



PRECONFERENCE WORKSHOP DESCRIPTIONS

TUESDAY, APRIL 22, 2025

Tuesday, April 22, 8:30 AM – 12:30 PM

A. **The Response to Corrosive Materials - Barry Lindley - Bad Day Training**

Corrosive materials are the largest class of compounds that are manufactured and transported. It includes acids, bases, plus several other classes of compounds. This presentation describes the different corrosive materials and how to respond to them.

B. **Metering Overview, Electrochemical Detection, and Photoionization Detection - Bobby Salvesen and Mike Monaco - The Hazmat Guys**

Metering can be a bit confusing, but we're great at making it easy to understand. In this half-day session, we'll break down metering technologies, starting with the basics and moving up to more advanced stuff. We'll talk about electrochemical sensors, catalytic beads, and photoionization detection, plus some chemical and physical properties. We might even chat about picking the right personal protection equipment. By the end, you'll have a solid grasp of metering, why it's crucial for dealing with hazardous materials, and you'll have a good time too. This talk is a quick look at our longer course on metering.

C. **Initial Monitoring for First Arriving Hazmat Responders - Brian Ramsey - Emergency Response Training Group**

This course examines the strengths and weaknesses of standard four-gas instruments that are carried by many hazmat teams and first arriving fire apparatuses. In today's world, critical decision-making is predicated on not only using instrumentation but using it correctly. This class goes into essential decision making when using a four-gas using A4 gas instrument for qualitative and quantitative monitoring at hazardous materials incidents. Participants will understand the following concepts.

- T-90 time and its relevance to accuracy
- Correction factors and when to apply
- Common mistakes using air monitoring equipment

Tuesday, April 22, 1:00 PM – 5:00 PM

A. **Rail Response Tabletop - Micheal Heeringa - Canadian National**

This session will be a tabletop exercise of a rail incident. Participants will be staffed to positions and sections within the Unified Command. With coaching support, the Command and General Staff formed by session participants will demonstrate the meetings and document creation within the Incident Command Post of a Rail Incident in Flint, Michigan.

What will Participants Learn:

In this session, participants will have the opportunity to experience roles they may be staffed to in a rail incident. Participants that have not staffed Command and General Staff Positions before will have an opportunity to observe the work of Unified Command Staff, Section Chiefs, and unit leaders as they support and observe within sections. All participants will have an opportunity to observe meetings and Incident Command System (ICS) form creation in the simulated urgency of initial response. Exercise truth and injects will be provided by facilitators allowing participants to get close to the real thing in terms of incident assessment, inter-operational coordination, and site communication. This session will be a great opportunity to see the content of ICS 300 and position specific courses in action.

Skill level: Intermediate

B. Lithium-Ion Battery and Electric Vehicle Emergencies Classroom and Hands-on Training (HOT) Workshop - Nick Zamiska, Barry Lindley, and Curt Thompson - Bad Day Training and Consulting

This session is designed to provide Firefighters and Haz Mat Technicians with the understanding of the special hazards associated with Lithium Ion (Li-Ion) Battery emergencies and how to respond to them safely. A general overview of batteries found in transportation, commercial, industrial, and residential settings and the inherent risks of each will be covered.

Participants will see, discuss, and practice HOT best approaches when:

- Identifying Li-ion Batteries
- Discussing Battery Design
- Evaluating Best Practices in Li-Ion Battery Overpacking and Documentation
- Applying Electric Vehicle (EV) Emergency Response Guides to a Response
- Analyzing Proper Packaging Requirements and Techniques of DDR Batteries
- Performing On-Scene Hazard and Risk Assessments*
- Practicing EV Cut Loop Procedures*
- Practice Safe Service Disconnect Procedure*
- Donning Proper Personal Protective Equipment for EV and Li-Ion Battery Response*
- Practice Preparing an EV Battery for Removal*
- Safely Remove a Battery from a Live EV Vehicle*
- Application of the Emergency Plug*
- Safe Application of a Fire Blanket*

Participants should dress appropriately for weather as Hands on Training will be outdoors.

C. Hold My Matches and Watch This! - Brian Ramsey - Emergency Response Training Group

A highly interactive demonstration of the physical and chemical properties of flammable liquids and flammable gases. During this session, 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.



Wednesday, April 23, 9:00 AM – 10:30 AM

A. The Devil is in the Details - Robert Coschignano and Derek Schaumann - Hazmat 101 Consultants

It is often the small details which can make incidents difficult or challenging. These details can prolong an operation or foil an otherwise straightforward response. In this course we will identify commonly confused information and other simple errors that can have costly consequences in responses.

