

HOTZONE 2010

Pre-Conference Workshops

October 14, 2010

Risk Based Response Using Infrared Spectroscopy - So what do you do when the unidentified material that you just sampled doesn't produce a match within the instruments library? How can you proceed with confidence on your next steps? Infrared (IR) chemical identifiers are now common hazmat tools, however most responders think they have limited utility when the library search doesn't produce a match. This powerful hands-on workshop for IR users presents practical tips and a systematic approach for getting more information out of the devices than is stored in their computer libraries. Determining chemical hazard classes from spectral landmarks, scene observations and a risk based approach will be the focus, however incorporating other monitoring principles are also discussed. Interactive exercises with actual samples allow students to practice the techniques and learn the true capability of IR technology.

Training Objectives:

Understanding relationships between chemical and physical properties, spectra and chemical hazard classes, systemic approach towards the use of IR instruments and other devices in the field, and interactively applying new techniques with real-world sample scenarios.

This is an all day workshop. It is recommended for advanced HazMat Responders.

Taught by Armando (Toby) Bevelacqua, Tony Mussorifiti, and Michelle Murphy. (limited to 24 persons)

Railcar Safety Course – A unique offsite workshop focusing on response to railroad emergencies. The course is designed as 4 modules including tank car recognition and features, safely responding to TIH materials, tank car capping kits, tank car valves and fittings, and responding to locomotive emergencies. At the completion of the modules, students will be provided various scenarios to practically apply their new found skills. This workshop is primarily hands-on utilizing actual training cars from the DOW Chemical training program. A training train will be brought to an area near the conference hotel. Training cars will consist of one flat car with simulated leak fittings, three tank cars (non pressure, chlorine, ethylene oxide), two classroom cars, one tank car with various

Railcar Safety Course (cont.)

fittings/leaks, and one locomotive. Work clothes, steel toe boots, and leather gloves are recommended. Lunch provided.

*Provided by TRANSCAER and taught by Union Pacific Railroad's Hazardous Materials Management Group and DOW Chemical's Distribution Emergency Response personnel. **(Limited to 60 persons)***

Responding to Hydrofluoric Acid Emergencies – This all day workshop will explore vital information about one of the most aggressive materials that a HazMat Responder may encounter. Come learn about the chemical & physical properties, health concerns, and special considerations for handling these types of emergencies. Workshop includes classroom and hands-on training.

Topics:

1. Hydrofluoric Overview
2. MSDS Exercise
3. Transportation Equipment
4. Chemistry of Remediation
5. Transportation Incident Review

This is an all day workshop.

*Taught by Chris Steel, Cheryl Wilkinson & Jeffrey Leese **(limited to 48 persons)**.*

HazMat Officer Competency Lab – This workshop will use scenario-based training in the classroom to simulate real life incidents. This exceptional session will utilize Fire Studio Simulator software, radios, laptops, and ICS vests. Pictures, videos, and sound will add realism to the scenarios. The program will stress the 8-Step Process for HazMat Officers and the entire group will have an opportunity to participate. Typically a 16 hour training program for some HazMat Officers, HOTZONE is offering this special edition as a Pre-Conference Workshop.

This is an all day workshop. It is recommended for advanced HazMat Responders.

Taught by Greg Socks and Justin Royall.

Ethanol Emergency Response – This all day workshop will include a classroom session covering the Ethanol Emergency Response Training Program that has been developed by the Ethanol Emergency Response Coalition, followed by some hands-on live fire demonstrations involving ethanol blended fuels.

Taught by Glen Rudner, John Frost, Tom Linnenkugel and The Woodlands Fire Department HazMat Team.

Finding, Using and Interpreting Electronic Databases for Planning, Response, and Recovery of Hazardous Materials (and other) Incidents - The internet has provided a

multitude of information for people involved in all aspects of emergency response. Some are good and others are....well, not so good. This preconference session will introduce participants to many of the free databases that can be ordered, downloaded or accessed via the internet. CAMEO, MARPLOT, ALOHA, and Landview will be demonstrated and discussed. Databases from ATSDR, EPA, NIOSH, OSHA, DOT and other sources will also be demonstrated and discussed. Just having data does not mitigate an incident. It's the interpretation and application of the information that is the key to a safe and effective response. Part of the session will address the information that is available and the use of it to properly plan for, respond to, and recover from incidents. **Students are encouraged to bring their internet capable computers to class so they can follow along and/or observe the demonstrations. Students are also encouraged to bring their own "incidents" – past or anticipated to the workshop – for use as case studies.**

Taught by Al Valerioti and Robert Bradley.

Maritime Hazardous Materials Response – **CANCELLED**

Houston Fire Department Incident Command Simulator – This offsite workshop will include a visit to the state-of-the-art HFD Incident Command Simulator. Activities will include a system demonstration and student participation in real life incident simulations.

