



EMERGENCY RESPONSE REVIEW

U.S. Environmental Protection Agency, Region 6

Union Pacific Derailment, Chandler, Texas

Final Report :: May 21, 2007

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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 Sunday, 4 March 2007 at 1614 hours, a Union Pacific train derailed near the intersection of State Highway 31 and Highway 315 in Chandler, Henderson County, Texas.

The derailment involved a rail car containing approximately 23,000 gallons of lube oil, as part of the 28 car derailment.

The lube oil traveled through a wooded area towards the Neches River where numerous citizens were fishing. Subsequently, the lube oil ignited, prompting local officials to initiate an evacuation of approximately 400-500 persons.

A railcar containing ammonium nitrate situated near the fire raised initial concerns.

The Sheriff's office 911 dispatcher notified the Chandler Fire Department and Tyler HAZMAT was asked to assist in the response. The local police chief, who was also fishing near the bridge where the derailment occurred, was able to communicate the placard numbers on the railcars to the fire department.

The evacuation was later lifted at 2000 hours after the fire was extinguished by the local and area fire departments. Much of the leaked lubricating oil was consumed by the fire.

On 5 March 2007, UP contractors cleared a path to mobilize additional heavy equipment to the derailment site, finished clearing the rail of damaged railcars, repaired the rail, deployed more than 3000 feet of boom (absorbent and hard) in the river, and staged oil recovery equipment at the spill site.



Recovery operations began on the morning of 6 March 2007 and the railroad reopened by 1510 hours, initiating a 10 mph pass policy for rail traffic along the repaired section of track.

UP contractors recovered approximately 13,000 gallons of approximately 80 to 90 percent lubricant oil to 10 to 20 percent water mixture (oil / water mixture).

TCEQ representatives arrived on site with two boats and collected water samples from multiple locations.

Representatives from the Upper Neches River Authority and Texas Parks and Wildlife also arrived to assess the affected waters; no fish or avian kills were noted by any personnel present.

Additionally, TCEQ representatives found that the nearest municipal water intake was greater than five miles from the spill location and that the intakes should not be affected by the spill.

The remediation phase began the follow week; an area of oil-affected soil located between the collection station and the railroad trestle bridge was excavated. The depth of the excavation was determined by the depth and concentration of contaminants, as were indicated by the analytical results of TCEQ and Union Pacific environmental samples.

TCEQ will continue oversight during the remediation phase and require Union Pacific to conduct confirmation water, soil, and sediment sampling from within the spill-affected area (as well as background areas).





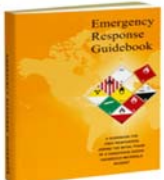

Responding personnel included the following organizations:


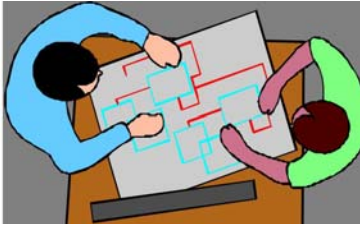

- Chandler Volunteer Fire Department
- Tyler HAZMAT/ Fire Department
- Athens HAZMAT/ Fire Department
- Texas Department of Public Safety - Athens and Tyler
- Chandler Police Department
- Henderson County Sheriff Department
- Texas Parks and Wildlife Department
- Brownsboro Volunteer Fire Department
- Westside Volunteer Fire Department
- Dixie Volunteer Fire Department
- Henderson and Smith County Emergency Management
- Smith County Fire Marshal
- Smith County Sheriff's Office
- City of Chandler Utilities
- Texas Commission of Environmental Quality
- U.S. Environmental Protection Agency

- Smith County Salvation Army Canteen
- EPA - START: Weston Solutions
- Union Pacific Railroad
 - Hulcher Environmental
 - Eagle Environmental Services
 - Specialized Response Solutions
 - Center for Toxicology and Environmental Health