B. Why Do I Care? Chemical and Physical Properties - Bobby Salvesen and Mike Monaco - The Hazmat Guys

This session takes a fresh look at the chemical and physical properties that form the basis of all our operations. Moving beyond the basics, we'll explore why these properties matter and how they provide tactical advantages.

We'll examine these concepts from multiple perspectives to better understand how they influence our ability to control incidents.

Objectives:

- Deepen Understanding of Chemical and Physical Properties: Gain insights into how these properties impact our ability to modify scenes to our advantage.
- Reimagine Incident Scenes: Explore new ways to conceptualize and manage scenes effectively.
- Enhance Incident Control: Develop a better understanding of how to take control of hazardous situations.

C. VAC'S, FRAC'S, and TRACKS- How to Work with Contractors on a Haz Mat - Curt Thompson-Technical Environmental Services

This course provides training in who to call and how to work with environmental response contractors. We will discuss the handoff process and what that looks like. We will also look at some of the nuances while working with these contractors and discuss how to get what you need done. We will talk about priorities, concerns, and how contractors do things after the Fire Department (FD) Haz Mat Team leave and the tools, they use to cleanup a spill.

Armed with this knowledge, you will make you be better prepared to handle an incident, get the site back to normal using a contractor, and get emergency responders back in service quicker.

Introduction:

- a. Contacting a contractor is not that easy.
- b. Understand the importance of contacting the right contractor for the job.

Overview:

- a. Contractors have priorities that don't always align with the FD or Haz Mat Teams.
- b. Contracts are important to a contractor.
- c. What do you do if you don't feel comfortable with their contractor?
- d. What do contractors do once the FD leaves?

Incident Safety Considerations:

- a. Do contractors care about safety?
- b. Are site safety plans required?
- c. Who is your safety officer?
- d. Do contractors have to air monitor?

Remediation Methods and Equipment:

- a. How do you get contamination from dirt?
- b. Getting contamination on pavement or concrete.
- c. Methods to get contamination from water.

D. Hazmat with Intent- Terrorism/Weapons of Mass Destruction (WMD) Response Tactics for Emergency Services - Adam McFadden - Firehouse Training

This session will include specific highlighted learning objectives, identify key speaking topics in the areas of Terrorism Response Procedures, Chemical, Biological, Radiological, Nuclear, and Explosives (CBRNE) & WMD Chemical Detection & Mitigation Equipment, which will also include an interactive group participation module. All participants will be provided handouts including various tactical worksheets to use during our group mock tabletop exercise, and round-table discussions.

Curriculum Overview & Content:

- Review of domestic & international terrorism events in North America

- Review and discussion of Incident Command Systems for CBRNE & WMD events
- Understanding the use of a tactical Hazmat worksheet to manage the incident
- Mitigation response strategies for bomb threats, chemical & nuclear attacks
- Joint response team initiatives for Fire, Police, and Paramedics
- Review of tactics (accountability and entry control, RECCE, decontamination (decon) techniques, extraction, FTT, Incident Command & emergency management operations)
- Group Case Study Discussions: Do we perform a snatch and grab rescue; or do we isolate the area to mitigate the hazardous material?
- Hazmat and CBRNE communication benchmarks, assigned tasks (Command, RECCE in hot zone, PAR status, decon setup, emergency decon established, FTT)
- Practical tabletop scenarios, group discussion & group questions

E. The World of Underfunded Training and Unfunded Mandates - John Emminizer - Black Sheep Safety Company

The presentation is designed and intended to provide guidance to attendees that are current or perspective team leaders to provide them with tools and tips to provide top notch hazmat training to personnel on a shoestring budget. Also, how to navigate the world of unfunded mandates and compliance requirements to keep team members current and safe in their operating environment.

Wednesday, April 23, 10:50 AM – 12:20 PM

A. HazMat by the Numbers - Christopher Hawley - FBN Training

Have you ever wondered what the term vapor pressure actually means? In your HazMat technician class, you may have written down the definition, and discussed it, but were you actually taught how to apply this term? Vapor pressure, along with many other “terms” that relate to chemical and physical properties will be covered in this session, not only on what the words mean, but more importantly how they can impact your health and safety. By truly understanding some simple terms responders can make PPE decisions, isolation and evacuation decisions, and determine the severity of the event.

B. Two Michigan Hazmat Responses – Lessons Learned - Jake Martin-Battle Creek Fire Department and AJ Armstrong-Lenawee County Hazmat

This workshop will cover in detail the following two events that happened in Michigan in 2024.

