four (4) facilities within the parish which store Threshold Planning Quantities (TPQ) of EHS. These are the facilities that have uploaded a Risk Management Plan, to date, in 2015. The physical addresses and risks are as noted:

#### 1. Calumet Shreveport Lubricants and Waxes, LLC

3333 Midway Street  
Shreveport, LA 71109

TPQ of EHS present or stored pose the risk of: fire, explosion and toxic vapors. There are no facilities within the recommended 1-mile radius recommended for evacuation.

#### 2. Caspiana Compressor Station

Approx. 10 mi. SW of Shreveport, on Highway 1  
Shreveport, LA 71115

TPQ of EHS present or stored pose the risk of: fire, explosion and toxic vapors. There are no facilities within the recommended 1-mile radius recommended for evacuation.

#### 3. Light 13 No. 1

Samson Contour Energy E&P, LLC  
4.3 mi. NW of Market Street on Hwy 71  
Shreveport, LA 71107

TPQ of EHS present or stored pose the risk of: fire, explosion and toxic vapors. There are no facilities within the recommended 1-mile radius recommended for evacuation.

#### 4. T.L. Amiss Water Purification Plant

City of Shreveport, Department of Water & Sewerage  
3205 Blanchard Road  
Shreveport, LA 71103

TPQ of EHS present or stored pose the risk of: fire, explosion and toxic vapors. There are no facilities within the recommended 1-mile radius recommended for evacuation.

**Note: Additional information on facilities and Tier 2 storage as well as emergency response is available at E-Plan (<https://erplan.net>).**

## **B. Roads, highways, pipelines, airports, waterways, and railroads likely to be used for the transport of EHS**

All modes of transportation have the potential to carry hazardous materials. Transportation routes within Caddo Parish identified include:

### **1. Highways:**

There are nine major highways radiating outward from the Shreveport Metropolitan area. Major highways leading north include US 71 and LA 1. Southbound highways connecting the metro area with central and south Louisiana include US 71, US 171, LA 1 and Interstate 49. Interstate 20 transects Shreveport eastward and westward connecting the area with Jackson, MS and Dallas, TX, respectively. Interstate 20 bypasses Shreveport to the north of I-20. There are two southern bypasses around Shreveport, the Inner Loop Expressway (LA 3132) and Bert Kouns Industrial Loop Expressway (LA 526).

### **2. Railroads:**

Ten railroad tracks operated by two companies radiate outward in all directions from Shreveport. Local rail lines include Kansas City Southern (KCS) and Union Pacific (UP).

**Note: Additional information is available at the Federal Railroad Administration (<http://fragis.fra.dot.gov/GISFRASafety/>)**

### **3. Waterways:**

The Red River is a navigable waterway. The Port of Shreveport-Bossier, located in extreme southeast Caddo Parish, ships and receives barge traffic carrying hazardous materials.

### **4. Airports:**

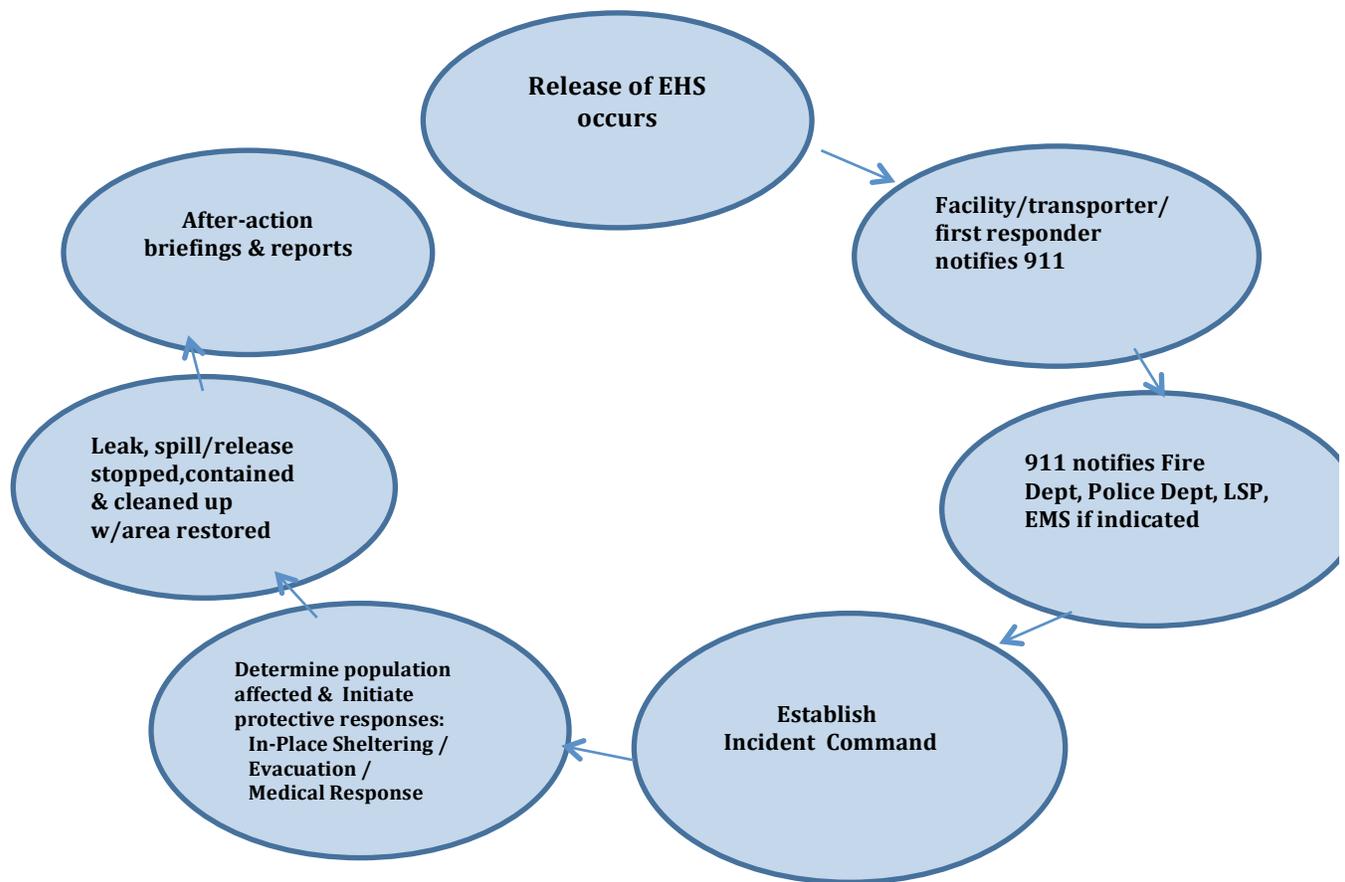
There are two major airports in Caddo Parish – Shreveport Regional Airport, 5103 Hollywood Avenue and Shreveport Downtown Airport, 1550 Airport Road. A private airport, Naylor Airport, is located at 2121 Robson Road in Shreveport.