Development:

Events such as multiple alarm fires, maydays, MCI's, hazmat, and ARFF operations are rare but pose a significant challenge to officers. These high risk, low probability, events are difficult to reproduce in a training environment, due to their large costs and manpower needs. In an effort to address this training shortcoming, the idea for a strategic simulator was developed. The Houston Fire Department Professional Development Division developed this idea into the HFD Strategic Simulator.

Focus:

Studies of large scale scenario training have determined that a greater emphasis must be placed on strategic level decisions making. Inherent limitation of large scale scenario training includes logistical and financial burdens on training budgets. The HFD Strategic Simulator removes these limitations by allowing large organizations to command custom scenarios in a controlled environment.

Operations:

The HFD Strategic Simulator provides scenarios using DVD and Computer based technologies. This allows for maximum flexibility during the incident. Simulations can escalate or mitigate based on either the user's performance or predetermined scenario parameters.

Instruction:

The designers of the HFD Strategic Simulator recognize that a simulator alone will not properly train an officer. The key to an effective simulation experience is immediate feedback and support for the users participating in the simulation. Following each simulation, user debriefing provides an opportunity for instructors and peers to discuss the simulation and the effectiveness of the fire scene management.

Coordinated By John Douglas, Richard Lawhorn, Moe Crespo, and Members of the HFD HazMat Team.

HAZMAT IQ 4 Step System – Traditional HazMat response is founded in the principles of industrial hygiene, organic chemistry and inorganic chemistry. While these foundations are valuable in the right setting, HazMatIQ has revolutionized first responder training by turning the focus away from mastering textbooks and onto the critical knowledge needed to make a simple decision: *Can I make entry to effectuate a rescue?* In order to do this, a first responder needs to understand the environmental hazards and the required personal protection equipment. This workshop helps streamline the size-up process and enables responders to maximize their response efficiency and effectiveness. The HazMatIQ system also incorporates training on how to safely and efficiently respond to unknown chemicals, mixtures or chemical reaction when there is no information on chemical and physical properties available.

The *HazMatIQ 4 Step System* is a response tool that incorporates a series of easy to understand job aids called *Smart Charts*. These charts enable responders to quickly assess risk and make a proper decision on how best to mitigate an incident. This system coaches responders through a process that virtually eliminates information overload.

The system incorporates the following:

Step 1) Revolutionary *Above the Line/Below the Line* chemical size up using only the chemical name. This process works with every possible chemical.

Step 2) Streamlined chemical research process based on only seven (7) chemical and physical properties.

Step 3) Detection device selection: CGI, PID, FID, pH paper, Temperature gun, KI paper, etc.

Step 4) Accurate PPE selection: Level A, Level B or SFPC (bunker gear). Gone are the days when Level A was erroneously donned “just to be safe.” HazMatIQ enables the user to correctly match protective ensembles with environmental hazards.

Taught by Cris Aguirre & Joe Gorman

Port of Houston Industrial Fire Boat Tour – This all day workshop will begin with a classroom with an overview of the Port of Houston and its various waterfront facilities. After a brief lunch break, the workshop will then depart the hotel for a Houston Ship Channel tour aboard a Port of Houston Fire Boat. This unique educational experience will include up close visual observations of one of the nation’s largest petrochemical port operations, the maritime transportation of hazardous materials, and the many different types of chemical plants, and refining facilities along the waterfront.

*Taught by Bill Hand, Captain Mike Oder, and Mike Hildebrand.
(limited to 20 persons).*

NEW! HazMat Refresher Course – This all day workshop will serve as 8 hours of HazMat Refresher training for those attendees who are trained to the Hazardous Materials First Responder Operations Level and the Hazardous Materials Technician as defined by OSHA 29 CFR 1910.120. Topics will include Laws & Regulations, Recognition & Identification, Chemical & Physical Properties, Reference Materials, Personal Protective Equipment, Hazard & Risk Assessment, and Decontamination. Upon completion of this 8 hour course students will earn a Hazardous Materials Refresher certificate issue by the Harris County Fire Marshal’s Office.

Taught by Richard Lawhorn, Shereen Sarvandian, Jimmy Lanphear, Butch Hayes, and Ray Burt.

HOTZONE 2010

Conference Workshops

October 15-16, 2010

Basics of Photo Ionization Detectors (PIDs) as a HazMat Response Tool – Photo

Ionization Detectors (PID's) measure ppm levels of many toxic gases and vapors. PIDs are a valuable tool for making HazMat responses safer, shorter and less costly. This is a basic seminar that discusses how PIDs work and how to apply them to a HazMat incident. (Note: this is the first, simple half of "PIDs" as a HazMat Response Tool)

Course Objectives:

1. Quick review of HazMat air monitoring too.
 - a. What do LEL monitors miss?
 - b. What are some common VOCs?
 - c. Why not use Colorimetric tubes
2. Understand how to use a PID for:
 - a. Initial PPE assessment
 - b. Leak detection
 - c. Perimeter establishment and maintenance
 - d. Spill delineation
 - e. Decontamination
 - f. Remediation
3. Understand how:
 - a. A PID works
 - b. The vapors & gases that a PID can measure
 - c. How to adjust PID sensitivity for different vapors & gases (Using Correction Factors)
 - d. Review of different types of PIDs and how they work
 - e. Choosing a PID

This workshop is designed for Municipal HazMat Teams, Industrial HazMat Teams, Safety & Hygiene Professionals that use VOCs, and Military Chemical Response Teams.

