Pre-Conference Workshops
Thursday, October 19th

A1, B1: Street Smart HazMat Safety Officer (8 Hrs) On Site

One of the most important functions in HazMat emergency response is the safety of response personnel at the scene. From the seasoned incident commander to the rookie emergency responder, "street smart" safety should be a primary focus of emergency operations. The course provides a practical approach to sizing up a HazMat emergency. The course helps participants develop practical site and emergency safety plans that can be implemented at any level from company officer to a complex multi-agency operation.

(Lunch on Your Own)

Callan

A2, B2: A Complete Cameo Update & Troubleshooting (8 Hrs) On Site

Participants will utilize the CAMEO Suite programs (CAMEO Chemicals, CAMEOfm, ALOHA, MARPLOT) to address issues presented by a number of HazMat scenarios taken from actual incidents. Training will include elements of all the CAMEO programs, such as, CAMEO Chemicals: Safety Datasheet Information, Absorbents Guide, Reactivity Worksheet; CAMEOfm: Effectively Interpreting and Utilizing Tier 2 Hazardous Chemical Inventory reports; ALOHA: Correctly Creating and Displaying Plumes Models for multiple chemicals, changing weather conditions, and future time changes; MARPLOT: displaying Control Zones taken from ERC, WISER, ALOHA, and real-time sampling/monitoring, creating and displaying evacuation and other related map zones, sharing and saving user-developed mapping information.

(Lunch on Your Own)

Bergman, Valerioti, Bradley, Coutoulakis

(Limited to 25 Students)

Participants should provide their own laptop for this class.

A3, B3: BioTechIQ: Response - Identify- Decon for Biological Agents, White Powders, and Unknowns

(8 Hrs) On Site

BioTechIQ trains responders to implement risk-based response tactics to safely, effectively, and efficiently respond to any potential biological incident. Through the use of an innovative Biological Field Guide (BFG), students are trained to:

1. Quickly confirm and identify a potential biological agent or unknown white powder.
2. Determine the signs, symptoms, and exposure route of suspected biological agents
3. Select proper personal protective equipment (PPE) needed
4. Choose the correct field and lab detection equipment
5. Select the correct products for decon of patients, responders and equipment.

This 8-hour training covers the different types of biological agents (virus, bacteria, parasitic), incubation period, mortality rate, trade names/synonyms, exposures routes, treatment/prevention and potential release scenarios of all CDC Category A, B, and C Biological Agents, as well as several other well known white powders that are easily misidentified as a biological agent. The second half of BioTechIQ gives students hands-on training using different detection equipment/instruments with surrogate biological agents and decontamination equipment and tactics.

(Lunch on Your Own)

Noble Training

A4, B4: When Meters Matter! Air Monitoring for Emergency Responders (8 Hrs) On Site

The Meter Guys is an innovative simultaneous hands-on lecture meter training program focused on Emergency Responders, Hazmat Personnel, and Industrial workers. This class provides students with the skills and competencies on how to properly use a Multi-Gas Meter, understand the readings, and interpret the implications of such during an emergency response. The Meter Guys program is tailored to our audience, making the information easy to grasp and comprehend, thereby meeting your training needs. There is no other hands-on meter class of this caliber. Our students will tell you so!

(Lunch on Your Own)

Russell, Bosley, Warchol

(Limited to 45 Students)

A5, B5: "HEINZ 5-Step Field ID Laboratory" (8 Hrs) On Site

This 8-hour "wet chemistry" course will consist primarily of hands-on lab work with liquid and solid unknown chemicals. The hazardous properties will be discussed as each sample is tested and analyzed. Participants will work in small groups and examine approximately 10-12 samples throughout the day. Samples will consist of common corrosives, oxidizers, flammable and combustible liquids and solids, and others. Physical properties such as appearance, vapor pressure and solubility will be considered as it relates to hazard determination and response tactics for hazardous materials team members. Safety, personal protection, and proper technique when working with chemicals will be emphasized and stressed during this qualitative analysis/bench chemistry workshop.

(Lunch on Your Own)

Heinz, Matlock, Wen

(Limited to 30 Students)

A6, B6: The HazMat Medic (8 Hrs) On Site

This interactive 8-hour presentation takes the audience through the important steps of identifying the need for a HM Medical program, how to define the capabilities of the program, equipment, drug needs, protocols and identifying the training and retraining program. To demonstrate the need, a number of case studies will be reviewed and how trained medical personnel can respond and manage patients generated from both large and small hazmat incidents. Combined, the instructors have over 50-years of hazardous materials medical response experience and have shared their knowledge and experience through numerous publications and course development. This presentation will provide critical information to those medical responders who want to develop a program and the State HM Medical Protocols will be reviewed and evaluated for use agencies wishing to take on this responsibility. Also, the discussion on obtaining buy in from the medical director and from the receiving facilities. Important lessons learned (what worked and what doesn't) will be reviewed and evaluated. Real case studies will be used to identify how usable the program and protocols are.

(Lunch on Your Own)

Bevelacqua, Murphy

A7, B7: Tactical Chemistry (8 Hrs) **On Site**

Tactical decisions at hazardous materials emergencies are heavily influenced by the released chemicals and their properties. Using NFPA 470 (2022) Chapters 34 and 38 as the framework, we will make tactical decisions at hazardous materials incidents fall into place using chemical demonstrations, scenario-based exercises, and hands-on chemical identification exercises using a variety of air-monitoring and sample identification equipment. We will examine the effect of chemical class, concentration, and complexity of mixtures on detection, identification, and product control. The class is highly interactive with students leading the direction of the class as we discuss multiple scenarios culled from the news and experience to illustrate the chemistry of hazardous materials.