- On the morning of August 2, a runaway rail car collided with another train at a crossing in Adrian, Michigan. As a result of the collision, a Carbon Dioxide rail car overturned and was leaking CO₂.
- Battle Creek Fire Department responded to an industrial facility for a chemical reaction in a solvent recovery system involving acetates and diisocyanates.

C. Air Monitoring, It's Not Just for Hazmat Calls Anymore - Mike Vacco and Kevin Ziegler - Minnesota/North Metro Chemical Assessment Team

Using air monitoring for more than just a Hazmat call is important. Are you incorporating air monitoring into your Tech Rescues? Did you know all permit required confined space entries including rescues, requires continuous air monitoring? How can you do this?

Learning Objectives:

- Understanding where air monitoring needs to be done. Showing the requirements of OSHA confined space entries.
- Using pictures and lecture to show air monitoring can take place alongside a tech rescue.
- Showing how to setup a remote air monitoring station at a Tech Rescue.

- D. Downrange Objectives: Tactical Incident Command for Hazmat Events - Adam McFadden - Firehouse Training**
It is vital on every hazardous materials emergency scene, to have a system in place to ensure that all downrange - fireground tasks are completed and to safely and effectively mitigate any hazardous material and its effects.

Incident Command is the standardized structure that allows for a cooperative response within various groups or agencies to coordinate hazmat response activities, without compromising any decision making or safety. Focusing on a risk-based response through the chain of command and utilizing tactical checklists as an Incident Action Plan in a way to identify roles, and tasks to ensure scene downrange objectives are met.

This roundtable group session will:

- Identify how to better assess the situation through scene size-up
- Objectives including product identification and the use of chemical detection monitors
- Choice of personal protective equipment
- On-scene decontamination strategies and procedures.

We will discuss the importance of having a Hazmat Safety Officer; and tactical priorities to make key decisions on-scene, such as rescue, recovery or spill response mitigation issues to consider. We will also review radio communication benchmarks for product related actions for fires or spills, life protection strategies for public safety, and assistance requests for local mutual aid agencies.

- E. Introduction to Intermodal Tanks - Barry Lindley - Bad Day Training**

The fastest growing mode of transportation, with over eight million containers in transportation at any one time, is intermodal tanks. This presentation will discuss basic anatomy, construction and response to intermodal container incidents.

Wednesday, April 23, 1:40 PM – 3:10 PM

- A. Compressed Gas Cylinders and Liquefied Gases - Barry Lindley - Bad Day Training**

Cylinders – Have you heard the one about the employee killed when a cylinder turned into a rocket because its valve was knocked off? How about the employee suffocated after entering a space filled with nitrogen? Or maybe the facility damaged when acetylene cylinder heated up and exploded? Did you know that a family of four was poisoned by propane in their back yard? This presentation will discuss cylinder design, construction, and response. We will discuss case studies and what can be found in cylinders.

- B. Cross Sensitivities - They Are Not Always a Bad Thing - Mike Vacco and Kevin Ziegler - Minnesota/North Metro Chemical Assessment Team**

Learn how to take advantage of cross sensitivities and get the most out of our monitors!

Learning Objectives:

- Better understanding of an air monitoring, by explaining the how they work.
- Understanding that a cross sensitivity is not just a wrong reading and how to take advantage of that.
- How to get more definitive answers at call and not just tell our customers everything is good now.

- C. HazMat Response to Odors - Christopher Hawley - FBN Training**

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 and 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.

D. Municipal Aircraft Incident Hazards and Response - Eric Thomas - Downriver/Western Wayne Hazmat Team

This 90-minute Municipal Aircraft Incident Response presentation will instruct, and review Aircraft Rescue Fire Fighting standard as defined by NFPA 1003 & NFPA 1700 Structural Fire Fighting strategies and tactics. This presentation lecture will discuss how to manage small and large aircraft incidents and identify the hazards with these incidents. Objectives for this course include but not limited to the following:

Review of Incident command - National Incident Management System forms, aircraft identification, types of aircraft fuels, mass casualty triage and transport – medical ops, communications & notifications, resource management & allocation, search and rescue, fire extinguishment, spill control, and community reception centers as needed as well as peer support.

By completing this class, the student will be able to have knowledge to effectively manage an aircraft incident, identify the hazards and mitigate them.

E. The Hidden Language of Hazmat Meters: Are You Fluent? - Bobby Salvesen and Mike Monaco - The Hazmat Guys

Metering can be perplexing, but we excel at simplifying it. This 90-minute session will demystify metering technologies like electrochemical, catalytic bead, and photoionization detection. Attendees will leave with a comprehensive understanding of metering and its critical role in hazardous materials response. This presentation offers a concise overview of our full-day course.