Taught by Chris Wrenn. (90 Minutes)

Rapid Risk Assessment Techniques - The effective control of a chemical incident is based on a good working understanding of the physical and chemical properties of the product or agent. Although this does not make a chemist out of a firefighter, the responder has to know how the enemy will behave in order to effectively deal with a hazardous material. Responders cannot begin to deal with a hazardous materials incident without a basic grasp of chemistry. Using the Docimo model role and the RRAT technique, anyone can understand the basic aspects of chemical behavior. Using this knowledge may save your life. The behavior of a chemical and the sequential events of a hazardous materials incident are crucial to dealing with the incident in a safe and effective manner.

This is a Hands-on workshop.

Taught by Frank Docimo. (Part 1 & 2, 180 Minutes)

Terrorist Bombings - Awareness Training - This workshop covers the following areas:

- Potential targets
- Suicide vests and belts: construction and tactics
- Nine phases of a suicide attack
- Personal protective actions
- Evidence preservation
- Vehicle bombs
- Pre-incident potential indicators
- Pre-blast responder actions
- Car and truck bomb response: post blast actions
- Responding to the scene
- Arriving at the scene
- Personal protection considerations
- Crime scene investigation
- Off-site support
- Secondary devices targeting first responders.

Taught by Rem Gaade. (90 minutes)

Basic Chemistry for Emergency Response – Come learn the basics of chemistry and the application to your response. NFPA 472 has over 60 terms the emergency responder must understand for hazard and risk assessment. This class will look at the least understood terms and their importance to emergency response.

Taught by Richard Dufek. (90 Minutes) (Will Repeat)

Operations Security for Special Operations Teams - If you are part of a Special

Operations Team you are at the tip of the spear when it comes to personal risk. You need to practice good OPSEC to keep you and your family safe. Your adversaries want to know who you are, what your tactical capabilities are, and what you are planning. Criminals and terrorists are using increasingly sophisticated intelligence-gathering techniques to collect information and use it to their advantage (and your disadvantage). According to a captured terrorist training manual, *"It is possible to gain 80% of the information needed to plan an attack against your enemy from open sources."* This workshop will show you why this statement is true and what you can do to deny critical information from your adversaries. This OPSEC Awareness workshop will open your eyes and change the way you handle sensitive information. The instructor will use real world examples to demonstrate how you can incorporate OPSEC into your daily life to protect you, your family, and your mission.

Taught by Mike Hildebrand. (90 Minutes)

First Due HazMat: "Must-Dos" - This train-the-trainer style workshop provides

educational techniques, tips, and tricks that hazmat technicians and instructors will find helpful for training first responders. Generally, the first arriving unit at a hazmat incident will not be the Hazardous Materials team. How you respond to such incidents can be daunting for first responders. This is especially true when a routine call becomes a hazmat incident after the first responder arrives! The workshop will stress common "musts" that first responders must be comfortable performing in order to effectively, efficiently, and safely handle the initial stages of a hazardous materials incident.

Course Outline:

1. Enhance the response to hazardous materials incidents as explained in the Final Report from the IAFC 2007 and 2009 Hazardous Materials Roundtable
2. Educational techniques, tips, and tricks about the ERG and the NIOSH book
3. Basics of chemical properties and occupational exposure limits – what numbers are the most important
4. Basics of identification of hazardous materials
5. Air monitoring made simple
6. Aid responders in assessing the situation en-route to and upon arrival at the scene of an incident
7. Aid responders in using proper judgment at an incident

This workshop is designed for the basic HazMat student.

Taught by Bill Cullen and Keith Silverman, PhD. (Part 1 & 2, 180 Minutes)

Structural Protective Ensemble 101 – The purpose of this workshop is to discuss and foster an understanding of design and engineering with the structural fire fighting ensemble and airpacks. Over the past years the protective clothing industry has made much advancement in protecting fire fighters. Individual design features and patents are what separate the manufactures, although they all generally start with the same materials and fabrics.

The National Fire Protection Association, NFPA, dictates a minimum level of protection in the construction and design of structural fire fighting ensemble. Standard tests are used with predetermined benchmarks for the performance of each part of the ensemble, but these tests may not always truly represent the environments a fire fighter may experience on the fire ground. Today's fire ground is different, causing fire fighters to keep up with the times. How do you design and engineer PPE to protect fire fighters from a career ending injuries or disability?