(Lunch on Your Own)

Dufek

Off Site Workshops

A8, B8: Houston Petrochemical/Industrial Marine Tour (8 Hrs)

This workshop will start with a classroom session at the hotel on Thursday morning. Then the students will travel to the Houston Ship Channel where they will board one of the Houston Fireboats for an up-close waterside tour of the Houston Ship Channel Industrial complex.

(Lunch Provided)

Hand, Lawhorn **Off Site**

Limited to 25 Students

A9, B9: HazMat Hands-On Practical Evolutions (8 hrs)

This all-day interactive workshop will focus on product release and control. 1) LPG and related products release and control. 2) Liquid product release and control.

3) Grounding and Bonding for product transfer. 4) Scene safety and Incident Management. **Gear needed for students - Safety glasses, close toed shoes.** Instructors for the class will all be current Houston Hazmat Team Members.

(Lunch Provided)

Captain Buck McClain and Houston HazMat **Off Site**

Limited to 30 Students **HFD Jahnke Fire Training Facility**

A10, B10: Ethanol Fire Response (8 Hrs)

This workshop will cover all aspects of responding to ethanol and ethanol blended fuels. The day will start with traveling to The Woodlands Emergency Services Training Center. There the instructors will provide classroom instruction and live demonstrations on; Introduction to Ethanol, Ethanol and Ethanol Blended Fuels, Chemical and Physical Properties of Ethanol and Hydrocarbon Fuels, Transportation and Transfer, Storage Containers and Dispensing Locations, Firefighting Foam Principles, General Health and Safety Considerations, Storage and Preplanning, Recognition and differences between E-10 and E98 Fires, Application of AFFF on both E10 and E98 fires using approved methods, and Application of Next Generation Green Foam on both E10 and E98 fires using approved methods.

(Lunch Provided) **Off Site**

Frost, Rudner, and The Woodlands HazMat Team

At the Woodlands Emergency Services Training Center

Limited to 30 Students

A11, B11: Chemical and Physical Properties for Risk Based Response – Interactive Experience (8 Hrs)

Hazards, Risks, and Consequences during this 8 hour highly interactive class, participants will understand the significance in using physical and chemical properties to assess hazards encountered at hazardous materials incidents, apply physical and chemical properties to manage risk during hazardous materials incidents, and understand consequences of how things can go wrong on hazardous materials incidents. During this lecture flash point, flammable range, boiling point, vapor pressure, auto ignition temperature, molecular weight, vapor density, and solubility will be demonstrated. This lecture will also demonstrate the properties of liquefied compressed gasses as well as cryogenics. These high energy fast paced demonstrations will leave the audience / students with a keen awareness of street smart chemistry of hazardous materials and how to apply physical and chemical properties to Risk Based Emergency Response!

(Lunch Provided)

Ramsey **Off Site**

Limited to 30 Students **Harris County Fire Training Facility**

Opening Session
Friday, October 20th

8:00 AM Keynote

"Leadership, Engagement, & Making a Difference"
Greg Noll

10:15 AM General Session

"The Devil We Know"
Eddie Weiss

Conference Workshop Descriptions

Friday – 1:00 PM

D1: Lithium-Ion Battery Response Part 1 of 2

This session will prepare HazMat Technicians to conduct risk-based response to Lithium Metal and Lithium-Ion (Li-Ion) battery emergencies, including incidents involving consumer batteries, scooters, electric vehicles, and bulk shipment of batteries. Topics will include battery construction/construction, thermal runaway, battery incident assessment, developing an action plan, air monitoring, and overpacking damaged lithium battery cells into approved DOT containers.

Sharp

D2: Compass: Guide to Hazard Assessment 90 Minutes

For some, COMPASS is an age-old acronym, and some have never heard the letters put together in this particular order but have seen some variation in most textbooks written on the subject of hazardous materials response. This is a powerful assessment tool that can ground responders to a very simple 60 second assessment of what the primary hazards are and how to protect themselves and others while additional information is gathered. This is a "back to the basics" look at the assessment process that will add value to the most seasoned responder as well as the brand new technician.

Lewis

D3: Back to the Basics; Grounding & Bonding 90 Minutes

The program will follow the recommendations as set by the NFPA 470 standard and discuss the misunderstanding of what ground resistance is and why 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. You can bring your ground density meter with you and make sure you know how it works.

Rudner

D4: The ABC's of HazMat Incident Command 90 Minutes

Who may function as an Incident Commander (IC) at a hazmat incident is guided by federal regulations and emergency response standards. Hazmat ICs should possess certain training qualifications and specific skill sets to properly manage such incidents and ensure safe and effective operations. This session will examine the training and qualifications required to function as an IC at a hazmat incident and provide additional considerations for those serving in this position and actively managing hazmat incidents.

Edinger

D5: Heat, The Silent Killer 90 Minutes

For Heat, The Silent Killer, I have taken thirty years of Emergency medical experience, coupled with industrial knowledge and Fire service to develop a training which relates to a silent but dangerous plague. This training will discuss a topic that is rarely talked about and/or taken seriously. Across the United States, temperatures can cause life altering situations within the workforce. Heat-related emergencies present as simple as a cramp but can quickly progress into a stroke complex or cardiac illness. A simple question of body mechanics and physiological functions of the human body could save a life. Why are we putting our firefighters and first responders at risk for devastating consequences? Heat, The Silent Killer was developed to bring awareness to a simple process that rarely gets discussed. Stages of this emergency and safety cultures will be combined with the understanding of how PPE helps when used properly; but, can also be dangerous if full safety considerations are not understood. The training is broken down into different stages of knowledge including: understanding the human body and its processes, rehabilitation (the how and why), solutions (stopping and reversing the heat stressors), engineering controls and safety concerns.

