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REGION 6 Preparedness, Response, and Prevention Update

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RESPONDING TO INCIDENTS INVOLVING ETHANOL AND GASOLINE FUEL MIXTURES;

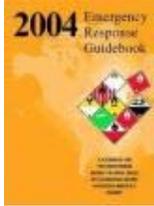
information retrieved from the U.S. Department of Transportation.

The Pipeline and Hazardous Material Safety Administration (PHMSA) is alerting emergency responders to appropriate emergency response guidance for responding to incidents involving fuel mixtures composed of ethanol (or "ethyl alcohol") and gasoline in various concentrations. The most common of these fuels, designated E85 (85% ethanol and 15% gasoline), recently has begun to be used in volume in the Midwest, primarily in the states of Illinois and Minnesota.

Fires involving E85 and other ethanol/gasoline mixtures containing more than 10% ethanol should be treated differently than traditional gasoline fires because these mixtures are polar/water-miscible flammable liquids (i.e., they mix readily with water) and will degrade the effectiveness of fire-fighting foam which is not alcohol-resistant. For this reason, PHMSA recommends use of alcohol-resistant foam to fight fires involving these fuel mixtures. Properties of ethanol/gasoline fuels that may be of interest to emergency responders are provided in the chart below.

Properties of Fuel Ethanol	
Property	Comment
Vapor density	Ethanol vapor, like gasoline vapor, is denser than air and tends to settle in low areas. However, ethanol vapor disperses rapidly.
Solubility in water	Fuel ethanol will mix with water, but at high enough concentrations of water, the ethanol will separate from the gasoline.
Flame visibility	A fuel ethanol flame is less bright than a gasoline flame but is easily visible in daylight.
Specific gravity	Pure ethanol and ethanol blends are heavier than gasoline.
Conductivity	Ethanol and ethanol blends conduct electricity. Gasoline by contrast, is an electrical insulator.
Toxicity	Ethanol is less toxic than gasoline or methanol. Carcinogenic compounds are not present in pure ethanol; however, because gasoline is used in the blend, E85 is considered to be potentially carcinogenic.
Flammability	At low temperature (32°), E85 vapor is more flammable than gasoline vapor. However, at normal temperatures, E85 vapor is less flammable than gasoline, because of the higher auto-ignition temperature of E85.

There are a number of shipping descriptions in the Hazardous Materials Regulations (Title 49, Code of Federal Regulations, Parts 171-180) for mixtures containing ethyl alcohol and gasoline. "Alcohols, n.o.s." and "Denatured alcohol" may be used for mixtures containing up to 5% gasoline. The appropriate proper shipping name for E85 is "Flammable liquid, n.o.s. (ethanol, gasoline)".



PHMSA recommends First Responders refer to Guide 127 (Flammable Liquids Polar/Water-Miscible) of the 2004 Emergency Response Guidebook (ERG2004) when responding to incidents involving E85 and other fuel mixtures known to contain or potentially contain more than 10% alcohol. Guide 127 (<http://hazmat.dot.gov/pubs/erg/g127.pdf>) specifies the use of alcohol resistant foam.

PHMSA is currently evaluating the need for changes to shipping descriptions or other hazard communication requirements for alcohol/gasoline fuel mixtures to ensure that these mixtures are readily identifiable and refer emergency responders to guidance specifying the use of alcohol-resistant foam. In the interim, PHMSA recommends the use of alcohol-resistant foam to fight fires involving fuel mixtures known to contain or potentially containing more than 10% alcohol.

Mixtures Containing Ethyl Alcohol and Gasoline

Alcohols, n.o.s., 3, UN1987

[Special Provision 172 allows alcohol mixtures containing up to 5% gasoline under this description]

Denatured alcohol, 3, NA1987

[Special Provision 172 allows alcohol mixtures containing up to 5% gasoline under this description]

Flammable liquid, n.o.s. (ethanol, gasoline), 3, UN1993

[May include varying concentrations of ethanol/gasoline]

Gasohol, 3, NA1203

[Authorized for gasoline mixed with not more than 20% zethanol - for U.S. shipments only]

For comments or suggestions on improving the Emergency Response Guidebook for the 2008 edition, please e-mail us at ERG2008@dot.gov. For more information concerning hazardous materials transportation safety or training, visit our website at [http://hazmat .dot.gov](http://hazmat.dot.gov)

Local Emergency Planning Committees; *information retrieved from Ohio Emergency Management.*

Throughout the nation, countless localities have organized a local emergency planning committee (LEPC) to achieve local and regional coordination, address common problems, develop solutions, focus limited resources, and prepare effective multi-jurisdictional emergency operations plans. In most areas, scarce resources, such as money, required this time-efficient and cost-restrained LEPC-approach to community emergency management.