Along this journey, we as fire fighters must learn to change our past behaviors, as we continue to educate ourselves with current events, studies, and technical information. In our past we honored certain signatures as badges of courage and/or bravery... lessons learned, near-misses. Today, studies show trending of several serious medical conditions occurring in the fire service. We must all learn that this ensemble is designed for one-time single use for the "bad day at the office". The quality of our care and maintenance prepares this garment for our survival.

During this process we have learned the self-contained breathing apparatus, the airpack, is the weakest link in the ensemble, but the most important. It is this device, which allows us to operate inside IDLH and many times inside thermally heated environments. We have noticed an increase in thermal damage to face pieces, not always a good thing. We gained knowledge, that there is minimal design protection for heat loading. How is this affecting the mask thermal issue? How is this affecting our long term health?

The fire service has a forum to address the aforementioned questions, and we must become educated on how this process works with the NFPA Standards review.

We must learn to "Operate Safely"... Stay low, stay cool and be safe.

Taught by Joel Calfee. (90 Minutes)

HAZMATIQ First Responder Offensive (FRO) - The HazMatIQ FRO system

incorporates the proven “Above the line /Below the Line” size-up tool while instructing First Responders equipped with a handful of instruments to safely enter the Hot Zone to make rescues. Current FRO training mandates that responders identify, isolate, deny entry and call for a Hazmat Team. This training also prohibits First Responders from entering the hot zone even when there is a rescue to be made. HazMatIQ FRO trains responders to safely enter the hot zone to make “Line of Site Rescue”. This is accomplished by teaching responders how to use and understand meters (Radiation meter, 4-gas meter and Temperature Gun) and reagent papers (pH and F papers). This equipment assures their safety when they choose to enter the hot zone to make a rescue. The 2008 NFPA 472 Standard clearly addresses and permits this critical task in its “Mission Specific Competencies”.

NFPA 472

Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents 2008 Edition

6.8 Mission-Specific Competencies: Victim Rescue/Recovery

6.8.1.1.1 *The operations level responder assigned to perform victim rescue/recovery shall be that person, competent at the operations level, who is assigned to rescue and/or recover exposed and contaminated victims at hazardous materials/WMD incidents.*

6.8.1.1.3 *The operations level responder assigned to perform victim rescue/recovery at hazardous materials/WMD incidents shall operate under the guidance of a hazardous materials technician, an allied professional, or standard operating procedures.*

6.8.1.1.4 *The operations level responder assigned to perform victim rescue/recovery at hazardous materials/WMD incidents shall receive additional training necessary to meet specific needs of the jurisdiction. **We add additional equipment to the “additional training”***

Taught by Cris Aguirre and Joe Gorman. (Part 1 & 2, 180 Minutes)

HazMat Team Safety Officer – What does it take to be an effective HazMat Team

Safety Officer? Estimating potential harm, assessing risks, developing a safe Incident Action Plan, monitoring unmanaged risk, and evaluating tactical operations are but a few of the essential tasks. This workshop will cover roles & responsibilities, collecting data, and evaluating information to ensure Team safety. Scenarios will challenge participants and raise their awareness of safety practices.

Taught by Glen Rudner and Rick Emery. (90 Minutes)

Roadside Response Safety – Let’s All Go Home; Not to Jail – Responding to highway emergencies is one of the most dangerous situations faced by first responders. This workshop will focus on safe practices, the Federal Highway Administration requirements for high visibility garments, and conflict resolution between response disciplines at the scene of the incident.

Taught by Mike Montgomery. (90 Minutes)

pH-The Power of Hydrogen – This workshop will explain why the First Responder should understand the hazards and risks associated with Corrosives, how they react with other materials, and how they may harm the human body.

Taught by Dieter Heinz. (90 Minutes)

HazMat Basics – 7 Facts of Life – This program examines several issues that face all responders to dangerous chemical spills. These facts are crucial to protecting a responder’s life in any emergency. The presentation will examine each principle which represents the fundamental need for a sound, practical approach to successfully handling a chemical emergency. Many of these lessons have been learned in the street at the cost of lives. Understanding these facts will develop the right attitude to safety at any chemical emergency and will make the difference in a hazardous materials spill. In fact these “facts of life” could be the difference between life and death at a HazMat call.

Taught by Mike Callan. (90 Minutes)

Changes in the NFPA HazMat and CBRN Clothing Standards - You can influence the design and performance of your future HazMat clothing with this course. The NFPA HazMat clothing standards are the leading influence on HazMat protective clothing performance and design. These standards, NFPA 1991, 1992 and 1994 are being revised. Learn more about these standards, the proposed change and how you can influence this revision process.

Taught by Dr. Jim Zeigler. (90 Minutes)

Hazardous Atmospheres: A Death Trap for Confined Space Rescuers – The first part

of the workshop will focus on the OSHA requirements for Confined Space Entries as laid out in 29 CFR 1910.146 and 29 CFR 1910.134. Attendees will receive a basic understanding of what is considered a confined space and what is required to safely enter and work within a confined space. We will discuss the duties of the Entry Supervisor, Authorized Entrant(s), and Authorized Attendant/Hole watch, as well as PPE selection, permitting requirements, and equipment use in and around the confined space.