Crockett

D6: HazMatIQ Above the Line/Below the Line Part 1 of 2

Developed by responders, for responders, this is the foundational, patented system that started it all – This one-day class, taught in a straight -forward easy to understand methodology, takes the typically complex world of Hazardous Materials and simplifies it for street level responder. Each participant receives a set of laminated Above the Line/Below© charts which allows them to efficiently size-up any chemical in minutes, determining the hazards, meters and PPE required.

Noble Training

D7: What's That Smell? 90 Minutes

HazMat teams respond to reports of odors all the time, and many of these calls can be challenging. This session focuses on how to determine the cause of the common odors, the unusual odors and the weird odors. There are true sick buildings and there are buildings with a chemical problem, one can be easily solved by a response team, the other requires more substantial work. This session will cover examples of both and provide strategies and case studies to handle these types of situations.

Hawley

D8: Bio Detection: Are You Ready? 90 Minutes

You are responding to an investigation of "Smoke in the Area". You turn the corner and smoke is light but coming out of the eves on that third house in. You strike a full alarm for a house fire. This is how a fire department found a Ricin batch being made. While on your shift the HazMat Team is called to a family clinic, the patients are described to you as having pustules and a fever. How about the infamous white powder call when the infrared signals a biological spectrum.

Bevelacqua, Murphy

D9: HazMat Pre-Entry Briefing 90 Minutes

The pre-entry briefing is the most important safety component of the mitigation process and will make (or break) an incident. Unfortunately, most pre-entry briefings are incomplete and do not provide all the information required to mitigate an incident safely and effectively. This requires communicating a lot of critical information to entry team members and the backup team in a concise format. The list is robust, but an effective pre-entry briefing should not require more than a few minutes to relay all this information. The Incident Commander ensures a pre-entry briefing is presented prior to allowing personnel in the Hot Zone; the Haz Mat Officer identifies the procedures and the Safety Officer conducts the safety briefing for personnel performing the tactical operations. Each participating Technician must know how to identify the components of a pre-entry briefing because every one of these components is essential for a successful outcome. Bring your team's pre-entry briefing checklist to this workshop to compare. We will conduct simulated safety briefings based on scenarios and share what must be provided to the entry team members.

Emery, Wiseman

D10: Matrix of Detection, Putting it All Together 90 Minutes

Technology! Today we have an entire suite of detection and identification tools from papers to gc/ms, and everything in between. But, how do we put them all together in the field to get our answers? In this presentation we will work our way through the matrix of tools available, leveraging their strengths and weaknesses to come to a solution. There is no perfect tool with all of the answers, but using what we have we can get there.

Frost

D11: Unstable Materials, Monomers & Organic Peroxides Part 1 of 2

Energy is always dangerous at a hazardous materials incident. After explosives, unstable materials are some of the most reactive and unpredictable situations responders can face. Unstable materials may decompose, condense, polymerize, or self-react. Temperature, shock, light, contaminants, incompatibles, or the loss of inhibitor may trigger an uncontrolled exothermic reaction. Monomers, when uncontrolled, may undergo runaway polymerization reactions. Organic peroxides inherently possess two or even three sides of the fire triangle and as a result may rapidly, exothermically, and sometimes explosively, disintegrate. Peroxidizable chemicals are capable of reacting with oxygen in the air to form potentially explosive peroxides. There is no single hazard class for unstable materials because they often present multiple hazards. Part 1 of this will be an awareness level with a focus on understanding unstable materials, the risks associated with them in an emergency, and transportation and storage. Part 2 of the class will be technician level with the focus on the chemistry of unstable materials and tactics for handling unstable materials during an incident.

Silverman, Cullen, Callan

D12: Reducing the Risk of Biological Exposure 90 Minutes

The risk of biological exposure is real, and the threat is evolving due to laboratory experimentation, natural mutation, or being used as a WMD. The onset of symptoms may take days or weeks. This incubation period creates many concerns for responders who may have been exposed. What PPE is appropriate? What decon methods are practical and best? Why is doffing PPE such a critical task? This session will address these and other concerns regarding the response to a potential biological agent and avoiding contamination and the spread of the agent.

CPT D. Cushman

Friday – 3:00 PM

E1: Lithium-Ion Battery Response Part 2 of 2

This session will prepare HazMat Technicians to conduct risk-based response to Lithium Metal and Lithium-Ion (Li-Ion) battery emergencies, including incidents involving consumer batteries, scooters, electric vehicles, and bulk shipment of batteries. Topics will include battery construction/construction, thermal runaway, battery incident assessment, developing an action plan, air monitoring, and overpacking damaged lithium battery cells into approved DOT containers.

Sharp

E2: Anatomy of a Cryogenic Container/Tank System 90 Minutes

This presentation will address container features and structure, physical and chemical properties of common products, their uses, and general actions and precautions to take when responding to cryogenic releases. Rail and highway modes of transportation along with several case studies will be presented.

Socks, Waterfield

E3: The Power Grid: Why Should I be Concerned? 90 Minutes

Since Winter Storm Uri in 2021, there has been much discussion about the Power Grid, its capacity, and demand reliability. This workshop will explain the supply and demand issues, generating capacity, and how power grid failure could create major issues in HazMat Response.

Lambert

E4: Big Foot, Loch Ness, Dale's Cone of Learning: Training Lies, Myths, & Legends 90 Minutes

This 90- minute course recognizes that, over a career, over $250,000 will be spent on responder training. However, training myths persist which lead to increased training times, poor long-term recall and application of knowledge and skills, and increased costs associated with poor performance. By utilizing research supported training methods, trainers can improve upon these deficiencies and improve the rate of return on training programs.

