



EMERGENCY RESPONSE REVIEW

Marshall Propane Release, Marshall, Arkansas

FINAL REPORT, June, 2006

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The Environmental Protection Agency (EPA) Region 6 is issuing this Emergency Response Review as part of its ongoing effort to protect human health and the environment by responding effectively to chemical accidents. Emergency Response Reviews are designed to:

- Review with a local community and state officials the response procedures and outcomes to a specific chemical accident, affecting that community;
- Share information about chemical response safety practices;
- Develop potential recommendations and lessons learned to more effectively respond to an accidental release in the future;
- Build cooperation among local, state, and federal government agencies.

Emergency Response Reviews are entirely voluntary and may include all local, state, and federal entities involved with the response, as well as the responsible party and their representatives.

This document does not substitute for EPA's regulations, nor is it a regulation itself. It cannot impose legally binding requirements on EPA, states, or the regulated community, and may not apply to a particular situation based upon circumstances. This guidance does not represent final agency action, and may change in the future, as appropriate.

SUMMARY OF INCIDENT

On the afternoon of February 2, 2005, a tanker truck carrying propane gas overturned at approximately 1330 hrs. on the west side of Hwy 65 in Marshall Arkansas. The incident was the result by excessive speed around a curve.

The first responding agency was PG & S Fire Department. The incident was dispatched as a vehicle fire. PG & S has 8 firefighters and have received some awareness level training. Upon arriving at the scene and realizing it was a propane tanker truck on fire, they immediately requested support from Harrison Fire Department Hazmat Team.

The truck was facing north approximately 15 feet from the home owners house trailer. The truck was upside down laying on the property owners residential propane tank. The hole was on the bottom of the tank, but due to tank lying upside down the hole was on top. PG & S noted flames to be approximately 40 feet high.

The driver had exited the cab and was uninjured. In the attempt to cool the cab with water, the flames were extinguished unintentionally.

The Arkansas State Police arrived at approximately 1423 hrs. (30 min. after notified). The state police immediately rerouted traffic from Hwy 65 to AR 235 and US 62/412. An Incident Command post was established at approximately 1452 hrs., 1 mile north of the accident site.

Due to poor cell coverage and failure of the State Police radios, communication between the responders at the north and south end of the incident was inadequate.

Due to unintentionally extinguishing the flame, attempts to receive assistance from area contractors were unsuccessful for fear of liability issues. Jule Johnson, a local resident who owns a propane business assisted in mitigating the incident. Initial responders from PG & S continued to assist response efforts at the South end of incident site.

Based on information retrieved from the ERG, PG & S began evacuating residents in a 1 mile radius by means of a pumper truck microphone and going door to door.

The first attempt to patch the hole on February 3rd proved unsuccessful. At approximately 1800 hrs. on February 3rd, 3 "trees" were set up and the tank was wetted to raise the temperature in order to increase burn off rate. The fire burned for two days, once the pressure had dropped Mr. Jule Johnson gauged the pressure for the responders.

On February 4th local responders were able to patch the hole after most of the vapors had vented from the containment. Once the hole was patched responders hooked a hose to the valve and ran the hose atop the trees and ignited.

After the hole was patched and vapors ignited the evacuation was lifted and residents began returning home on the evening of the 3rd and completed on the 4th. At approximately 1415 hrs. on Saturday February 5th, the trailer was lifted, removed from the ditch, and the cab reattached.

OBSERVATIONS / RECOMMENDATIONS

Observation / Recommendation # 1

All local response organizations should review protocols based on the following:

"Response teams to a disaster scene have a responsibility to first protect themselves and their team members. If you or your team is injured, not only are the number of victims increased, but the response is now delayed, resulting in additional resource utilization. This delay and need for additional resources due to your inability to keep yourself and your team protected could cost other victims their lives.

DISASTER Paradigm: Safety and Security

Don't be selfish - protect yourself. Scene priorities:

- Protect yourself and your team members first
- Protect the public
- Protect the patients
- Protect the environment

"Basic Disaster Life Support Manual, Version 2.5"

At an incident, safety should be the first concern of any responder. When fire fighters, police officers or emergency medical technicians become injured or contaminated, they become part of the problem, instead of a solution. It's unfair to ask first responders to risk their life, health, or the health of their families by becoming contaminated at an incident. Difficult decisions need to be made and risks taken should be weighed against the possibility of a positive outcome.