The second part of the workshop will focus on an area confined space fatality case study. The response to this confined space double fatality involved local police, fire, county hazmat, medical examiner, and a local industrial mutual aid rescue team. We will examine the incident in depth and give the workshop attendees a personal prospective on response, scene size-up, information gathering, and the initiation of the response objectives. This is an incident where all responding agencies came together in a Unified Command setting to safely accomplish the response objectives.
Taught by Richard Lawhorn and Eugene Franco (90 Minutes)

Basic Chemistry for Emergency Response – Come learn the basics of chemistry and the application to your response. NFPA 472 has over 60 terms the emergency responder must understand for hazard and risk assessment. This class will look at the least understood terms and their importance to emergency response.

Taught by Richard Dufek. (90 Minutes)

Dealing with Heat Stress - This is a 2-part seminar for effective heat stress management in the hazardous materials and fireground settings. Heat stress occurs frequently, even under good conditions, and is a common hazard for fire, EMS and HazMat responders. First responders need to understand how to anticipate when heat stress will occur and how to conduct effective prevention and rehab. This seminar will provide a practical approach to understanding and recognizing heat stress and will provide multiple options for dealing with heat stress at both small and large incidents.

Taught by Dr. Jim Zeigler and Dave Hostler. (Part 1 & 2, 180 Minutes)

Grounding and Bonding – What Is It? Why Do It, and How Do We Do It? – This

workshop will layout the What's, Why's, and How's of grounding and bonding. The program will follow the recommendations as set by the NFPA 472 standards and discuss the misunderstanding of what ground resistance is and why do we do it first. Then by demonstration, the instructor will show how we set up a grounding field for the damaged container, grounding field for the recovery container, and appliances and how to bond them together. This is an interactive program that will ask the student to discuss the subject. If you wish, bring your ground density meter with you and let's make sure you know how it works!
Taught by Glen Rudner. (90 Minutes)

Not Your Grandfather's CAMEO Any More - This workshop will cover non-traditional uses of the CAMEO suite. Programs discussed will include CAMEO, ALOHA, MARPLOT, and LANDVIEW. These programs have been around for over twenty years with many features. This workshop will explore alternative uses to include enhanced training for modeling while using advanced searches to categorize chemicals and provide data for risk and damage assessment. As a bonus, using these programs for natural disasters will also be demonstrated.

Taught by Al Valerioti and Robert Bradley. (90 Minutes)

Street Smart Response – Safe, Unsafe, and Dangerous – This is a practical approach to dealing with chemical emergencies. It is applicable to anyone who responds to hazardous materials releases. Whether you're industry or fire department personnel this program is designed to keep you alive. It helps identify that there are three distinct areas of a hazardous materials situation - Safe, Unsafe and Dangerous. Recognizing when it's safe or dangerous is the beginning of developing a proper mitigation process, site safety plan or emergency response to a chemical spill.

Taught by Mike Callan. (90 Minutes)

JHAT/working with FBI – Has your team ever been asked to stand-by for a special event? What’s the plan? What are you expected to do? How can you respond efficiently without raising the attention of the public?

Joint Hazards Assessment Teams (JHATs) are organized teams that provide technical assessments of threats at special events. JHATs are normally comprised of specialized personnel from different agencies and disciplines, such as fire, law enforcement, and public health professionals. JHATs may also include scientists and specialists from private organizations, depending on the type of event or the possible threats that could occur during the events.

This session will focus on planning for special events and tools used by HazMat teams to effectively respond during these operations.

Taught by Dione Mazzolini and Domenick Iannelli (90 Minutes)

Have You Heard the Latest? – This workshop is designed to be an informational update about what’s going on around the country concerning hazardous materials response, national programs, advances in technology and pending research, rule making, regulations, and laws that may affect the way we do our business.

Taught by Tim Butters, Chairman of the IAFC Hazardous Materials Committee. (90 Minutes)

National Hazardous Materials Fusion Center Update – Come hear about lessons learned from hazmat responders nationwide and view the latest version of the National Hazardous Materials Fusion Center Web portal. In addition to learning about the portal and receiving a demonstration of its content, there will also be an overview of the latest product-specific and incident-based hazmat training packages created by the Hazmat Fusion Center’s Regional Incident Survey Teams.

Taught by Tom Wells, Amber Wells, Kelly Wolfe, and Elena Slavinsky. (90 Minutes)

Radiological Incidents Involving Moisture Density Gauges & Radiographic Source

Projectors - While much attention has been focused on the possibility of a terrorist attack in the United States involving radioactive materials, it is important that responders remain competent at mitigating the most common types of radiological incidents. Two of the most frequently occurring incidents involve moisture density gauges and radiographic source projectors. This class is designed to provide participants with an opportunity to become familiar with the applications and operation of such devices. The program will include a lab session to practice mitigation of incidents involving each of these devices.