Donohue

E5: HazMat Emergency Response & the Weather 90 Minutes

The U.S. Weather Service can be a great value to you during a HazMat Incident. Come learn about all of the tools available at your fingertips.

Reilly

E6: HazMatIQ Above the Line/Below the Line Part 2 of 2

Developed by responders, for responders, this is the foundational, patented system that started it all – This one-day class, taught in a straight -forward easy to understand methodology, takes the typically complex world of Hazardous Materials and simplifies it for street level responder. Each participant receives a set of laminated Above the Line/Below© charts which allows them to efficiently size-up any chemical in minutes, determining the hazards, meters and PPE required.

Noble Training

E7: Put it Out or Let It Burn 90 Minutes

When gasoline tankers go up in flames, we are faced with some tough decisions. Let's discuss the basics of gasoline tanker trucks and things to consider when it's your decision on whether or not to let 'em burn.

Meehan, McCain

E8: Liquid Oxygen Emergency Response 90 Minutes

Hazmat researchers at Utah Valley University studied the reactivity and impact sensitivity of liquid oxygen and asphalt to satisfy the mythology and procedures surrounding releases of liquid oxygen and the potential impact on the emergency response. This presentation begins with a historical perspective on LOx response and includes the data, photos, IR and ultra-high-speed video of the impact and reactivity experiments. The session concludes with an open discussion regarding the way forward in LOx response procedures and the impact this new information may have. Participants will be encouraged to conduct their own research that may be impactful for emergency responders.

Byrnes

E9: Is There Hazardous Materials in the Port? 90 Minutes

Providing over $900 Billion a year in economic value to the U.S. economy, the Houston Ship Channel alone includes: The Port of Houston which is now the single largest port in the U.S. fifth with the fifth largest container port; Texas City which is the largest Petrochemical Complex in the Western Hemisphere; as well as the Port of Galveston which has become the fourth largest cruise ship port. The area is seeing a major boom in industrial park growth, liquified gas exports, container imports, and cruise ship passengers, with larger ships transiting more-congested waterways and extensive pipelines, railways, roadways and channels all in the backyard of the third most populous county in the Nation. In a time of threats from domestic and international terrorism, state sponsored cyber-attacks, increased trends of ship and port facility fires with concurrent shifts toward potentially less effective Florine-free firefighting foam, and a drive to alternative vessel fuel sources including hydrogen, ammonia, LNG and nuclear, with simultaneous spontaneous lithium ion battery cargo concerns, it is high time to grow local, state and federal hazmat preparedness and response cooperation between the many area Local Emergency Planning Committees and the Central Texas Coastal Area Committee.

CPT. K. Donohue

E10: Taming the Tiger; Anhydrous Ammonia Response 90 Minutes

Get prepared to handle anhydrous ammonia incidents by learning the types of ammonia releases that could be encountered with various containers and transportation equipment. Session includes discussions of control and containment tactics for both offensive and defensive operations. Lessons learned will be discussed through brief illustrations of case histories involving both stationary facilities and transportation incidents as well as live release training footage.

Binder

E11: Unstable Materials, Monomers & Organic Peroxides Part 2 of 2

Energy is always dangerous at a hazardous materials incident. After explosives, unstable materials are some of the most reactive and unpredictable situations responders can face. Unstable materials may decompose, condense, polymerize, or self-react. Temperature, shock, light, contaminants, incompatibles, or the loss of inhibitor may trigger an uncontrolled exothermic reaction. Monomers, when uncontrolled, may undergo runaway polymerization reactions. Organic peroxides inherently possess two or even three sides of the fire triangle and as a result may rapidly, exothermically, and sometimes explosively, disintegrate. Peroxidizable chemicals are capable of reacting with oxygen in the air to form potentially explosive peroxides. There is no single hazard class for unstable materials because they often present multiple hazards. Part 1 of this will be an awareness level with a focus on understanding unstable materials, the risks associated with them in an emergency, and transportation and storage. Part 2 of the class will be technician level with the focus on the chemistry of unstable materials and tactics for handling unstable materials during an incident.

Silverman, Cullen, Callan

E12: Post Disaster HazMat Challenges 90 Minutes

Disasters are bad enough but in the aftermath of a disaster there will be countless hazmat containers out of place and many hazmat spills and releases that must be remediated. Following large scale disasters like major hurricanes, part of the federal response will include an ESF-10 response to those challenges.

Temperilli

Saturday – 8:00 AM

F1: Dogs Are Family Too: HM Medic Operational K9 90 Minutes

The use of trained operational K9's has increased within the first response community since 2001. This brings a new dimension to the hazardous materials incident and/or alarms that contain potential chemical exposure. What do you have in place to come to the aid of the working K9? Can you provide life-saving medical care.

Bevelacqua, Murphy

F2: CNG HazMat Response 90 Minutes

This workshop will prepare personnel to conduct a Technician level response to incidents involving compressed natural gas (CNG) vehicles including leaks, cylinder failures, and fires. Students will learn CNG system familiarization, damage assessment, fire suppression, and mitigation techniques including system shut down, depressurization, and defueling.

Sharp

F3: Challenging Foursome Part 1 of 2

This presentation will address similarities and differences, physical and chemical properties transportation, storage, use and general actions and precautions to take when responding to a release involving Liquefied Petroleum Gas, Chlorine, Anhydrous Ammonia, and Liquefied Natural Gas. Several case studies involving each gas will be presented.