Objectives:

1. Detailed Review of Meter Technologies: Understand the different metering technologies and their applications.
2. Recognize the Importance of Metering: Learn why metering is essential in hazmat responses.
3. Formulate Effective Tactics: Apply newly acquired knowledge to develop strategies for managing incidents.

Wednesday, April 23, 3:30 PM – 4:30 PM

A. HAZMAT Identification Through Colored, Opaque, and Closed Barriers - Ricardo Nobara - Agilent

Raman spectroscopy is a very powerful tool, capable of detecting unknown materials. Over the past 20 years, semiconductor technology has advanced rapidly, aiding in the creation of smaller lasers and detectors, which has facilitated the development of portable Raman systems.

One of the advantages of Raman is that it does not require sample preparation, however the laser must interrogate it directly, so the measurement must be exposed or in a transparent container. If an unknown material is found in an opaque container, it is typically transferred to a transparent one, posing a tremendous risk to the operator. Thanks to a new technique, called Spatially Compensated Raman Spectroscopy (SORS), it is possible to measure Raman signals from an unknown material, through opaque barriers, eliminating the danger. In this presentation we explain how SORS technology works and how it is used for the identification of hazardous and illicit materials, to improve safety and speed.

B. Superfund Amendments and Reauthorization Act (SARA) Title III in Michigan and How it Relates to the HAZMAT Responder - Michael Young – Michigan Environmental, Great Lakes, and Energy

We will be discussing a 360-degree view of SARA Title III and how it relates to how HAZMAT responders. Specifically, the why of 302 sites and why Emergency Response Plans are beneficial (think of them as chemical company pre plans versus an Emergency Operations Plan).

C. Gas Detector Maintenance, Tips, and Tricks - James Moore - Ideal Calibrations

We'll be going over the different technologies behind gas detection, going over a couple of the quirks of common brands, and walking the class through calibration and common maintenance.

D. Common and Uncommon Failures of Chemical Storage Containers - Randy Homic - Pfizer, Inc.

This workshop is an overview of different types of drums and containers used for storage. Also, we will cover the use of a variety of chemicals, as well as some common and uncommon failure points for each of these containers.

E. Weapons of Mass Destruction (WMD) Response - Jody Stanley – Federal Bureau of Investigation (FBI)

This workshop will go in-depth in the FBI's overview of WMD responses and case studies to assist you and your team while handling responses. There will be lessons learned to help improve your next WMD response.



Thursday, April 24, 8:30 AM – 10:00 AM

A. Hazmat Training-Meeting the National Fire Protection Association (NFPA) 470 Standards - Eric Thomas - Downriver and Western Wayne Hazmat Teams

This lecture will discuss the newer NFPA 470 standard regarding qualification and training for hazmat members. This lecture will cover basic training to advanced training requirements and how to meet those standards in accordance with Michigan Occupational Safety and Health Association 1910.120. This lecture will also discuss ways to manage your hazmat team training including record keeping and individual qualifications of your members. There will be a discussion on different ways and ideas to keep your team and training fresh and up to date with new and emerging technology. Emphasis will also be put on Incident Command System and how to integrate that into training.

B. Explosive Threat Awareness for First Responders - Dennis Thompson - H3D, Inc.

This presentation will provide participants with the understanding of how to analyze potentially explosive hazards, as well as blast effects and basic explosive physics. It will provide the knowledge and skills needed to identify safe locations where Bomb Technicians and Explosive Breachers can perform their duties with reduced risk of injury from blast overpressure and fragmentation. It will also cover how to react to potential Radiological Dispersal Device packages until the appropriate authorities can be called to the scene.

C. I-65 South: Managing Hazmat Incidents from Emergency to Cleanup to Emergency - Michael White - Indiana Department of Homeland Security

This workshop will cover managing the hazmat incident from the emergency phase to the cleanup phase then moving back into the emergency phase when clean up results in a chemical reaction.

- Working within the Incident Command System (ICS) command structure involving multiple agencies.
- Conducting research on chemical loads with limited information on shipping papers.
- Working with civilian clean up contractors and their place in the ICS command structure.

D. Lithium-Ion Battery Response for Firefighters and Haz Mat Technicians - Curt Thompson - Technical Environmental Services

Battery fires can arise from several issues and at any time or place. In this course, we will briefly look at several causes and discuss how to choose the best strategy to safely manage your response. We will discuss what is important to the Fire Department on these calls and how to predict the battery behavior. We will also look at what a Haz Mat team and Technicians can do on these incidents and how to integrate in these calls. This is a must attend course for those needing more information on all types of batteries from cars and home storage to larger Battery Energy Storage Systems (BESS).