LEPCs were originally designed to prepare and maintain emergency plans addressing hazardous substances and weapons of mass destruction. However, natural and man-made events during the past five years necessitated that LEPCs appropriately adjust to changing circumstances and accept increased responsibilities to plan and prepare for all possible hazards.

Typically, LEPC membership includes a diverse representation of local and regional stakeholders: elected officials, fire, police, emergency medical, public works, public health, hospitals, environmental, transportation, education, media, and any others who could bring specific expertise to the planning process. The positive synergy achieved by the cooperation of this broad-based membership frequently produces emergency plans that successfully integrate local and regional resources and adeptly orchestrate mutual aid.

In general terms, the current goals of the LEPC are to facilitate community-based emergency preparedness and hazard mitigation initiatives. Nevertheless, the Emergency Management and Response-Information Sharing and Analysis Center (EMR-ISAC) considers each LEPC a potential advocate for critical infrastructure protection (CIP), and the principal CIP catalyst in its area of responsibility.

Moreover, the EMR-ISAC urges these committee LEPCs to deliberately incorporate provisions to protect local and regional critical infrastructures into the next update of their emergency preparedness plans.

New Versions of CAMEO software are available; *information retrieved from <http://www.epa.gov/ceppo/cameo/request.htm>*

- **CAMEO_{fm}** has been upgraded to version 1.1.3
 - Updated to allow import of Tier2*Submit 2005 files
 - Chemical Library was updated with the latest AEGLs values
 - Minor changes to the Reactivity Report
- **MARPLOT** has been upgraded to version 3.3.2
 - Correctly display ALOHA's multiple footprints
- **ALOHA** has been upgraded to version 5.4
 - The latest version of ALOHA (v5.4) has added the ability to model the hazards associated with fires and explosions. With this major update, users can now estimate the hazards associated with jet fires (flares), pool fires, vapor cloud explosions (VCE), BLEVEs (Boiling Liquid Expanding Vapor Explosions), and flammable regions (flashfires) as well as toxic threats. The User manual was completely updated to include extensive material associated with fires and explosions.

To download these new versions, go to <http://www.epa.gov/ceppo/cameo/request.htm>.

Texas TransCAER® Training Tour; *information retrieved from <http://www.texascaer.org>. and from Karen Scheel of Texas TransCAER®.*

TransCAER® (Transportation Community Awareness Emergency Response) is a voluntary national outreach effort that focuses on assisting communities prepare for a possible hazardous material transportation incident. It operates under the American Chemistry Council and the American Association of Railroads.

TransCAER® members consist of volunteer representatives from government, interested state and national groups and the chemical manufacturing, transportation, distribution and emergency response industry.

The primary objective of the Texas TransCAER® organization is to provide free training and education for local fire departments and emergency agencies, particularly those in rural areas with volunteer responders who don't have access to training programs in handling hazardous materials. Experience has shown that when incident response is properly handled, the effects are greatly reduced and this requires proper training and education.

One way that TransCAER® provides training is to conduct a whistle-stop tour, which includes both speaker presentations and hands-on training for responders; four whistle-stops were conducted in EPA Region 6 in April 2006. Many companies made donations of their equipment for the hands-on portion of each whistle-stop. Texarkana hosted the first training with an outstanding attendance of 89 paid and volunteer emergency responders representing the Texarkana, TX and Texarkana, AR Fire Departments. Also in attendance were students from the U. S. Army Civil Support Team, Texas Forest Service, surrounding city volunteer fire departments, emergency response contractors, Arkansas TransCAER® and Albemarle Corporation. The presentations covered were Railcar Identification, Tank Truck Identification, Damage Assessment of Railcars and Tank Trucks, DOT presentation on use of the Emergency Response Guide Book, and an EPA presentation on the lessons learned from Emergency Response Reviews.

The tour continued on to Longview hosted by Eastman Chemical Company's Texas Operations facility, again the attendance was fantastic with 115 emergency responders present despite less than ideal weather conditions. The emergency responders represented many areas of North East Texas and some even as far away as British Columbia (students from the Kilgore Fire Academy). Participants attended one-hour sessions on topics such as: How to Use the Emergency Response Guide (ERG); Responding to Flammable Liquid & Gas Releases; Tank Truck & Tank Car Familiarization and training on how to use the EPA's CAMEO software.

