

HOTZONE 2017 Opening Session

Friday, October 20th
8:00 AM

Keynote Address

Dallas Fire & Rescue Active Shooter Incident
David Coatney, Fire Chief

Plenary Session

Demystifying the Operational Response to Fentanyl
Dr. Christina Baxter

HOTZONE 2017 Workshops

Friday, October 20th
1:00 PM

One Pot Meth Labs

90 Minutes

In this workshop students will see the mechanisms incorporated by 'Meth Cooks' from start to finish. Each of these steps or mechanisms poses a threat of injury and or death. The presentation is full of videos and is presented by an experienced law enforcement responder, who is also a chemist.

Taught by Jake Kelton

Highway Cargo Tanks

Part 1 of 2

This workshop is a crash course on responding to incidents involving highway cargo tanks. More than a review of the basics, this course will review and discuss real-life incidents and how they were handled, specifically the DOT 406, DOT 407, DOT 412, MC331 and MC338 (time permitting).

Taught by Richard Meehan

"E" Comes After A, B, C, D

90 Minutes

If "A" stands for the Accident. What comes after the A and B,C,D,? The goal of this session is to provide the mental tools to make complex hazmat emergencies decisions – Easier! It's not as complicated as you may think. Come benefit from over 100 years of hazmat experience, training and lessons learned without the pain of "learning it the hard way". Learn that in the long run it all boils down to a series of simple rules.

- It's just the juice, jar, and map?
- Are you safe unsafe or in danger?
- It's just the right tool for the right job!
- And much, much, more

This workshop will help you understand the next letter E, in other words how fast can you get to simple. In hazmat it isn't what you call it – “Emergency, Episode, release, situation, disaster or incident, it is the first lesson most of us learn – “How can you favorably influence the incident?”
Taught by Mike Callan, Frank Docimo, Toby Bevelacqua

What's in the Cylinder?

90 Minutes

Compressed gas cylinders are sometimes found lying around, sometimes in weird locations. Junk yards, abandoned building, washed up after a flood, etc. Of course HazMat is called to deal with them. How do you do an assessment? Are they dangerous? What do they contain? What do I do with them? This presentation will review examples of cylinder assessments on cylinders found abandoned without any identifying markings or labels. It will also present a worksheet that can be used to assess the cylinder and help to narrow down what they could contain. It will also look at cylinder and valve features that are unique to certain groupings of gases.

Taught by Eugene Ngai

Detection Data Interpretation Made Easy

90 Minutes

This class will provide the Hazmat technician with the background and understanding of an automated decision support tool which combines real-time data from disparate sensors with known detector system sensitivity and cross-reactivity data along with overarching system characteristics to provide the operator with operationally relevant response information. The successful use of the vast amounts of readily available data from detectors requires standard guidelines for intelligent decision making for the protection of both the responders and the community. These standard guidelines also allow for the extension of instrument applicability from WMD response into hazmat response. The student will leave this course with the knowledge and enhanced skills necessary to implement decision support tools and automated data ingest functions in the operational environment and will increase the applicability of their detectors to a variety of hazmat/WMD situations.

Taught by Dr. Christina Baxter

NWS Support for Hazardous Materials Incidents

90 Minutes

In the event of a hazardous materials release or incident, the National Weather Service (NWS) can provide support in a number of ways. The NWS can provide a verbal or written weather briefing, including current and forecast conditions, a more formal hourly tabular spot forecast for the location of the incident, HYSPLIT dispersion modelling for large releases of neutrally buoyant gases, and dedicated 24/7 weather support for the incident as needed. For longer duration incidents, an Incident Meteorologist can be requested to support onsite from the Incident Command Post (ICP) or the Emergency Operation Center (EOC). The NWS can also relay non-weather emergency messages from the Incident Commander or Emergency Manager with recommended actions such as “Shelter-in-Place” or “Evacuate Immediately” that are then sent out via the Emergency Alert System (EAS). The EAS system is designed to get emergency messages out quickly through TV and radio stations, even if the station is unmanned. It is the same system that carries weather-related warnings (e.g. flash flood, tornado) to the public through broadcast media.

In this presentation, forecasters from the NWS will explain in more detail what each of these support methods involves and how to request weather support for an incident from the NWS. The presenter will also facilitate a simple exercise based on a Hazmat scenario to illustrate these support methods and tools.

Taught by Dan Reilly

The Hot Seat

90 Minutes

This fast paced workshop is an in depth look at new and emerging hazards as they relate to emergency response and new approaches to tactically work safe during down range operations and maintain acute situational awareness when responding to such an event. This class is a 90-minute facilitation that puts the student in the "Hot Seat", utilizing recognized prime decision making skills that will work during a real world event. The class is divided into 3 modules.

- Bad Guys
- Benchmarks
- Briefings

Taught by C.J. Haberkorn, Dana Brown

Is Your Backup Team Equipped and Ready?