Armed with this knowledge, this course will make you better prepared to handle an incident involving any type of battery emergency from a AAA battery to a BESS fire in a residential or commercial building.

Course Objectives:

1. Introduction: In this course we will explain the basics of battery emergency concepts and how to properly mitigate them. We will also discuss safety and mitigation strategies as well as Personal Protective Equipment recommendations for those operating on the incident.
2. Overview:
 - Identify different causes of battery issues.
 - Learn battery technology and why these batteries are dangerous.
 - Discuss where you will find these batteries
 - Cover mitigation strategies in fire situations and non-fire situations.
 - Look at tools to help with battery emergencies.
 - Discuss overpacking of batteries.
3. Monitoring Equipment and Techniques:
 - Discuss how Haz Mat teams can help on these incident
 - Discuss Fire Blankets and their effectiveness
 - Cover the Emergency Plug
4. Case Studies and Practical Applications:
 - Look at case studies to help understand how to respond
 - Learn from others' actions
 - Determine how we should respond based on past cases and what we know.

Thursday, April 24, 10:15 AM - 11:45 AM

A. 51st Weapons of Mass Destruction (WMD) Civil Support Team (CST) Response and Capabilities - Deborah Cushman and Tabytha Varela - 51st CST

This session will cover the capabilities of the Michigan National Guard 51st CST. The mission of CSTs is to support civil authorities during domestic incidents that could result in a catastrophic loss of life or property. CSTs assist with identifying and assessing hazards, advising on response measures, and facilitating the arrival of military forces. The 51st WMD CST is a hazmat response team developed to assist, assess, advise and identify upon request for hazmat responders. This will include down range analytics with the survey section, communication capabilities, decontamination, and other assets available for response.

B. Oil 101 and Booming Strategies - Jon Gulch and Tricia Edwards – United States Environmental Protection Agency (EPA)

This class, taught by EPA On-Scene Coordinators, will cover the basics of oil spill response and the use of booms and other collection devices. Specific topics to be covered include the definition of oil, types of oil, notifications, responder safety, booming configurations, and case studies.

C. Politics of Hazmat - Robert Coschignano and Derek Schaumann - Hazmat 101 Consultants

The goal of this class is to teach the student about people issues that will affect your hazmat call, team, and agency. It's about the people. IT'S ABOUT TRUST.....without the right people in the right position on the right day making the correct decision or being allowed to implement the correct course of action, everything will be more difficult and possibly fatal. Human Interaction (Politics) prior to the call, during the call, and after the call in some cases, will be the focus of the class. Politics both externally and internally as it relates to your hazmat team is critically important.

- Discuss the difference between external and internal relationships especially those in the transportation fixed facility industries.
- What training is required?
- Leadership vs Management
- What actions can we take?
- Discuss how bad decisions due to trust issues or ego issues have put firefighters at more risk than they otherwise would have or should have been placed in.

D. Industrial Fire & Spill Response: Strategies for Manufacturing & Production Facilities - Adam McFadden - Firehouse Training

In this industrial firefighting tactical overview session, the student will increase their understanding of various firefighting and hazmat response tactics when dealing with active hazmat, fire, and spill emergencies in commercial or manufacturing facilities. This will include an overview of incident command strategies for factory or plant emergencies, industrial firefighting tactics, and objectives for site-fires including water supply, large diameter hose-handling review, tactical ventilation, fire protection and suppression systems shutoffs, hazardous materials risk assessments, fixed facility spill response procedures, dealing with hazardous materials fires, and general preparedness for emergency incidents in the areas of oil and gas, industrial factory and commercial firefighting. This program will also cover joint-response coordination with local fire departments and emergency medical services, as well as local authorities and environmental companies.

Conference workshop training topics include:

- National Fire Protection Association (NFPA) 1081 & 600 Industrial Fire Brigade Member Qualifications and Standards Review
- NFPA 1581 Incident Command Qualifications and NFPA 1500 Health & Safety Review
- NFPA 1072 Hazardous Materials Operations Response Review (industrial specific)
- Onsite Hazard Evaluations and Risk Assessments & Fire Safety Responsibilities
- Fire Dynamics & Tactical Ventilation specific training for Commercial Occupancies
- Incident Command & Radio Communication Considerations Benchmark Review
- Smoke Management, Fire Protection & Suppression System, Plant Egress Overview for Commercial Buildings
- Onsite Fire Safety Plan, Firefighting tactics, Evacuation Practical & Spill Response Review
- SCBA and Personal Protective Equipment Review & Options for on-site response
- Discussion about Fire Department Emergency Joint Response Coordination for Medical Calls, Hazardous Materials Events & Fires