- ✓ OSHA 29 CFR 1910.120 -- Hazardous Waste Operations and Emergency Response (HAZWOPER)
- ✓ OSHA 29CFR 1910.134 -- Respiratory Protection (Commonly referred to in the fire service as the Two In/Two Out Rule)
- ✓ EPA 40 CFR 311 -- Worker Protection
- ✓ NFPA 471 -- Recommended Practice For Responding to Hazardous Materials Incidents
- ✓ NFPA 472 -- Professional Competence of Responders to Hazardous Materials Incidents
- ✓ NFPA 473 -- Competencies for Emergency Medical Personnel Responding to Hazardous Materials Incidents
- ✓ NFPA 1500 -- Standard on Fire Department Occupational Safety and Health Program

Observation / Recommendation #2

Local governments that respond to hazardous materials emergencies should always be aware of the potential for reimbursement under the Local Government Reimbursement program, operated through EPA. More information on this program can be found at:

www.epa.gov/region6/lepc

Observation / Recommendation #3

All local response officials should be familiar with the technical support and assistance available through their State and EPA Region 6 during a hazardous materials incident or oil spill. The State of Arkansas has a 24-emergency number: ADEM (501-703-9750); and EPA Region 6 24-hour number: 866-372-7745

Observation / Recommendation #4

As with most emergency responses, communication is an issue. The decision to shut down the Incident Command should be communicated to everyone. There was virtually no communication between responders on the North and South end of the incident site. Responders on the South end were given little if no relief throughout the response.

Responding organizations should work together to improve communication capabilities. "The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS). All emergency responders and their communications shall be coordinated and controlled through the individual in charge of the ICS assisted by the senior official present for each employer."

"The "senior official" at an emergency response is the most senior official on the site who has the responsibility for controlling the operations at the site. Initially it is the senior officer on the first-due piece of responding emergency apparatus to arrive on the incident scene. As more senior officials arrive (i.e., battalion chief, fire chief, State law enforcement official, state coordinator, etc.) the position is passed up the line of authority which has been previously established."

- OSHA 29 CFR 1910.120(q)(3)(i) -- Hazardous Waste Operations and Emergency Response (HAZWOPER)
- EPA 40 CFR 311 -- Worker Protection
- NFPA 471 -- Recommended Practice For Responding to Hazardous Materials Incidents
- NFPA 472 -- Professional Competence of Responders to Hazardous Materials Incidents
- NFPA 473 -- Competencies for Emergency Medical Personnel Responding to Hazardous Materials Incidents
- The National Incident Management System – U.S. Department of Homeland Security.

Observation / Recommendation #5

Anyone responding to a hazardous materials incident should receive at least operations level HAZMAT training. All other individuals involved in the incident, including dispatchers should be trained at a minimum of awareness level.

Awareness level training teaches you to recognize, identify, notify the proper authorities, and to isolate the incident. All levels of HAZMAT training are required to have annual updates that demonstrate competencies.

“Incident commanders, who will assume control of the incident scene beyond the first responder awareness level, shall receive at least 24 hours training equal to the first responder operation”

- OSHA 29 CFR 1910.120(q)(6)(v) -- Hazardous Waste Operations and Emergency Response (HAZWOPER)
- EPA 40 CFR 311 -- Worker Protection
- NFPA 472 -- Professional Competence of Responders to Hazardous Materials Incidents
- National Incident Management System – U.S. Department of Homeland Security

Observation / Recommendation #6

In the event of a leaking propane truck, it is advised to let the flame burn unless the hole can be patched.

“Back-up personnel shall stand by with equipment ready to provide assistance or rescue. Qualified basic life support personnel, as a minimum, shall also be standing by with medical equipment and transportation capability.”

- OSHA 29 CFR 1910.120(q)(3)(vi) -- Hazardous Waste Operations and Emergency Response (HAZWOPER)
- EPA 40 CFR 311 -- Worker Protection
- NFPA 471 -- Recommended Practice For Responding to Hazardous Materials Incidents
- NFPA 473 -- Competencies for Emergency Medical Personnel Responding to Hazardous Materials Incidents
- NFPA 1500 -- Standard on Fire Department Occupational Safety and Health Program

Observation / Recommendation #7

A staging area should be set up so that available tactical resources may be stored and readily available.

Observation / Recommendation #8

Once responders recognize their need for mutual aid, they should call for help as soon as possible. The community should consider automatic aid so help will be dispatched immediately.

“The safety and security of response personnel and others in the area of an emergency response incident site should be of primary concern of the incident commander.”

- OSHA 29 CFR 1910.120 – Appendix C, Compliance Guidelines (6) in ICS and (7) Site Safety and Control Plans\
- EPA 40 CFR 311 -- Worker Protection
- NFPA 471 -- Recommended Practice For Responding to Hazardous Materials Incidents
- NFPA 1500 -- Standard on Fire Department Occupational Safety and Health Program
- The National Incident Management System – U.S. Department of Homeland Security.

Observation / Recommendation #9

Due to issues with local media, in future responses community officials should consider calling the State for PIO support

Each of the emergency response reviews conducted within Region 6 show one consistent pattern: Emergency response personnel within Region 6 are to be commended for their professionalism and sincere desire to protect the citizens of their communities.

Region 6 EPA is grateful for the efforts made by all emergency response personnel, and hopes the above recommendations can be used to improve the response and preparedness readiness of a community, if a future emergency occurs.