90 Minutes

This workshop will take a look at the HazMat Back-up Team and discuss what equipment is needed and what you should expect if they are activated during a HazMat incident.

Taught by Butch Hayes

The Challenging Threesome

Part 1 of 2

This workshop will address three of the top ten most common hazardous materials utilized, stored, and transported throughout the US as liquefied gases. Information presented by three experienced street smart instructors will cover behavior, plume modeling, hazards and container profile. Numerous past incidents and case studies will also be presented throughout the presentation.

Taught by Greg Socks, Bill Hand, Robert Bradley

GHS: The Rookie of the Year

90 Minutes

The OSHA Hazard Communication Standard (HCS) has changed to align with the United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS). In the revised HCS, OSHA has added pyrophoric gases, simple asphyxiants, and combustible dusts to the United Nations definition of a "hazardous chemical". This workshop will explore these three hazard classes, including their chemical and physical behaviors, what to look for on safety data sheets and labels, as well as ideas on how to manage releases.

Taught by Keith Silverman, Bill Cullen

(LEPC) The Evolution of HazMat

90 Minutes

How did hazardous materials response get to where it is today? A look back in history at some of the key events that help to drive the evolution that became hazardous materials response. Texas City, Texas; Kingman, Arizona; Crescent City, IL; Shreveport, Louisiana, these are just a few of the events that helped to drive the change that would lead to hazardous materials response. Join us as we follow the road through history stopping along the way to look at the key events that were the catalyst for change. Lessons learned that should not be forgotten.

Taught by Tobias Frost

Friday, October 20th
3:00 PM

Chemical Suicides - A HazMat Perspective

90 Minutes

This workshop will very briefly look at the history and then move into a discussion from the HazMat perspective of the trending methods. Starting with a review of an incident from the Fire Fighter's Near Miss Program to reinforce how complacency with these events has crept into our operations. Using a discussion of chemical and physical properties, monitoring, and research (to satisfy the guidelines), each method will be examined in detail. This will develop a methodology for approaching an event of unknown origin, and allow for the determination of products, and safe mitigation. Research will then be presented to validate the approaches to scene safety and ventilation. Several real world incidents will be discussed to further reinforce the concepts that have been presented.

Taught by Phil Hebert

Highway Cargo Tanks

Part 2 of 2

This workshop is a crash course on responding to incidents involving highway cargo tanks. More than a review of the basics, this course will review and discuss real-life incidents and how they were handled, specifically the DOT 406, DOT 407, DOT 412, MC331 and MC338 (time permitting).

Taught by Richard Meehan

Have You Ever Said, I Wonder What's In There?

90 Minutes

Too many times, following an incident, we have heard the local responders say, "we had no idea what was in there or what they do". Don't be caught by surprise! Come learn some tips on how to get started with your "H" Occupancies and pre-incident planning.

Taught by Mike Montgomery

Compressed Gas Fundamentals

90 Minutes

This 90 minute Compressed Gas ER Fundamentals class will provide the First Responder with a working knowledge of the physical and chemical behavior of a compressed gas that can affect the incident assessment or mitigation plan. It will include many of the more hazardous specialty gases classified as highly toxic, corrosive, oxidizing, or unstable. The student will get a basic understanding of key properties such as:

- Critical Temperature
- Vapor Density
- Liquid Density
- Flammability Limits
- Boiling Point
- Vapor Pressure
- Latent Heat of Vaporization

and why they might be important during an incident. This will include a review of select incidents and the lessons learned.

Taught by Eugene Ngai

The First 100 Minutes of a Radiation Dispersion Incident

90 Minutes

Based on the DHS draft guidance & the ASTM Recommended Practice, this session will provide decision-making considerations for response to RDD and radioactive emergencies. It provides information on what to include in an ERP, and what activities to conduct during a response. The session will teach participants how to identify hazards and training issues, how to develop a plan, and what equipment to acquire.

Taught by Tony Mussorfiti

Surprise! You're the New HazMat: Program Manager, Leader, Chief **90 Minutes**

So you put in the time, worked hard, passed the test and got the promotion. Congratulations! Oh, by the way... you're now in charge of HAZMAT. Wait. WHAT!? This was exactly what happened to me in my career. With the "promotion hangover" still pounding in my ears, this was certainly not the news I expected to hear. Perhaps this has happened to you & you are now finding yourself navigating uncharted waters as I did. Maybe you've been a career "Glow Worm" but now have to be the responsible adult. What I want you to do is breathe. There now. Better? Okay, now you can freak-out, but it's still going to be okay. My goal for this workshop is to help you put together a HAZMAT program (either from scratch or build onto an existing program), establish a leadership team, because let's face it, you can't do this alone

L.E.A.D.

- Learn
- Educate
- Advance
- Develop

Taught by Josh Fowler

Incident Management: The Eight Step Process

90 Minutes

This workshop will review the application and use of the Eight Step Process as a tool for the tactical management of HM and special operations incidents. Workshop materials and content will be based on information from the textbook Hazardous Materials: Managing the Incident (4th edition).