## 5. Pipelines:

Numerous pipelines from a multitude of oil and gas pipeline companies radiate through Caddo Parish. Pipeline maps are on file in the Caddo Emergency Operations Center.

**Note:** Additional information is available from the National Pipeline Mapping System (<https://www.npms.phmsa.dot.gov/>).

## II. Methods and procedures to be followed by local emergency and medical personnel to respond to an EHS release:



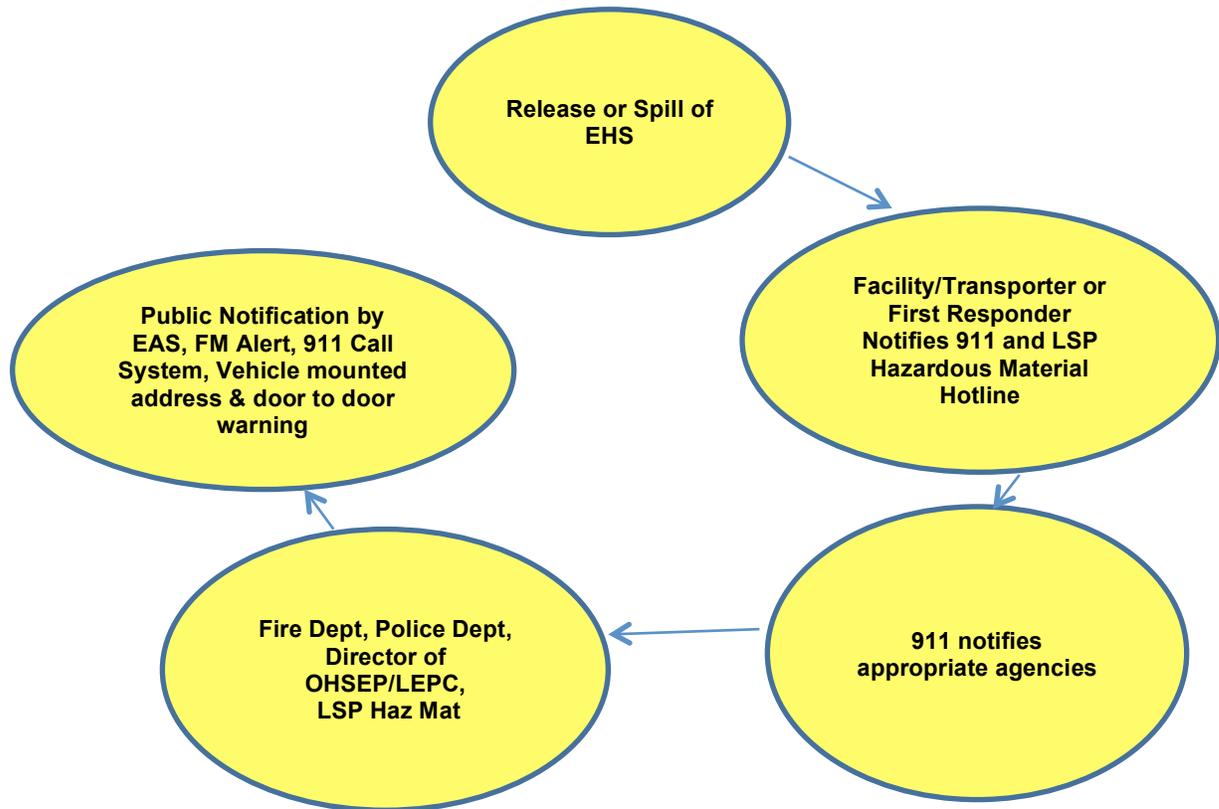
- A. Caddo Parish has been designated as an Emergency Planning District by the State Emergency Response Commission.
- B. All incidents involving the carrier of goods, material liquids, or freight of any kind should be regarded as incidents involving hazardous materials until proven or verified otherwise.

