



**Description of Methodology:** The methodology for this course consists of lecture, discussion, demonstration, and supervised practice.

**Student Equipment & Supplies:** Pen/pencil & notebook, Personal Protective Equipment and Respiratory Protection as issued by the Authority Having Jurisdiction (AHJ). The PSFA Facial Hair Policy will be enforced for those using respiratory protection.

**Equipment/Audiovisual/Facility/Supply Requirements:**

1. Classroom set up with usual amenities; computer and computer projection equipment with screen/monitor; Audio Visuals for the course.
2. Instructor Guide and PowerPoint Presentation.
3. Student Manual for each student (recommended).
4. One ERG (latest edition) for each student.
5. Other equipment and supplies for selected menu option(s).
6. Skill Sheets for Core and Mission Specific

**Core Outline**

<b>Estimated Time</b>	<b>Topic</b>
0.25	Introduction
0.25	Definitions
0.50	Material Properties
1.00	Reference Materials
0.50	Personal Protective Equipment
2.50 Hours	<b>Total Time</b>

**Special Notes & Conditions:** Instructor Requirements: an accredited PA State Fire Academy Local Level Instructor trained in hazardous materials and nationally certified by IFSAC or Pro-Board Hazardous Material Operations level. Class Size Maximum: 30 students. Student minimum age: 16.

**Competency Evaluation Mechanism:** 100% Class Attendance and participation in all practical skills evolutions.

**Core Learning Outcomes (Behavioral Objectives):**

- The student will identify hazardous materials definitions, properties and effects.
- The student will utilize the current ERG and other hazardous materials documents (SDS).
- The student will identify various PPE and the limitations of the PPE.
- The student will implement a planned response.

**OPTION 1: AIR MONITORING Mission Specific (See attached Menu Option Sheet)**

**Training Session Outline**

<b>Estimated Time</b>	<b>Topic</b>
0.50 hours	Introduction
0.50 hours	Detection and Monitoring
1.00 hours	Types of Detectors and Monitors
1.00 hours	Practical
0.50 hours	Summary
3.50 Hours	<b>Total Time</b>

**Air Monitoring Course Learning Outcomes (Behavioral Objectives):**

- Plan and implement air monitoring and sampling activities.
- Select equipment suitable for detecting or monitoring solids, liquids, or gaseous hazardous materials/WMD.
- Describe the operation, capabilities and limitations, local monitoring procedures, field testing, and maintenance procedures associated with each detection/monitoring device.
- Describe the local procedure for responder decontamination as well as the decontamination procedures for detection/monitoring devices upon completing the air monitoring mission.
- Demonstrate the field test and operation of each detection/monitoring device, and interpret the readings based on local procedures.
- Implement the 10 basic rules for detection and monitoring.
- Perform a start-up procedure with a bump test.

**OPTION 2: PRODUCT CONTROL Mission Specific (See Menu Option Sheet)**

**Training Session Outline**

<b>Estimated Time</b>	<b>Topic</b>
0.25 hours	Introduction
1.00 hours	Control Options
2.00 hours	Integrated Exercise – Spill Control or Vapor Dispersion and Suppression with Foam Application
0.25 hours	Summary
3.50 hours	<b>Total Time</b>

**Product Control Learning Outcomes (Behavioral Objectives):**

- Describe and identify the control options available to operations level responders.
- Describe and identify the control options available for flammable liquid and flammable gas incidents.
- Describe purpose, equipment, precautions associated with control options.
- Describe the applicability and characteristics of aqueous film-forming foam, alcohol-resistant concentrates, fluoroprotein foams, protein foams, and high-expansion foams.