Taught by Greg Noll

The Challenging Threesome

Part 2 of 2

This workshop will address three of the top ten most common hazardous materials utilized, stored, and transported throughout the US as liquefied gases. Information presented by three experienced street smart instructors will cover behavior, plume modeling, hazards and container profile. Numerous past incidents and case studies will also be presented throughout the presentation.

Taught by Greg Socks, Bill Hand, Robert Bradley

Legal Aspects of HazMat Response

90 Minutes

This presentation will address the legal ins and outs of hazardous materials planning and response. Among topics that will be discussed are a general introduction to the standards, regulations, and laws that govern the society we live in. We will then explore federal laws and regulations specifically addressing hazardous materials, as well as the different modifications that local factors that can affect response. Case histories will be presented and discussed with participants. After the presentation participants will have a basic knowledge of certain aspects of law dealing with hazardous materials.

Taught by Alan Finkelstein

HazMat in the Cross Hairs

90 Minutes

An average day in hazmat is never boring in the Nation's Capital. From bread and butter calls to terrorist threats every day is a new challenge. This session will discuss partnerships, practices, and tools used for hazmat preparedness and response in the high threat environment that is the Nation's Capital.

Taught by John Emminizer

LEPC Track – TBA

90 Minutes

Saturday, October 21st

8:00 AM

Should I Stay or Should I Go?

Part 1 of 2

Discussing the importance of hazard and risk assessment. Participants will review cases where intervention was both successful and tragic. Emphasis placed on the importance of research and how using proven models to determine potential outcomes is vital to success. Participants will review different scenarios then asked to go through decision-making models to determine if intervention would be the best choice. Use of the DECIDE process in determining if an offensive or defensive posture should be taken when presented with various scenarios. How GEBMO is utilized as part of the DECIDE process. Why being able to make better estimations early will improve the overall outcome. Understanding that sometimes sticking in there instead of pulling out is the worst decision with long lasting consequences.

Taught by Shereen DeVries, Bill Hand, Jim Lanphear, Richard Lawhorn, Jason DeVries, David Slovap

Briefing the Boss

90 Minutes

This workshop provides smart practices in developing and presenting Risk-Based Response recommendations to decision makers at HazMat/WMD events. Utilizing lessons learned from actual events, evidence is provided on how information is conveyed is critical in achieving positive outcomes. Special focus will be put on how to present technical information from our detection technologies in street terms so shared understandings can be obtained.

Taught by Dave Matthew

HazMat Case Studies

90 Minutes

This 90-minute class will discuss historic case studies and lessons learned from those incidents. Students will be encouraged to discuss the lessons learned and how they can relate to future incidents.

Taught by Doug Rohn, Joe Bartholomew

Natural Disasters, Unnatural Hazards

90 Minutes

In the aftermath of a natural disaster whether it be a hurricane, tornado, earthquake, or tsunami, the hazards responders face can be particularly challenging. When the environment is full of unknowns and is generally unstable, the playbook of standard operating procedures ends up being woefully inadequate. Even in areas where certain types of disasters are almost common place, the scenario is different every time. Professional Continuity Planner and Associate Safety Professional, Monique Lewis, former team lead for a national HazMat response team whose primary mission was to respond to the aftermath of natural disasters will explore the challenges

associated with these environments, share some practical solutions to interesting situations her team faced, and host an interactive discussion where participants will have the opportunity to come up with out of the box solutions to real world problems that have or are likely to arise

Taught by Monique Lewis

The HazMat Group Supervisor Clipboard

90 Minutes

Whether you are a new Hazmat Tech or a program manager, this class can help you and your organization run a successful and efficient hazmat program. The tools and templates presented can be quickly and easily modified to meet your organizations specific needs from equipment maintenance to incident response. Running a successful hazmat program presents many challenges. Maintaining training and managing equipment can be difficult enough, let alone running an incident efficiently, systematically, and safely. These challenges can be compounded by limited resources, Hazmat Techs, and personnel on scene. Initial hazmat training classes can provide the education to understand hazmat... but often do not provide templates and tools to practically apply that knowledge on a hazmat incident. This class presents our fire department's model, flow charts, and checklists to streamline, simplify, and organize these challenges. Starting with before the call, we will present our department's plan for training and equipment maintenance. We will then transition to Incident response tools presenting a method to run a successful hazmat incident including:

- A 3 tiered hazmat response approach
- A Quick Reference Card for hazmat incidents which outlines an operations level hazmat response, and transitions to a technician level hazmat response.
- ICS Check Sheets for managing larger incidents
- A Tech Ref Flow Chart to make Technical Reference quick and efficient.
- The use of a Hazmat Group Supervisor Clipboard to stay organized from the incident all the way to the final report.