Taught by Cheryl Weaver. (Part 1 & 2, 180 Minutes)

Bio Sampling In The Field – Prior to the 2001 Amerithrax letter attacks, few responders knew much about field sampling for biologicals. White powder sampling quickly became a key issue for responders, and soon after work started on a national sampling standard culminating in the publication of ASTM E2458-06. Shortly thereafter, E2458-06 was reopened for revision following feedback from the response community. During revision of the standard, the community recommended the development of an umbrella document to assist in initial response coordination. In this session, the currently active revision process, a brief history of field sampling and an update on operational exercises will be presented. Coordinating sample collection and submission is a critical component of the revised standard and coordination is discussed according to best practices as well as operational exercises to address lessons learned for coordinated the who, what, where, when and how to sample in the field to meet the goals of responders, law enforcement, and public health.

Taught by Rick Emery. (90 Minutes)

E-Plan: A First Responder Tool – Over the past two years, tremendous strides have been made in the E-Plan database for First Responders located at The University of Texas at Dallas. As of May 31, 2010, we have collected 356,129 Tier II facility records from forty-four (44) states and one (1) territory. This is up from 262,538 Tier II facility records from twenty-three (23) states twelve months ago, May 31, 2009. This is a 35% increase in the number of facilities and a 91% increase in the number of states. In addition there have been numerous additions to E-Plan capabilities that provide first responders with the ability to be more effective and more are being planned. E-Plan is a first responder's best tool for the first one to two hours of a hazmat incident.

Some of the many improvements to E-Plan are; 1) Facility Risk Management Plans (RMPs), 2) Maps of the area surrounding a fixed facility showing schools and hospitals, 3) Maps of all facilities with a specific hazardous material in a specified area for; hurricanes, tornados, floods, terrorist threats, etc. 4) Search for facilities containing a chemical and/or containing more than a specific quantities, 5) Instant download of data from E-Plan into Excel, PDF or Tier2 zip files for offline viewing and analysis, 6) E-Plan online Tier II filing system provides an online interface for capturing facility data and makes it instantly available to first responders. Being used by NY, NC, SC, TN, GA, 7) Visual Search provides capability to search for nearby facilities by simply selecting a point on a map, 8) Integrated with Google Maps to show facilities and nearest schools and hospitals, 9) Developing interfaces to interface with Exchange Network partners for data import (NE data the first), 10) E-Plan web services for E-911 integration (beginning in FL), 11) Cleaner and simple user interface for providing facility and chemical information with color coding such as EHS chemicals highlighted in orange color, 12) Multi query search capability to search for facilities satisfying several criteria (used for contingency planning).

An E-Plan update, along with plans for new capabilities, will be presented. E-Plan users have developed an excellent "E-Plan Users Group" to recommend and prioritize new capabilities that would make them more effective. How the "E-Plan Users Group" is organized and how First Responders can become a part of the organization will be discussed.

Taught by Dr. E. Douglas Harris. (90 Minutes)

Underwater Oil and Hazard Substance Response Operations - In the past 15-years, the salvage and commercial diving industries have increasingly been sought out to prevent oil spills from marine casualties or to proactively mitigate the spill below the surface once it occurs. Underwater oil recovery techniques have advanced from predominantly surface-supplied diver vacuum or installed pumping systems in relatively shallow waters to the use of saturation diving systems and remotely operated vehicles at greater depths. This workshop will provide the basic rules of underwater response operations and a brief analysis of recent technological advances available to recover oil at depth, from using saturation diving systems and manually connected viscous oil pumping systems to remotely operated vehicles and associated offloading systems. Recent case studies frame the presentation of advances in sub-sea oil recovery equipment and associated safety, logistical and financial considerations.

Taught by Commander Jim Elliott, Commanding Officer, United States Coast Guard Marine Safety Unit Galveston. (90 Minutes)

New Detection Technologies – HazMat events have changed very little - what has changed is our recognition of the hazards, and the evolution of equipment available to assist in the response. In recent years, there have been dramatic improvements in the air/gas monitoring, detection, and identification technologies available for field use. Walking into the back of a HazMat response apparatus often feels like walking into a laboratory. This session provides an overview of current, new, and emerging technologies with a specific focus on limits of detection, sensitivity, and applicability to specific scenarios.

Taught by Chris Hawley (90 Minutes)

Survival In The Hot Zone– Entry operations at hazardous materials incidents are inherently dangerous. Incidents that require the use of a Level-A ensemble place even more dangers and constraints on personnel. Maneuverability, visibility, dexterity and communications are all compromised. Many problems related to suit usage may be encountered during entry operations. As an entry-team member, are you aware of the various problem situations that may develop and the procedures to address them? This workshop will explore some of the many techniques used to self-rescue responders working in this environment. Attendees should bring a change of clothes.