When asked about the success of the TransCAER® training Kelly Allen of Eastman, a coordinator for the Longview event, said that, "This event is typical of what we see everyday – A 100% effort by emergency responders in law enforcement and firefighting to obtain all the information they can to do their job to the best of their ability. Even with the inclement weather, a great number showed up to participate and that speaks volumes about our bravest and best."

The next stop was down the road in Cleveland at the volunteer Fire Department with 12 emergency responders in attendance from Liberty, Montgomery, and Polk counties. Presentations included an overview of Texas TransCAER®, training in the use of the DOT ERG, air monitoring and modeling information, lessons learned from EPA Emergency Response Reviews, characteristics of chlorine and LPG, anatomy of railcars, and a hands-on demonstration of chlorine capping kits and recovery vessels.

The final stop on the tour was Beaumont with 31 responders braving the thunderstorms to hear about pipeline safety, Texas Excavation Safety Systems, DOT training on the use of the Emergency Response Guide Book, air monitoring and toxicology, and polymerized materials. Due to the severe weather the participants were unable to go outside to the field portion of the seminar. However, many of the chlorine capping props were brought inside the hotel and the meeting room was utilized to provide hands on training to the participants. Many of the participants commented that it was the best training they ever attended.

For more details about these efforts, visit the Texas TransCAER® website at <http://www.texascaer.org/>



Railcar valve training (at left).



Hands-on training for a Level B chlorine capping kit (at right).



Texarkana participants brave the weather for hands-on training (at left).



The TransCAER training railcar (at right).



Pat Brady (BNSF) gives a chlorine railcar demonstration to Cleveland attendees using a mock-up model (at left).



Attendees in Beaumont receive classroom training (above).



Railcar demonstration with the TransCAER training model in Texarkana (lower left).

SRS and Oxychem give a demonstration of a Level A chlorine capping kit (lower right).



Fun Facts: Storm Names Retired; information retrieved from Natural Hazards Observer

The names Dennis, Katrina, Rita, Stan, and Wilma, all players in the historic 2005 Atlantic hurricane season, were “retired” by an international hurricane committee of the World Meteorological Organization. Now retired, these five storms will not appear on the list of potential storm names that is otherwise recycled every six years.

Retirement is saved for storms that cause particularly large losses of life and property. Retired names are not used again for sensitivity reasons and to establish distinction within the scientific and legal communities.

For 2011, Dennis, Katrina, Rita, Stan, and Wilma have been replaced with Don, Katia, Rina, Sean, and Whitney, respectively. Find out more about retired storm names at www.nhc.noaa.gov/retirednames.shtml. Names for tropical cyclones through 2010 are available at www.nhc.noaa.gov/aboutnames.shtml.

The upcoming 2006 hurricane names are: Alberto, Beryl, Chris, Debby, Ernesto, Florence, Gordon, Helene, Isaac, Joyce, Kirk, Leslie, Michael, Nadine, Oscar, Patty, Rafael, Sandy, Tony, Valerie, and William.

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	Paula McKinney	800-452-2791	pmckinney@beh.tdh.state.tx.us

Emergency Numbers for Spill Reporting in Region 6

Arkansas Dept. of Emergency Management	800-322-4012
Louisiana State Police	877-925-6595
New Mexico State Police	505-827-9126
Oklahoma Dept. of Environmental Quality	800-522-0206
Texas Environmental Hotline	800-832-8224

National Response Center	800-424-8802
EPA Region 6	877-372-7745
CHEMTREC	800-424-9300



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We're on the Web!

See us at:

www.epa.gov/ceppo

CAMEO Search:

What chemical has the general description “odorless”, uses “Halon” for fire fighting, has a health hazard that causes “malaise” and has a vapor density of “18.8”?

ALOHA Exercise:

At 7:14am on January 7, 2005, a railcar carrying R 1141 derailed during a collision with a motor vehicle at the intersection where the train tracks cross Alta Vista Street in Santa Fe, New Mexico. The collision caused the railcar to rupture and releasing its contents through a 10 inch hole that is 1 foot up on the side of the railcar, however the railcar landed upright on its wheels beside the train track. The railcar is 12 feet in diameter and 26 feet in length. The chemical is stored under pressure in the railcar as a liquid at ambient temperature. The railcar left the chemical facility 75% full and the leaking chemical is burning as a jet fire. The buildings in the area are enclosed office buildings; the wind is out of the Southeast at 4 mph with a measurement height of 10 meters. The sky is clear and the ground roughness is urban ground roughness. The temperature is 46° F with no inversion and humidity of 23%.

What is the thermal radiation level of the yellow threat zone?

ANSWERS:

1. Mirex, which should be kept away from food.
2. 120 yards