Taught by Mike Spasev, Matt Housley

Downrange Chemical Identification: In Opaque Containers and Residues

90 Minutes

Handheld Raman-based chemical detectors have been used by Hazmat, Military, and Security personnel to identify unknown chemicals for more than a decade. However, traditional Raman detectors are limited in their use because they cannot identify chemicals found inside thick, opaque or colored packaging/containers. Without proper sampling techniques, these systems are also unreliable in identifying liquid and powder residues on surfaces. These two operational limitations decrease efficiency in the hot zone and increase the risk to the operator and, in some cases, the public. In this workshop, attendees will be trained on handheld detection systems in the context of First Responders, and users will have the opportunity to gain hands-on experience in:

- Analyzing unknown materials inside opaque containers (envelopes, gas cans, bottles)
- Sampling techniques that allow for confident identification of liquid and powder chemical residues where there is not enough sample to collect into a vial

Taught by Eric Roy

Explosives Recognition and Understanding

90 Minutes

The world is changing and we are seeing a rise in terroristic activity all over. The use of explosives as a tool for terror is all too common. This lesson is a lecture/discussion driven session on explosives. This lesson is meant to serve as a tool to help responders recognize the

presence of improvised explosive devices (IEDs) and understand the risks associated with responding to an explosive event. This will be accomplished through discussion of the precursors of homemade explosives, the 4 components needed to make an IED, showing videos of the effects of an IED detonation, and treatment of some blast-type injuries based on best practices of emergency personnel in NYC. Case studies of explosives incidents will be used at the end of the presentation to incorporate the knowledge gained during the lesson. These case studies will be events that have taken place in big cities and small towns across the country.

Taught by Joshua Sutherland

P4 - Anhydrous Ammonia Response

Part 1 of 2

Get prepared to handle ammonia incidents from start to finish, beginning with an overview of ammonia properties, including health effects and first aid. Session will review common anhydrous ammonia use processes, such as industrial refrigeration, power plant pollution control treatment, and heat treatment as well as types of containers and selected transportation packaging. We will examine real life release modeling and live release footage, trouble shooting incidents, and address response concerns such as indoor vs. outdoor releases, types of releases, PPE levels, and flammability concerns.

Taught by David Binder, TRANSCAER(R)

Research, So Much to Do, So Little Time 7.0

90 Minutes

This presentation will discuss different hazmat research resources, with a focus primarily on electronic media, but inclusive of books. After attending this presentation all participants will have knowledge of the most commonly available and accessible computer software and phone/tablet apps to assist in research for hazmat incident response and planning. Some of the programs to be discussed and displayed will be AskRail, the CAMEO Suite, COBRA, HotSpot, HPAC, PEAC, SAFER Mobile Response, and WISER.

Taught by Alan Finkelstein

A HazMat Responder's Guide to Flash Fire Protective Clothing

90 Minutes

This course will provide information on different performance standards available to assess chemical protective clothing worn by HazMat Responders when the garment is exposed to a chemical flash fire. Information will be shared regarding NFPA 1991 (gas tight suits) and NFPA 1992 (liquid tight suits) standards' Flash Fire Escape Option tests and NFPA 2112 (Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire). The student will understand what different claims of "FR" really mean for their HazMat suits.

Taught by Khyati Vyas

(LEPC) Effectively Using the ALOHA Before, During, and After Chemical Incidents

Part 1 of 2

ALOHA is an "air dispersion" computer program that predicts downwind concentrations of dangerous atmospheres for some 850 chemicals. ALOHA also performs a number of calculations that can be a great assistance to first responders, such as "how long will it take for this tank to stop leaking", or "how long will it take for this puddle of chemical to evaporate", or "how much product will remain in the damaged container", and many other items. This course explores many uses of the ALOHA program, and the appropriate methods to utilize it before, during, and after chemical releases.

COURSE OUTLINE:

- Review of Basic ALOHA Limitations and Operations

- Using ALOHA for Pre-Planning Activities
- Advanced ALOHA Operations for HazMat Technicians
- Using ALOHA after chemical incidents for investigative processes
- Sharing ALOHA results with Google Earth and ArcView products
- Sharing from ALOHA to tablets, iPhones, and other devices
- Capstone Project

Taught By Tom Bergman, Robert Bradley

Saturday, October 21st

10:00 AM

Not Just Another Gas Leak

90 Minutes

In this class we will discuss: approaching the scene, what do you need to consider, monitoring or detecting, is there a Safety Officer, and wind direction/speed. PPE, full bunker gear or PBI coveralls, the corrosion properties of Mercaptan and what does it do to PPE. Accountability of ALL the gas, where has it gone, how much has escaped prior to our arrival. Static electricity, how much is out there, how much do we as humans produce and discharge, how do we discharge other static electricity, what is causing it, what makes it worse or better? Safety for responders, what do we need to protect us if we are "going into the hole", why do we use this? Explain the gas grid, how does it come from the supplier to the resident. Causes of gas leaks, mitigation of the leak, how are we going to stop it and make the area safe until the gas company arrives to fix the leak and start gas flow again.