- C.** Procedures providing reliable, effective, and timely notification by the facility emergency coordinator, transporter or other regulated agencies to local, state and federal emergency personnel that a release has occurred shall be based upon procedures established in each facility or transporter emergency plans. These notification systems include telephone, radio, or in-person immediately after determining that a release has occurred and meets EPCRA reporting requirements or if emergency assistance is needed.
- D.** Methods for determining that a release of an extremely hazardous substance (EHS) has occurred and the area of population to be affected shall be according to the facility's SOG's and Risk Management Plans. Facility leak detection devices range from automated leak detection sensors, audible alarms, computer notification, camera monitoring, first-on-scene, etc.
- E.** Depending on the seriousness of the incident, protective responses could include in-place sheltering, evacuation, or notification of appropriate agencies of possible contaminated water.
- F.** The methods and procedures to be followed by medical personnel to a release of hazardous substances are outlined in each emergency service's SOGs.
- G.** The procedures for conducting health assessments upon which to base protective action decisions are outlined in each emergency service's SOGs. Additional health and protective action information may be obtained from the current Emergency Response Guide or by contacting the CHEMM site of the US DHH (<http://chemm.nlm.nih.gov/index.html>).
- H.** Mutual-aid agreements between the affected facilities and local jurisdictions for emergency response will be negotiated and maintained by the involved jurisdiction and a copy forwarded to the Caddo OHSEP.
- I.** The role of the affected facility in the decision-making process is to consult with emergency response agencies at the scene and the activated EOC or Caddo OHSEP regarding product safety measures. Facility representatives may serve as product technical experts since they deal with the material on a daily basis and can provide valuable information to first responders and emergency coordinators. For an extended incident at a location, a Facility representative should report to the activated EOC to aid in the public information and decision-making process.
- J.** State assistance under this function may begin at the first response to an incident. The Louisiana State Police (LSP) has the primary responsibility at the state level for hazmat incidents. When the LSP is notified of a hazmat emergency that requires their assistance, they will respond as soon as possible with the resources required by the situation.

### **III. Facility Emergency Coordinators for each EHS facility**

Current contact information for each EHS facility is maintained at 911 Dispatch, in the Caddo OHSEP and is available online at E-Plan (<https://erplan.net>) .

#### IV. Emergency Notification Procedures



#### V. Methods for determining the occurrence of a release of an EHS and the area or population likely to be affected

Methods for determining that a release of an extremely hazardous substance (EHS) has occurred and the area of population to be affected shall be according to the facility's SOG's and Risk Management Plans. Facility leak detection devices range from automated leak detection sensors, audible alarms, computer notification, camera monitoring, first-on-scene, etc.

The population affected or the area to be evacuated will be determined through:

- a. Use of monitoring equipment
- b. Information given in the publication of the Office of Hazardous material, U.S. Department of Transportation titled, "Emergency Response Guide Book" or online at E-Plan (<https://erplan.net>)
- c. Information from any printed document of the carrier, such as Way Bill or Bill of Lading.
- d. Information on the label of the containers.
- e. Advice from CHEMTREC or other such agencies whose purpose is to supply such information.

- f. Information or advice from an official representative of the shipper, manufacturer, user or a fixed facility representative per Risk Management Plan

Additional resources are:

Emergency Response Guide (<http://phmsa.dot.gov/hazmat/library/erg>) and Computer-Aided Management of Emergency Operations (CAMEO) (<http://www2.epa.gov/cameo>)

## **VI. Local emergency equipment, facilities, and the persons responsible for them**

All resource organizations and contact information are maintained in digital and printed form in Caddo OHSEP including fire departments, EMS, hospitals, law enforcement, public works, governing officials, etc. Resources available from each organization are listed as appropriate.

## **VII. Evacuation Plans**

All pertinent information for evacuation is included in ESF #1 and ESF #5.

## **VIII. Training Programs and Methods for exercising the Emergency Plan**

The emergency plan is exercised on a yearly basis through co-operative exercises with fixed facilities with EHS, fire departments and law enforcement. Caddo OHSEP also participates in state exercise programs. Training and exercise records are maintained in the EOC.