Socks, Waterfield, Hand

F4: Lithium-Ion Fire Investigations 90 Minutes

With this presentation, we will go over what fire investigators need to be on the lookout for during normal structure fires that have Lithium-Ion batteries left over. Chris will begin with a short discussion on the limitations of the current fire codes across North America, and how it affects fire investigators. We will continue on with a talk about PPE and clues to possible energy systems within a structure. A final wrap up with the current limitations and distractors written into NFPA 921 will close the fire investigation talk, where we will pivot to how hazmat teams can assist fire investigation. During this final discussion we will have an open forum discussion on legal issues related to safe disposal and how it can affect ongoing fire investigations.

Pfaff

F5: Radiation Safety & Monitoring Part 1 of 2

This training session will review the types of radiation and the potential harm associated with each type of radiation. The common recommendation of Time, Distance, and Shielding will be discussed in terms of calculating Stay Time, the Inverse Square Law and demonstrating the efficacy of various shielding materials, respectively. The occurrence of radionucleotides used in medical and industrial applications will be presented and radionucleotides that have a higher probability for use in a Radiological Dispersal Device (RDD) or a Radiological Exposure Device (RED) will be identified. In preparation for the hands-on radiation monitoring portion of the class, emergency responders should focus their effort on answering the following three questions: How much radioactivity is being emitted by the source? (2) How much radioactivity is at the point where you are standing?, and (3) How much radiation is being absorbed by your body? Articles written by Harper et al, and a Canadian researchers that conducted experiments with RDDs to determine zone and perimeter recommendations will be reviewed. Several radioactive minerals such as, carnatite, betafite, pitchblend and thorite will be used to provide radiation meter readings well above background radiation levels, therefore, you are encouraged to bring a radiation meter to class. ThermoFisher has agreed to provide radiation meters to the class and explain their use and interpretation of readings (NOTE: This is not a sales presentation by ThermoFisher).

Murdock

F6: HazMat/WMD Incident Commander Part 1 of 2

This course covers the requirements for Incident Commander at a HazMat/WMD incident in alignment with NFPA 470 (Chapter 12 &13) utilizing newly designed infographics to enforce key concepts. The participants will demonstrate competency in managing a HazMat/WMD incidents through scenario-based exercises and group activities. The scope of the course will include:

-Focus on transportation and fixed facility incidents.

-Embracing of ICS principals and Hazardous Materials fundamentals

-Adopting a Risk Based Response process to include chemical analysis and risk assessment

-Offer smart practices in briefing decision makers at HazMat/WMD events

Byrnes, Matthew

F7: Team Positioning, Timing & Techniques 90 Minutes

This workshop will discuss hazmat team response procedures, communications and style. How close is the warm zone line to your rig? When does the decon team go on air? Where should they be positioned during the entry? When should the entry briefing take place? Is the back-up team at the hot zone line during entry? How close to entry should the medical monitoring take place? Some of these items may sound basic, but it's amazing that some teams don't quite get it yet, nor practice and understand these important details at a response. Come join the discussion and let's get it figured out for a safer, more efficient and refined operation.

Heinz, Wen

F8: 18 Breathes for Life 90 Minutes

This workshop deals with smoke hazards on fire scenes and the use of cyano kit for smoke inhalation. The presentation is based on a real incident case study that happened in Springdale.

Andrews

F9: Inside the Fenceline: Chemical Facility Emergencies Part 1 of 2

TRANSCAER[SM] is a voluntary national outreach effort that focuses on assisting communities to prepare for and to respond to a possible hazardous material incident. Emergency responses to chemical plants that produce, and store potentially hazardous chemicals can seem daunting and challenging. Typically, these are not your bread-and-butter calls. As a first responder, you may not have the familiarity, experience, training and/or equipment to feel you can safely and effectively handle them. This session will better prepare responders to handle incidents "inside the fence line" of chemical facilities. We will begin by learning how to size up a chemical facility and then learn about some common activities, processes and hazards that can be found "inside the fenceline". Lastly, we will cover strategy, tactics, and tips for handling incidents and rescues involving potentially hazardous materials.

Silverman, Cullen

F10: Dam…There is No App For That! Part 1 of 2

Thanks to smartphones and the apps made for them, emergency responders and the public they serve now have a wealth of help at their fingertips for almost any disaster scenario. They can look up the effects of toxic chemicals, brush up on first aid, find the nearest shelters or turn their phone into a flashlight. Apps filled with reference material and up-to-the-minute data can help them respond to an emergency. Thus, it is critically important for several reasons to not become overly dependent on apps and smartphones. The goal is to get the right information in the right hands at the right time, and order to make decisions in minutes not hours. For this reason, you need to be able to think "out of the box and on your feet" and not to become overly dependent on apps and smartphones. This session will utilize science, monitoring devices, HAZMAPS, and street smarts with Frank's ability to "Connect the Dots" during a chemical emergency.

Docimo

F11: 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. The why behind our tactics, tools and legislation.

Frost, Hayes

F12: HazMat Response in a Marine Domain 90 Minutes

Lessons learned from several recent international salvage and marine firefighting case studies will be presented, including containership fires involving undeclared hazardous materials, salvage and shipwreck removal operations requiring hazmat operations with Level-B entries, and the recovery of a high-benzene cargo from a sunken tank barge using a diver-directed "hot-tap" system. The U.S. salvage and marine firefighting regulatory framework, operational best practices, the challenges of alternative fuels and lithium battery response operations, and recommendations for policy and procedural improvements will also be discussed.