Taught by Tony Janke

Should I Stay or Should I Go?

Part 2 of 2

Discussing the importance of hazard and risk assessment. Participants will review cases where intervention was both successful and tragic. Emphasis placed on the importance of research and how using proven models to determine potential outcomes is vital to success. Participants will review different scenarios then asked to go through decision-making models to determine if intervention would be the best choice. Use of the DECIDE process in determining if an offensive or defensive posture should be taken when presented with various scenarios. How GEBMO is utilized as part of the DECIDE process. Why being able to make better estimations early will improve the overall outcome. Understanding that sometimes sticking in there instead of pulling out is the worst decision with long lasting consequences.

Taught by Shereen DeVries, Bill Hand, Jim Lanphear, Richard Lawhorn, Jason DeVries, David Slovark

EH&S For HazMat Responders

90 Minutes

This session will provide the hazmat responder an in depth view into best practices for managing health and safety both day to day and on the scene for their hazmat teams. Faced with raising threats ranging from terrorism to illicit drugs the role of the hazmat team safety officer is ever changing and always challenging. This session is designed to help provide new tools to the hazmat officer to keep everyone safe.

Taught by John Emminizer

Lithium Batteries

90 Minutes

Battery power is the future in the world of technology. In the news recently there have been numerous incidents regarding Lithium Ion batteries. Come learn the facts. Why are these cell phones, laptops and even battery powered cars catching fire or exploding? Can you put water on these fires? Are lithium ion batteries the same as lithium batteries? Why did the DOT add new Guide pages for these batteries to the ERG? Are there different tactics for these batteries? Come join a well-organized, insightful seminar.

Taught by Brian Heinz, Jeanette Heinz

What Could Possibly Go Wrong?

90 Minutes

This session looks at several scenarios with discussion about each potential outcome. It looks at events that have already occurred, although we will not review, these events discussed are real scenarios. In many cases the discussion is focused around the idea of a singular issue. We tend to approach the problem with a monoptic view. In general HazMat response is regarded as a complicated topic. When in reality it is just like any of the rescue disciplines a refined art, however as with any art review of the issues within context is how we learn. We will identify a process towards, analyzing and thus controlling the risks and hazards that are present or may become a part of your incident, discussing tactical problems, safety concerns and community impact. It is a balanced approach weighing the risk benefit towards a strategy and/or scene mitigation tactic.

Taught by Michelle Murphy, Toby Bevelacqua

Firefighter Exposure Studies and Community Monitoring

90 Minutes

Data collected from a variety of simulated fires and fire activities, including search and rescue, extinguishment, and overhaul have shown that toxic combustion byproducts can be deposited onto protective clothing, penetrate the clothing, and be absorbed onto the skin. Post-fire procedures that reduce the exposure of fire fighters to toxic products of combustion are extremely important to overall exposure reduction. Recommended procedures involve turnout gear removal, isolation and cleaning of PPE; and, equipment cleaning and decontamination. After the fire, a variety of decontamination methods can be applied to reduce the overall risk. New decision support tools will be demonstrated to highlight levels of exposure and to identify appropriate decontamination and PPE laundering guidance. Finally, methods for monitoring community exposures will be addressed.

Taught by Dr. Christina Baxter

The First 100 Minutes of a Radiation Dispersion Incident

90 Minutes

Based on the DHS draft guidance & the ASTM Recommended Practice, this session will provide decision-making considerations for response to RDD and radioactive emergencies. It provides information on what to include in an ERP, and what activities to conduct during a response. The session will teach participants how to identify hazards and training issues, develop a plan and what equipment to acquire.

Taught by Tony Mussorfiti

What Could Possibly Interfere With My Communications

90 Minutes

Taught by Rodney Reed

P4 - Anhydrous Ammonia Response

Part 2 of 2

Get prepared to handle ammonia incidents from start to finish, beginning with an overview of ammonia properties, including health effects and first aid. Session will review common anhydrous ammonia use processes, such as industrial refrigeration, power plant pollution

control treatment, and heat treatment as well as types of containers and selected transportation packaging. We will examine real life release modeling and live release footage, trouble shooting incidents, and address response concerns such as indoor vs. outdoor releases, types of releases, PPE levels, and flammability concerns.

Taught by David Binder, TRANSCAER(R)

LNG: The Challenges Keep on Coming

90 Minutes

Current and future LNG facilities are being planned throughout the US and other countries. This workshop will address the storage, transportation methods, hazards, liquefaction and regasification processes and a strategic overview of Liquefied Natural Gas. The Savannah, GA Elba Island LNG facility will be featured in the presentation.