Taught by Butch Hayes, Glen Rudner, John Frost, Justin Royall, Marvin Crawford, Stephen Kastensmidt, Joe Leonard, Ray Burt, Gary Scheibe, and Sam Andrus (Part 1 & 2, 180 Minutes)

The Other ID!

Over the past 10 to 20 years we as responders have embraced a lot of ID's...including PID, HAZMATID and GASID. With the recent changes in some manufacturing requirements we as responders have an opportunity to add a Fire Department Friendly FID. The flame ionization detector is a very versatile, accurate and reliable instrument well suited to a variety of important applications including emergency response analysis, hazardous waste evaluation, industrial hygiene and natural gas leak detection. With the increasing stringency of governmental regulations for exposure and accountability, the flame ionization detector is playing an increasingly vital role in meeting these requirements. This session will cover, application, operations, operating principles and additional considerations of the FID. An open discussion at the end of this program will focus on what manufacturers need to do to make this tool Fire Department Friendly.

Taught by Frank Docimo. (90 Minutes)

The Number One Objective R.I.C.H. Recognize...Identify...Chemical...Hazards! Understanding Physical and Chemical Properties and Reactions

is a Must for Emergency Responders - Emergency Responders to Chemical Incidents must understand basic "Street - Chemistry" terms. Let's solve the problems and not add to them. Safety always comes first!

Taught by Dieter Heinz. (Part 1 & 2, 180 Minutes)

So you want to be a HazMat Medic - Unless we have a belief that we can effect change within the environment in which we live and work, the past events will repeat themselves. With each year of experience, a new solution to a problem was discussed and implemented. However, the medical aspect has been mostly disregarded; until now. This program is an attempt towards the complete management of a hazardous materials incident. It is the awareness of such an incident, regardless of its size, that will protect the Fire Department, HazMat Team, Ambulance Service, Emergency Response Personnel, Emergency Departments and the community in which they serve. By utilizing medical controls, heighten awareness, and problem identification; a system towards improved efficiency can be managed. As this course will illustrate, the services that are presently available within any ALS system, can improve Hazardous Materials mitigation. The key here is the available knowledge, training, and skill application each pre-hospital provider maintains.

So you want to be a HazMat Medic (cont.)

Course Objective:

The main goal is to identify and outline areas of medical importance when dealing with a Hazardous Materials incident. The assessment is from a TEAM prospective with emphasis on team safety and support. The presentation is organized to assist the team members in making decisions based upon information gained and weighted on a scale of risk versus gain.

Description:

Awareness and community involvement has increased significantly over the past few years. The concerns from the private sector as well as from the fire protection agencies are very real. How we view an incident, understand and gather information, and deciding how to deal with the problems is the beginning toward mitigation of the incident. Medical efforts are focused on decontamination, medical techniques, and importance of a Hospital liaison. We will also look at specialized equipment, and limited antidotal treatments in order to “gain control” of a hazardous materials incident from a medical aspect. Standard operating guidelines, identification of common nomenclature, chemistry applications, decontamination procedures, selective medical techniques, and equipment are but a few topics that will be discussed in depth. **This is an advanced workshop recommended for EMTs, Paramedics, and hospital personnel.**

*Taught by Michelle Murphy and Armando (Toby) Bevelacqua.
(90 Minutes)*

When the HazMat Incident is a Crime Scene – When the Haz-Mat incident turns out to be a WMD/Terrorism crime scene, what is the next step? Has your Haz-Mat team prepared for these events?

This workshop will introduce concerns that may arise during WMD/HazMat terrorism responses. Topics will include identifying WMD/HazMat terrorism incidents as part of a hazard risk assessment, providing guidance for HazMat responders encountering a potential WMD/Hazmat incident, and how to preserve potential HazMat/WMD crime scenes. You will learn the important difference between a Public safety sample and a evidentiary sample for forensic laboratory analysis. The workshop will include case histories of HazMat/WMD incidents encountered by the FBI HMOU.

Taught by Dione Mazzolini and Domenick Iannelli. (90 Minutes)

Highway Cargo Tank Emergencies - Highway cargo tank incidents are one of the most frequently encountered types of hazardous materials emergencies. Bill Hand will draw on his long career as a member of the Houston Fire Department Hazardous Materials Response Team to provide actual case histories of highway cargo tank incidents for the students to assess and make tactical decisions. This will be an interactive workshop and students will have ample opportunity to make emergency response decisions.
Taught by Bill Hand. (Part 1 & 2, 180 Minutes)

Mercury Is a Big Deal! – Are you safely responding to mercury spills? How can you tell it has been cleaned up? Come learn about responding to Mercury Spills.
Taught by Greg Socks. (90 Minutes)