Francis

Saturday – 10:00 AM

G1: DOT 407 Emergency Response 90 Minutes

The DOT 407 is one of the most common hazmat tankers on the road. Let's review their construction and discuss dealing with them after they trolled a few times.

Meehan, McCain

G2: Addie: The Simple Method for Developing Training 90 Minutes

This can be delivered as either a 90- or 180-minute course and presents a proven and tested method for evaluating job performance and developing training remedies to improve performance. This method builds upon identifying performance gaps and developing strategies for improvement, resulting in improved capabilities and performance outcomes which are evaluated to ensure that desired performance metrics are obtained.

Donohue

G3: Challenging Foursome Part 2 of 2

This presentation will address similarities and differences, physical and chemical properties, transportation, storage, use and general actions and precautions to take when responding to a release involving Liquefied Petroleum Gas, Chlorine, Anhydrous Ammonia, and Liquefied Natural Gas. Several case studies involving each gas will be presented.

Socks, Waterfield, Hand

G4: The Colormetric Conundrum 90 Minutes

Confused by colorimetric tubes? Do they work – not work? Are they accurate? Can they really solve my problem? Come to this session and you will learn the answers and become a Colorimetric Guru. This session will cover the science, use, care and feeding of colorimetric tubes.

Hawley

G5: Radiation Safety & Monitoring Part 2 of 2

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Murdock

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-Offer smart practices in briefing decision makers at HazMat/WMD events

Byrnes, Matthew

G7: Air Dispersion Models and Jack Rabbits – It's a Matter of Interpretation 90 Minutes

Models have specific uses and trying to use them when they are not the appropriate tool can have unfortunate results. This session will explore if, when and how air models can help you in planning and emergency response. ALOHA, the responders air model, now has empirical to help show you its strengths.....and weaknesses. The Jack Rabbit experiments at Dugway will be explored and related to air model results in ALOHA and the ERG. Case studies from actual releases (experimental and accidental) will be discussed and the reality of the release and model results will be compared and explained. Other models available to responders will also be discussed (IMAAC).

Valerioti, Bradley

G8: HazMat & Law Enforcement 90 Minutes

For many years it has been assumed that hazardous materials to be the exclusive domain of fire departments. This view is incredibly short sighted. Law enforcement is typically the first on scene of motor vehicle accidents, The very nature of these incidents can place law enforcement within the hot zone. including those incidents involving hazardous materials. With the increased threat of terrorists using weapons of mass destruction (WMD), there is an increased possibility for law enforcement roles within the hot zone, including evidence collection and preservation, suspect apprehension, and securing routes of ingress and egress. The purpose of this session is to provide familiarization for participants on roles and duties law enforcement can take on and an overview of how those roles could be carried out.

Lanham

G9: Inside the Fenceline: Chemical Facility Emergencies Part 2 of 2

TRANSCAER^{SM} is a voluntary national outreach effort that focuses on assisting communities to prepare for and to respond to a possible hazardous material incident. Emergency responses to chemical plants that produce, and store potentially hazardous chemicals can seem daunting and challenging. Typically, these are not your bread-and-butter calls. As a first responder, you may not have the familiarity, experience, training and/or equipment to feel you can safely and effectively handle them. This session will better prepare responders to handle incidents "inside the fence line" of chemical facilities. We will begin by learning how to size up a chemical facility and then learn about some common activities, processes and hazards that can be found "inside the fenceline". Lastly, we will cover strategy, tactics, and tips for handling incidents and rescues involving potentially hazardous materials.

Silverman, Cullen

G10: Dam…There is No App For That! Part 2 of 2

Thanks to smartphones and the apps made for them, emergency responders and the public they serve now have a wealth of help at their fingertips for almost any disaster scenario. They can look up the effects of toxic chemicals, brush up on first aid, find the nearest shelters or turn their phone into a flashlight. Apps filled with reference material and up-to-the-minute data can help them respond to an emergency.

Thus, it is critically important for several reasons to not become overly dependent on apps and smartphones. The goal is to get the right information in the right hands at the right time, and order to make decisions in minutes not hours. For this reason, you need to be able to think "out of the box and on your feet" and not to become overly dependent on apps and smartphones. This session will utilize science, monitoring devices, HAZMAPS, and street smarts with Frank's ability to "Connect the Dots" during a chemical emergency.

Docimo

G11: Program Management for the New HazMat Officer 90 Minutes

Jensen

G12: How Smart is Your HazMat Team 90 Minutes

How Smart is Your Haz Mat Team! (90 minutes) This is an innovative way to evaluate your responder's knowledge on hazardous materials response knowledge and skills. Whether they are First Responders or Technician, using a weighted scoring method and a practical delivery this program monitor the participant's answers so you can truly evaluate that "they really understand this stuff". Over the last decade this evaluation process helps has been well received throughout the hazmat community. The primary objective of this drill / exercise is to provide a street-smart experience that measures practical solutions to a problem rather than just passing a test with the one "correct" answer. Emergency response is not a multiple-choice test! It's "street" essay. A tough, physical, spoken experienced based trial that your responders pass or fail in "live or die" events. So, finish the conference with a take home "drill" that you can use to educate those who didn't attend the sessions like you. It will also give you a good reality check on how much do my people really know. In fact, there is even a home-work assignment. Remember this is a virtual conference, so there is no need to skip out early on the last day. Stop by you won't regret it! **Callan**

Saturday – 1:00 PM

H1: Lithium Battery Issues: More Than E-Bikes and Scooter Fires 90 Minutes

Bierling, Lohmeyer, Pulley, Henry

H2: Dr. Ludwig Benner: The History of Risk Based Response 90 Minutes

Managing a hazmat incident using the principles of risk-based response (RBR) is important to ensure safe and effective operations. While risk-based response has been used in hazmat for years, many people do not know the origins of its development and the research work and discussions that enter into this concept. This session will introduce participants to Dr. Ludwig Benner's important work on RBR and how it is used today to manage hazardous materials incidents.