Taught by Greg Socks, Jason Waterfield

(LEPC) Effectively Using the ALOHA Before, During, and After Chemical Incidents

Part 2 of 2

ALOHA is an “air dispersion” computer program that predicts downwind concentrations of dangerous atmospheres for some 850 chemicals. ALOHA also performs a number of calculations that can be a great assistance to first responders, such as “how long will it take for this tank to stop leaking”, or “how long will it take for this puddle of chemical to evaporate”, or “how much product will remain in the damaged container”, and many other items. This course explores many uses of the ALOHA program, and the appropriate methods to utilize it before, during, and after chemical releases.

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- Capstone Project

Taught By Tom Bergman, Robert Bradley

Saturday, October 21st

1:00 PM

Colormetrics and the Modern HazMat Team

90 Minutes

Colormetrics seems to be a lost art in the modern hazmat team and all of the different chemical identifiers available to them. This class will discuss the different types of colormetrics, their technology, use and limitations. Using actual chemicals the students will use colormetrics to classify and determine how the information can be used in conjunction with the modern equipment.

Taught by Richard Dufek

Intermodal Container Emergency Response

90 Minutes

Will focus on emergency response issues and challenges involving Intermodal Transportation Containers during all modes of transportation. Intermodal containers began making their way into American industry during the 1970's. Since that time they have become increasingly popular and bring a different kind of challenge to rail, marine and highway transportation. The workshop on intermodal containers will deal with pressurized and non-pressure intermodal tank containers as well as other types of intermodal transportation containers. This course will identify the regulations and codes that govern intermodals, the various types of intermodals, and their design features, markings and closures. The workshop will be an interactive discussion with plenty of chances for students to participate and ask questions.

Taught by Bill Hand

Handheld Mass Spectrometry for Downrange Chemical and Explosives Detection

Part 1 of 2

Numerous detection and identification technologies are available to first responders, ranging from pH paper to infrared (IR) and Raman. However, capability gaps still exist for down range CWA/TIC/EOD missions during site assessment. Rugged, handheld devices based on High Pressure Mass Spectrometry (HPMS) can address many of these gaps with rapid target confirmation of numerous priority hazards. Products can be measured from trace to bulk quantities in solid, liquid, and vapor form. This hands-on workshop will introduce the capabilities and limitations of HPMS technology to demonstrate how it can help eliminate detection blind spots in a HazMat event by properly integrating a handheld mass spectrometer with currently deployed meters. Students will have the opportunity to operate several different monitoring technologies in a variety of scenarios ranging from illicit HME labs to chemical emergencies. Attention will be paid to field CONOPs to present hot zone deployment options for HPMS, including continuous air monitoring, wipe samples, and target chemical identification in the presence of interferences.

Taught by Mark Norman

User Friendly GIS - It's Not Just for "Geeks" Anymore

90 Minutes

Almost everyone is familiar with Geographic Information Systems – Googlemaps, Google Earth, Mapquest, Garmin, Waze – are all examples of consumer based GIS. However, for the most part they are “view only” – users can't enter or change data in any significant manner. It can't be “customized” to their jurisdiction or needs. To do that there are “high-end” systems like ESRI Arcmap, but it is a rather costly, intricate and time consuming program. The answer can be MARPLOT from NOAA/EPA. It's free, part of the CAMEO Suite and much easier to use than Arcmap, but provides much of the functionality needed. Users can create their own maps, use existing data and share data with almost anyone. This workshop will demonstrate the power of a field deployable GIS, show participants where to get data and how to use it in response and planning applications

Taught by Al Valerioti, Robert Bradley

DeconIQ

Part 1 of 2

This operations/technician level workshop will provide responders and warfighters the knowledge and skills required to conduct Electrostatic Decontamination Tactics (EDT). EDT uses an electrostatic sprayer to add an electric charge to the decon solution. The charged decon droplets will envelop and adhere to the target. The result is the ability to perform a more effective decon, for a wide range of incidents, with significantly less decon set up. The workshop will include interactive lecture supported by videos, case studies, and a demonstration of electrostatic sprayers.

- Use and limitations of current wet and dry decon techniques
- Operation of electrostatic and air assisted electrostatic sprayers
- Electrostatic decon tactics and set up
- Use and limitations of EDT
- Decon solution selection for EDT
- Special decon considerations
- Lessons learned from the Ebola crisis

Taught by Federal Resources

High Hazard Flammable Liquids Trains: Facts, Myths and Observations 90 Minutes

Changes in the North American energy sector have created new challenges for the emergency response community. The purpose of this workshop is to provide a review of the lessons learned as a result of the 20+ incidents involving HHFT. The session will focus upon three specific areas of information: (1) what do we know as fact; (2) what have we observed but needs further confirmation; and (3) what don't we know that we need to determine.

Taught by Greg Noll

"E" Comes After A, B, C, D 90 Minutes

If "A" stands for the Accident. What comes after the A and B,C,D? The goal of this session is to provide the mental tools to make complex hazmat emergencies decisions – Easier! It's not as complicated as you think. Come benefit from over 100 years of hazmat experience, training and lessons learned without the pain of "learning it the hard way". Learn in the long run it all boils down to a series of simple rules.