Emergency Response to Anhydrous Ammonia Incidents - This workshop covers the chemical and physical properties of Anhydrous Ammonia and its unique hazards. The material's containers and packaging, proper PPE, and emergency response objectives will also be discussed. As an added feature unconventional / criminal uses of Anhydrous Ammonia, such as its use in meth labs, will be covered.
Taught by Catherine Blair. (90 minutes)

There is a Fire in the BSL - This workshop will highlight the many challenges of responding to emergencies inside a Biosafety-Level Laboratory including fires. Inherently, these labs contain some of the most hazardous biological materials in various stages of development. Topics such as regulations, building construction, design limitations common emergencies with current practices and tactics will be discussed. Three scenarios will follow the lecture to allow students the ability to “work out” the problems.
Taught by Brian Wagner. (90 Minutes)

Risk Based Approach to Monitoring and Detection - Risk-Based Response: How to

Apply What the Meter Is Telling You. Response personnel must have the ability to quickly estimate the potential harms that may occur at a HazMat / WMD event to determine their tactics. This session will initially guide the responder through a matrix of decision points that are rooted in the chemistry of hazardous materials, followed by practical hands-on session using Monitoring & Detection devices to identify the hazards associated with unknown products. The session will conclude with 3-D scenarios in which the Technician will use Job-Aides to determine operational tactics.

Course Objectives:

- Understanding relationships between chemical and physical properties, and how they can assist the risk assessment
- A systemic approach towards scene management using a matrix and other devices in the field
- Interactively applying new techniques with real-world sample scenarios.

This workshop is designed for the basic HazMat student.

Taught by Armando (Toby) Bevelacqua and Tony Mussorfiti (90 Minutes)

Blowing Up Can Ruin Your Whole Day - Combustible gases and vapors are one of the most common gaseous threats for HazMat responders. However, many responders don't fully understand how their combustible gas sensors operate and what their limitations are. This course will discuss the operation and limitations of wheatstone bridge catalytic bead LEL sensors, infrared combustible sensors, thermal conductivity combustible gas sensors, dilution fittings, and even using Photoionization Detectors (PIDs) for assessing combustible environments. It will help you understand when to trust and use each technology.

Course Objectives:

- Understand how the most common combustible gas sensors work
- Understand the limitations of “catalytic bead” sensors
- Understand why there may be a difference between calibration gas and measurement gas
- Understand options that can be used for measuring combustible gases and vapors

Course Outline:

1. Wheatstone bridge catalytic bead
2. Response, calibration & correction factors
3. High range flammability
4. Dilution
5. Thermal conductivity
6. Non-dispersive infrared (NDIR)
7. Photoionization Detector (PID)
8. Which technology should I trust

This workshop is designed for Municipal HazMat Teams, Industrial HazMat Teams, Safety & Hygiene Professionals, and Military Chemical Response Teams.

Taught by Chris Wrenn. (90 Minutes)

Small Spills: It's Not the Big One but it's Still One - Small spills and releases are

common occurrences, but responding to them can be confusing and challenging. What amount of material constitutes a small spill? Is it always the same or can the criteria change? Is the material hazardous or potentially hazardous in any capacity? The better we understand how to size-up small spills, the more prepared we will be to mitigate them. This workshop will discuss response options to several types of common small spills with a focus on situational assessment, risk-based decision-making, and responder safety.

Course Outline:

1. Enhance the response to hazardous materials incidents as explained in the Final Report from the IAFC 2007 and 2009 Hazardous Materials Roundtable
2. Educational techniques, tips, and tricks focused on size-up, risk assessment, and risk analysis
3. Basics of chemical identification with an emphasis on predictability and exposure assessment
4. Aid responders in assessing the situation en-route to and upon arrival at the scene of an incident
5. Aid responders in using proper judgment at an incident
6. Use lecture, video, and case studies, to develop a plan for a safe response

This workshop is designed for the basic HazMat student.

Taught by Bill Cullen and Keith Silverman, PhD. (90 Minutes)

Smoke as a Hazardous Material – This workshop will take a scientific look at some of the toxic byproducts of combustion. A special focus will be placed on Hydrogen Cyanide (HCN), called “the new Carbon Monoxide” and the thermal decomposition of Teflon® which yields Perfluoroisobutylene (PFIB), a chemical that cannot be detected by a PID and is ten times more toxic than phosgene. It is substantially more toxic than Hydrogen Fluoride which is also liberated at Teflon® fires and is a common concern for fire fighters.

Taught by Kristinia Kreutzer. (90 Minutes)

Closing Session

October 17, 2010

The Haitian Earthquake - Deepwater Horizon - 5 Years of Katrina – Have We Learned Anything? – This presentation will feature a close up view from a response participant to the Haitian earthquake and the Deepwater Horizon oil spill event. In light of these two major 2010 incidents coupled with five years of responding to Katrina, have we learned anything? If so, have we managed to put into use what we have learned? Come hear the candid comments and insights from an inveterate responder.
Presented by John Temperilli, Director - Response & Logistics, James Lee Witt Associates.