Edinger

H3: Hold My Matches and Watch This! Part 1 of 2

Hold my matches and watch this! A highly interactive demonstration of the physical and chemical properties of flammable liquids and flammable gases! During these sessions, participants will witness flash point, flammable range, vapor pressure, boiling point, and vapor density. Additionally, we will be demonstrating the dynamic tendencies of flammable vapors when they encounter oxygen and ignition sources to create the "Boom" that tends to surprise us if we don't fully understand the hazards of our response situation!

Ramsey

H4: WISER is Gone – Now What? 90 Minutes

WISER is(was) a popular response tool to Hazmat personnel. It is no longer being supported - But there is CAMEO Chemicals, a more robust database available. Bring your laptops, phones, devices, etc., and we will explore the data available, its uses and how to find it.

Valerioti, Bradley

H5: Train Derailment; Now What 90 Minutes

This session provides the emergency responder to any railway disaster with the background information regarding the regulations, standards, and best practices that affect a safe and efficient derailment response. It provides detailed information on the construction and operation of locomotives and tank cars. It explores the most common reasons why trains derail through case studies, a look back at several high-profile derailments. The chemical and physical properties of the most common commodities released will be analyzed from an operational perspective. It explains the lessons learned by emergency responders during these complex, devastating incidents. Risk-based incident management strategies and realistic public protective actions will be emphasized through scenario-based discussions.

Byrnes

H6: Railroad 101: Understanding Railroad Ops & Safety Part 1 of 2

This workshop will give the responders from Awareness to Technician the ability to work with the railroad within the railroad right-of-way safely and to be given an understanding of railroad operations. Additional content includes all types of Railcar Construction and features.

Rudner

H7: Should a HazMat Mayday be an Emergency or a Planned Event? Part 1 of 2

Statistically, most haz mat teams are ill-prepared to act quickly and efficiently to remove and rescue a Mayday Technician safely. A haz may MAYDAY is not the same as a fire Mayday and Project Mayday proves that secondary MAYDAYs are common. Time is the enemy without a step-by-step plan that is practiced until you operate in sync like an Indy 500 pit crew. Students will have a 360-degree view of the challenges associated with a haz mat MAYDAY. These best practice Backup Team skills have been tested and proven to decrease evacuation time and get the MAYDAY resolved in record time. You will understand MAYDAY challenges while performing MAYDAY evacuations and break down the tasks required while executing a successful MAYDAY rescue. Time management utilizing the 25/75 model is critical when it comes to personnel, work cycles, air consumption and assignments. NFPA 470 now covers equipment needed to remove a stricken member from the Hot Zone quickly, emergency decontamination and rescue from the CPC before handing off to EMS. This workshop is divided into a short didactic portion with the remainder being a practical understanding of equipment in preparing for various scenarios utilizing the newly acquired skills and understanding.

Emery, Wiseman

H8: HazMat Headlines 90 Minutes

This workshop will include discussions about air monitoring, decontamination, and referencing have given way to more prominent points of discussion like; what is a hazmat medic, or is there such a thing as hazmat RIT, or what does the back-up team do, or how do you perform a quick reference? These are questions ripped from the headlines of hazmat.

Bevelacqua, Murphy

H9: Can I Become the Incredible Hulk? A Radiation Presentation 90 Minutes

In this presentation, we will discuss basic knowledge of radiation.
- Bad Days – looking back when radiation took a wrong turn
- What is radiation and where does it come from, manmade vs natural
- When was it first discovered and by whom
- Basic terminology
- Uses, good and bad
- Protection from radiation

Janke, Hageman

H10: HazMat Pre-Incident Planning 90 Minutes

After the events of the ITC petrochemical fire in Deer Park, TX. Harris County contracted a county-wide gap analysis which resulted in 50 recommendations. All recommendations were adopted through Harris County Commissioners Court and the Fire Marshal's Office was tasked to develop, build, and execute a first of its kind hazardous materials preplan program along with an extensive team expansion. Since the fire impacted residential areas, commercial businesses, and EPCRA Tier II production units, the recommendations were aimed at being more prepared for a hazardous material event, which may affect areas 15-20 miles downwind. This presentation will discuss the program and how it benefits the local first responders, builds relationships with industry, and increases community knowledge about the plans to minimize risks from hazards surrounding their area.

Lawhorn

H11: Mental Health Mayday Part 1 of 2

An open discussion on how trauma impacts emergency responders, their families, and loved ones. This Thought-provoking and insightful session is suited for the transfer of knowledge and ideas on: Recognizing the signs of PTSD Coping strategies Finding what works; Diverse perspectives on treatment options. Removing the stigma.

L. Snell, J. Royall

H12: Panel Discussion: How Do We Address Today's Biggest Threats? 90 Minutes

Panelist to be announced.

TDEM Domestic Preparedness

Saturday – 3:00 PM

J1: Tactical Considerations for Electric Vehicle Fires 90 Minutes

This workshop is the result of a 14-month study on Electric vehicle fires and tactical considerations. It is based on studies and findings from Britain and around the world. It deals with extinguishing agents and the dangers of lithium-Ion.