- It's just the juice, jar, and map?
- Are you safe unsafe or in danger?
- It's just the right tool for right job!
- And much, much, more

This workshop will help you understand the next letter E, in other words how fast can you get to simple. In hazmat it isn't what you call it – "Emergency, Episode, release, situation, disaster or incident, it is the first lesson most of us learn – "How can you favorably influence the incident?"

Taught by Mike Callan, Frank Docimo, Toby Bevelacqua

HazMat History and How Things Have Changed 90 Minutes

This workshop will look at some of the events from the past that has resulted in today's regulations, Laws, and standards. Come take a walk down memory lane as we talk about some of the HazMat incidents that you may have forgotten about.

Taught by Butch Hayes

Common Sense Isn't 90 Minutes

In the world of safety and hazardous materials response in particular we hear the phrase "use common sense" quite a bit. The problem with "common" sense is that it's only common to the person whose sense is in question. Associate Safety Professional Monique Lewis takes a humorous yet practical look at the pitfalls of relying on common sense and will then show participants how to develop a consistent, effective, and relevant training program that will help bring everyone's sense to the same level so that it can indeed be considered "common".

Taught by Monique Lewis

Explosives Recognition and Understanding

90 Minutes

The world is changing and we are seeing a rise in terroristic activity all over. The use of explosives as a tool for terror is all too common. This lesson is a lecture/discussion driven session on explosives. This lesson is meant to serve as a tool to help responders recognize the presence of improvised explosive devices (IEDs) and understand the risks associated with responding to an explosive event. This will be accomplished through discussion of the precursors of homemade explosives, the 4 components needed to make an IED, showing videos of the effects of an IED detonation, and treatment of some blast-type injuries based on best practices of emergency personnel in NYC. Case studies of explosives incidents will be used at the end of the presentation to incorporate the knowledge gained during the lesson. These case studies will be events that have taken place in big cities and small towns across the country.

Taught by Joshua Sutherland

LEPC Track – TBA

90 Minutes

Saturday, October 21st
3:00 PM

PEAC - WMD Decision Support Software for HazMat/CBRNE Professionals **90 Minutes**

PEAC-WMD is a decision support software used within the hazmat response community by critical CBRNE units such as the National Guard Civil Support Teams, the United States Air Force (USAF), and civilian responders worldwide. This course will illustrate how PEAC-WMD can be used in technical reference and situational analysis as well as modeling and incident reporting. The instructor will review how to expedite the completion of NIMS ICS forms through automation and how to leverage integrated technologies such as Google Earth. The course will include scenarios based on real incidents, review several computation tools such as the Explosion Calculator and PAD Calculator and include discussion on methods available to quickly disseminate pertinent incident data. Additional items such as chemical reactivity and Tier II information will be covered as well. At the end of this course students will know how to access, use and distribute the data sets and tools included in PEAC-WMD and have a heightened awareness of software support aids available to assist their teams in response efforts.

Taught by Matthew Stewart

Handheld Mass Spectrometry for Downrange Chemical and Explosives Detection

Part 2 of 2

Numerous detection and identification technologies are available to first responders, ranging from pH paper to infrared (IR) and Raman. However, capability gaps still exist for down range CWA/TIC/EOD missions during site assessment. Rugged, handheld devices based on High Pressure Mass Spectrometry (HPMS) can address many of these gaps with rapid target confirmation of numerous priority hazards. Products can be measured from trace to bulk quantities in solid, liquid, and vapor form. This hands-on workshop will introduce the capabilities and limitations of HPMS technology to demonstrate how it can help eliminate detection blind spots in a HazMat event by properly integrating a handheld mass spectrometer with currently deployed meters. Students will have the opportunity to operate several different monitoring technologies in a variety of scenarios ranging from illicit HME labs to chemical emergencies.

Attention will be paid to field CONOPs to present hot zone deployment options for HPMS, including continuous air monitoring, wipe samples, and target chemical identification in the presence of interferents.

Taught by Mark Norman

The New Wild Wild West: Bath Salts, Spice, Synthetics, and Now Fentanyl 90 Minutes

The ante has been raised! White powder calls have changed once again! Bath salts, spice, synthetics, and fentanyl, what are we getting into? What are the hazards of these unknown mixtures? In this presentation we will look at the history, components and chemistry, as well as current trends in these operations. We will examine the alphabet soup of chemicals and explain what they are. How can we identify these chemicals? Why are these operations so hard to stop? What kind of PPE should we use? And what is next?

Taught by Tobias Frost

DeconIQ

Part 2 of 2

This operations/technician level workshop will provide responders and warfighters the knowledge and skills required to conduct Electrostatic Decontamination Tactics (EDT). EDT uses an electrostatic sprayer to add an electric charge to the decon solution. The charged decon droplets will envelop and adhere to the target. The result is the ability to perform a more effective decon, for a wide range of incidents, with significantly less decon set up. The workshop will include interactive lecture supported by videos, case studies, and a demonstration of electrostatic sprayers.