OBSERVATIONS / RECOMMENDATIONS

<p># 1</p>	<p>EPA Region 6 commends the tremendous effort carried out by all response organizations referenced above during the response effort. Throughout the response, numerous local responders displayed professionalism in their efforts.</p> <p>All local response organizations should review their response 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 the number of victims is increased, but the response is now delayed, resulting in additional resource utilization.</p> <p>DISASTER Paradigm: Safety and Security -- Don't be selfish - protect yourself. Scene priorities:</p> <ul style="list-style-type: none"> • Protect yourself and your team members first • Protect the public • Protect the patients • Protect the environment <p>Once your team has safely entered the scene, focus on protecting the public ..."</p> <p style="text-align: right;">"Basic Disaster Life Support Manual, Version 2.5"</p>
<p># 2</p>	<p>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:</p> <p>www.epa.gov/region6/lepc</p> 
<p># 3</p>	 <p>Response Organizations within Henderson and Smith Counties should ensure they have the 24 hour phone numbers for EPA Region 6 (866-372-7745), The State of Texas 24-emergency number: 800-832-8224; as well as the phone number for the National Response Center (NRC 800-424-8802), and CHEMTREC (800-424-9300).</p>
<p># 4</p>	<p>Anyone who responds (in a defensive or offensive mode) 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 to a minimum of the awareness level.</p> <p>Awareness level training teaches you to recognize, identify, and notify the proper authorities and to isolate an incident. All levels of HAZMAT training are required to have annual updates that demonstrate competencies.</p> <p>The Chandler Volunteer Fire Department should work to obtain hazardous materials awareness, as well as basic Incident Command System (ICS), training for response personnel within the County who have not already received this training.</p> 
<p># 5</p>	<p>The Command Post was too close to the incident and had to be re-located; it was difficult to determine where to place the command post due to the rough terrain near the derailment. Agencies should pre-plan for various scenarios to determine placement suitability of the incident command post.</p> <p>The Command Post and staging areas should be sufficiently separated so that the personnel in the Command Post can function efficiently without unwarranted distractions.</p>
<p># 6</p>	<p>After the response, local personnel questioned how local responders could discern between a residual railcar and a railcar that has been cleaned and purged.</p> <p>Union Pacific advised treat a residual car as a full car and to look at the conductor's consist to determine which cars contain residual chemicals versus cleaned and purged.</p> 

<p># 7</p>		<p>Local media outlets did not disseminate information on evacuation procedures, as provided by local response officials.</p> <p>The incident command team should appoint a public information officer (PIO) to communicate directly with the media, to help in dissemination of critical information. Mutual aid is also available from TCEQ, who can provide contacts and assist in making notifications.</p> <p>Henderson and Smith Counties should work to have media contacts on their LEPC to pre-plan emergency communications.</p>
<p># 8</p>	<p>After the response, local community responders requested a meeting with rail officials to pre-plan response actions in the event of a future derailment, not simply rail car response training.</p> <p>Union Pacific can schedule this type of training, working with the TransCAER program for effectiveness and larger coverage of the training.</p> <p>Union Pacific should work through the emergency managers to disseminate training information to the correct parties.</p>	
<p># 9</p>	<p>The local responders were unprepared for how much area the rail contractors needed for their equipment and operations.</p> <p>Staging areas should be planned with consideration given to the amount of room that contractors will need for their equipment, as well as space for response personnel rehab.</p>	
<p># 10</p>	<p>Communication is always a concern in every response.</p> <p>For Unified Command to be effective, local responders should ensure that representatives of the responsible party stay in the command post with command personnel, until relieved by other responsible party personnel.</p>	
<p># 11</p>	<p>Henderson and Smith Counties do not have an active LEPC.</p> <p>All response / planning organizations within Henderson and Smith Counties should meet to determine the need and effectiveness to re-invigorate an LEPC within the County.</p>	

Overall, the response efforts by all parties (local, state, and the responsible party) are to be commended. Region 6 EPA hopes the above recommendations can be used to improve the response and preparedness readiness of the community, if a future emergency occurs.

Emergency Response Review (March 30, 2007) Attendees

Michael Moore, Union Pacific. Railroad
 Angie Mills, EPA-START
 Jeff McCully, EPA-START
 Jim Seaton, Smith County E.M.C.
 J.D. Hicks, Tyler Fire Department
 Dan Parker, CID Lt., Henderson County S. O.
 James P. Lehman, Asst. Chief - Chandler Police Department
 Joy Kimbrough, Henderson County E.M.C.
 Tres Winn, Athens Fire Department
 Dan Barnes, Athens Fire Department

Steve Mason, EPA Region 6
 Samuel Cheek, EPA-START
 Michael Van Buskirk, TCEQ Tyler
 Richard Leckie, Chandler Volunteer Fire Department
 Robert York, Chief - Chandler Volunteer Fire Department
 Tom Rushing, Asst. Chief - Chandler Volunteer Fire Department
 Rick Ford, Chandler Hazard (Volunteer)
 Daniel Smith, Tyler Fire Department
 Patrick Mayo, Tyler Fire Department