Andrews

J2: Carbon Dioxide Emergency Response 90 Minutes

This discussion will go over Carbon Dioxide in a total aspect. We will begin with the physical properties of this NON-cryogenic liquified gas. We will discuss the difficulties with identification via containers and how previous knowledge may have been flawed with this product. We will then discuss what the fire code has done to address this hazard, and how this can assist first responders that may not have the tools on their rig to quantify the hazard. We will close out with a discussion on how to approach and address a CO2 emergency for agencies of any size. **Pfaff**

J3: Hold My Matches and Watch This! Part 2 of 2

A highly interactive demonstration of the physical and chemical properties of flammable liquids and flammable gases! During these sessions, participants will witness flash point, flammable range, vapor pressure, boiling point, and vapor density. Additionally, we will be demonstrating the dynamic tendencies of flammable vapors when they encounter oxygen and ignition sources to create the "Boom" that tends to surprise us if we don't fully understand the hazards of our response situation!

Ramsey

J4: What IS Risk Based Response 90 Minutes

Confronted by a HazMat response and you want to make quick response decisions – how do you determine your actions? How do you determine PPE? Isolation distances? How bad is the situation? Using basic devices and a basic risk assessment process responders can make safe, but quick decisions. The process focuses on fire, corrosive, toxic and radioactive hazards. If you were provided the on-scene detection readings how quickly could you make a response decision? After a short review of the process, scenarios will be discussed to apply the lessons learned.

Hawley

J5: The Hierarchy of Detection: Bringing it All Together 90 Minutes

The goal of the course is to give the participant an opportunity to understand the key components of a detection and monitoring plan; develop a foundation for quantitative versus qualitative methods and limitation; and interpret results; and application of the detection (and monitoring) plan for emergency response.

Hageman, Janke

J6: Railroad 101: Understanding Railroad Ops & Safety Part 2 of 2

This workshop will give the responders from Awareness to Technician the ability to work with the railroad within the railroad right-of-way safely and to be given an understanding of railroad operations. Additional content includes all types of Railcar Construction and features.

Rudner

J7: Should a HazMat Mayday be an Emergency or a Planned Event? Part 2 of 2

Statistically, most haz mat teams are ill-prepared to act quickly and efficiently to remove and rescue a Mayday Technician safely. A haz may MAYDAY is not the same as a fire Mayday and Project Mayday proves that secondary MAYDAYs are common. Time is the enemy without a step-by-step plan that is practiced until you operate in sync like an Indy 500 pit crew. Students will have a 360-degree view of the challenges associated with a haz mat MAYDAY. These best practice Backup Team skills have been tested and proven to decrease evacuation time and get the MAYDAY resolved in record time. You will understand MAYDAY challenges while performing MAYDAY evacuations and break down the tasks required while executing a successful MAYDAY rescue. Time management utilizing the 25/75 model is critical when it comes to personnel, work cycles, air consumption and assignments. NFPA 470 now covers equipment needed to remove a stricken member from the Hot Zone quickly, emergency decontamination and rescue from the CPC before handing off to EMS. This workshop is divided into a short didactic portion with the remainder being a practical understanding of equipment in preparing for various scenarios utilizing the newly acquired skills and understanding. Ensure your haz mat MAYDAY ends up as a rescue, not a recovery!

Emery, Wiseman

J8: Hazardous Materials in the Wildland Interface 90 Minutes

If the inherent dangers associated with battling a wildland fire are not concerning enough, the presence of hazardous materials add additional risks sometimes unexpectedly.

Jensen

J9: Shoot, Move, Communicate, Survive – HazMat Leadership, Strategies & Tactics 90 Minutes

Although the background of Shoot, Move, Communicate, Survive comes from a military perspec4ve, the lessons learned from these principles can span all organiza4ons (HazMat included). These lessons are not limited to combat, however. Rather, they are practiced in one form or another, every day.

Fowler

J10: Confined Space: A HazMat Response or Technical Rescue 90 Minutes

Confined spaces offer unique challenges to rescue units because all too often the process for preparing for a confined space entry is simply an exercise in checking regulatory boxes. Workers are trained in the basic "rules" they must follow, but rarely have an in depth understanding of the true nature of the hazards they face. When working in a permit required confined Space, OSHA allows a local fire department to be listed as the standby rescue. How many times do you think your department has been listed on an entry permit without you being notified? If your department is notified, is it the rescue squad, the HazMat team, or both that are put on standby and what information do you obtain from the entry supervisor? In case studies where rescuers are injured during confined space rescues, almost without exception the root cause is a lack of knowledge that a hazardous material is present or lack of understanding of the behavior of hazardous materials in the space.

Lewis

J11: Mental Health Mayday Part 2 of 2

An open discussion on how trauma impacts emergency responders, their families, and loved ones. This Thought-provoking and insightful session is suited for the transfer of knowledge and ideas on: Recognizing the signs of PTSD Coping strategies Finding what works; Diverse perspectives on treatment options. Removing the stigma.

L. Snell, J. Royall

J12: Utilities Are IDLH (Immediately Dangerous to Life & Health) 90 Minutes

Responding to emergencies are present, are some of the common emergencies we face IDLH situations. Haz Mat responders, especially technicians are trained to recognize Risk. Remember Risk is "any situation, atmosphere or condition that is fatal, can permanently injure or interferes with the person's ability to escape." Mike Callan has been training responders to the IDLH conditions and the risks of flammables products like Propane, Natural Gas and especially the "Dangerous" conditions of electricity. Hazardous material responders are risk analyzers in a world of response risk takers. You as the Hazardous Material technician are the first step to protecting your personnel. Taking this session will help you stay alive around IDLH conditions exist when utilities are present.

Callan

Closing Session
Sunday, October 22nd

9:00 AM **Keynote**

"Ohhh What a Ride …. Now Tighten Your Seat Belt Because We're Not Done Yet!"
Frank Docimo