- Use and limitations of current wet and dry decon techniques
- Operation of electrostatic and air assisted electrostatic sprayers
- Electrostatic decon tactics and set up
- Use and limitations of EDT
- Decon solution selection for EDT
- Special decon considerations
- Lessons learned from the Ebola crisis

Taught by Federal Resources

Inside the Fenceline: Response to Chemical Facility Incidents 90 Minutes

Emergency responses to chemical manufacturing facilities can seem daunting and challenging. This is because many responders have not been adequately trained on what happens inside the fenceline of facilities that produce and store potentially hazardous materials. In many cases, facility owners and operators work hard to improve chemical facility safety and security and welcome the opportunity to engage local emergency responders to establish cooperative and lasting relationships before an incident occurs. Collaboration allows for sharing of practices and tactics that reduce safety risks when responding inside the fenceline. This workshop will discuss how to size-up a chemical facility, explains the basics of what happens inside the fenceline, introduces practices and tactics for safely and efficiently handling common incidents, and provides tips for assessing the emergency response needs of facilities.

Taught by Keith Silverman, Bill Cullen

Jack Rabbit II Tests Results Update 90 Minutes

Since 2010, DHS has conducted scientific studies of large-scale releases of compressed liquefied gases with meaningful results. In September of 2016, Jack Rabbit II, Phase II concluded the large-scale tests with ~20 tons of liquefied Cl₂ being released. This workshop

provides specific findings and key observations that resulted from the testing with discussion on its likely impact on the first responder community. The workshop utilizes actual videos of the releases and outlines the process where participants can access the training materials so they can deliver the presentation to their jurisdictions.

Taught by Dave Matthew

Wizardly Witchcraft: Debunking Firefighter Sweat Detoxification

90 Minutes

Unfortunately, industry has been watching the dilemma firefighter have been facing with the prevalence of cancer. They have been jumping into the market with products that promise to reduce toxic exposures experienced by firefighters. There have been numerous articles written on “sweat detoxification”. Detoxification spas have become one of those products advertised to provide firefighter detoxification. Some make claims that sweating is the “Best” way to rid the body of fat soluble toxins. I’ve got to admit that they had my attention and I was excited that an excellent product was on the market to help with firefighter cancers. But, unlike others in the fire service, my hazmat background came into play and I started to do my research. What I found may shock you. This presentation will evaluate real research involving human detoxification and review what firefighters can do to reduce their exposure and the affects cause by toxins. It will dispel some of the “wizardly witchcraft” being spun into the firefighter profession who is looking for answers, cures, and a chance to be one of the lucky ones who retire and live out their lives cancer free.

Taught by Richard Stilp

FTIR and RAMAN Spectroscopy

90 Minutes

Is your team using FTIR/Raman chemical identifiers? What do you do when you do not get an answer, or an answer with a low match. This class will discuss the proper use, limitation and interpretation of the results presented. Using actual chemical mixtures interpret the results.

Taught by Richard Dufek

Thermal Imaging in HazMat Response

90 Minutes

Thermal Imaging in a hazmat response – This 90 minute course is designed to give responders strategies and tactics to get the most out of thermal imaging. Students will learn the capabilities of the equipment and get best practices to use during their response. There will be a hands-on component and demonstrations of tactically using a thermal imaging camera.

Taught by Doug Rohn, Joe Bartholomew

Marijuana Grow Operations

90 Minutes

For the last several years there has been a nationwide push to legalize the recreational use of Marijuana in the United States. Recently, eight states, have passed legislation that allows recreational and medical marijuana use. This new addition to the American pastime has created a whole new set of uncontrollable factors for members of the American fire service to train and plan for. As a result, Marijuana Grow Operations are opening up in the communities we serve, faster than fire departments can plan, train and implement safe operating procedures when called to respond to these facilities. Marijuana grows are developed and implemented to maximize the space used, in order to produce higher harvests, thus producing higher profits. In order to do this, netting and wire mesh are used to allow the plants to grow out versus up, producing more buds that can be sold for consumer use. This poses new and increased entanglement hazards for interior fire attack crews. Heavy high voltage lighting is installed to simulate sunlight so the plants will grow, creating increased overhead fall hazards. Chemicals such as Sulfur and Carbon Dioxide are used to control molds and increased Tetrahydrocannabinol production. An unrealized consequence to the madness that Marijuana

has created, is the increased use of Butane Hash Oil. This new challenge and growing popularity have dynamically changed the landscape of the American Fire Service. The processes, hazards and real life case studies will be covered during this class to increase the situational awareness of responders. This class was developed to show historical data and decision-making processes by the citizens of Colorado, lawmakers and ultimately the Federal government.

Taught by C. J. Haberkorn

LEPC Track – TBA

90 Minutes

Sunday, October 22nd

9:00 AM

Closing Keynote

Leadership, Engagement, and Making a Difference
Greg Noll