- Identify the location and describe the use of emergency remote shut-off devices on MC/DOT-306/406, MC/DOT-307/407, and MC-331 cargo tanks containing flammable liquids or gases.
- Describe the recovery phase, and the transition from emergency to clean-up.
- Practical on how to perform the following control activities:
  - Absorption
  - Damming and Diking
  - Retention
  - Vapor Dispersion and Suppression
- Practical on how to apply appropriate methods of foam application
  - Rain-down method
  - Roll-in method
  - Bounce-off method

**OPTION 3: MASS DECONTAMINATION Mission Specific (See attached Menu Option Sheet)**

**Training Session Outline**

<b>Estimated Time</b>	<b>Topic</b>
0.50 hours	Introduction
0.25 hours	Mass Decontamination and Effectiveness
0.25 hours	Role of Reference Sources in Mass Decontamination
0.25 hours	Crowd Control, Reports, Documentation and Evidence Preservation
2.00 hours	Integrated Mass Decon Exercise
0.25 hours	Summary
3.50 hours	<b>Total Time</b>

**Mass Decontamination Learning Outcomes (Behavioral Objectives):**

- Explain the advantages and limitations of mass decontamination operations.
- Describe three ways to reduce or eliminate contamination on victims.
- Describe the reference sources available for responders charged with performing mass decontamination.
- Identify the equipment required to set up and implement mass decontamination operations.
- Describe methods for crowd control.
- Describe the steps required to perform mass decontamination operations on ambulatory and non-ambulatory victims within the Incident Command System.
- Describe how to evaluate the effectiveness of a mass decontamination process.
- Describe the importance of completing reports and documentation of mass decontamination operations.
- Plan a response within the capabilities of available personnel, personal protective equipment, and control equipment by selecting a mass decontamination process to minimize the hazard.

- Set up and perform mass decontamination.
- Evaluate the progress of the planned response by evaluating the effectiveness of the mass decontamination process.

**OPTION 4: TECHNICAL DECONTAMINATION Mission Specific (See attached Menu Option Sheet)**

**Training Session Outline**

<b>Estimated Time</b>	<b>Topic</b>
0.50 hours	Introduction
0.50 hours	Technical Decontamination
0.25 hours	The Technical Decontamination Process
2.00 hours	Set-up Technical Decon (6 step process)
0.25 hours	Summary
3.50 hours	<b>Total Time</b>

**Technical Decontamination Learning Outcomes (Behavioral Objectives):**

- Plan a response by selecting a technical decontamination process that will minimize the hazard.
- Identify the personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based on local procedures.
- Identify and describe the limitations and advantages of technical decontamination operations and the technical decontamination methods.
- Identify resources for determining the correct technical decontamination procedure in a hazardous materials/WMD incident. (NFPA
- Identify the supplies and equipment needed for technical decontamination.
- Identify tools, equipment, and procedures for processing evidence during technical decontamination.
- Identify the role of the operations level responder assigned to technical decontamination.
- Identify procedures, equipment and safety precautions for handling tools, equipment weapons, criminal suspects, and law enforcement canines brought to the decontamination corridor.
- Identify procedures for evaluating the effectiveness of technical decontamination.
- Identify the importance, steps, and requirements of maintaining records.
- Describe the procedures for implementing technical decontamination duties as assigned.
- Demonstrate the ability to set up and implement technical decontamination operations in support of entry operations.

**OPTION 5: VICTIM RESCUE AND RECOVERY Mission Specific (See attached Menu Option Sheet)**

**Training Session Outline**

<b>Estimated Time</b>	<b>Topic</b>
0.25 hours	Introduction
0.50 hours	Tactical Considerations
0.75 hours	Search, Rescue and Recovery
1.75 hours	Practical Exercise
0.25 hours	Summary
3.50 hours	<b>Total Time</b>

**Learning Outcomes (Behavioral Objectives):**

- Describe tactical considerations such as attempting to make a rescue without the proper PPE or without backup personnel, or deciding whether a rescue attempt has a good chance of success.
- Describe entry team and backup team responsibilities.
- Describe the difference between ambulatory and non-ambulatory victims, and considerations for each.
- Describe the difference between rescue mode and recovery mode.
- Describe considerations in providing medical care and/or decontamination to victims during rescue mode or recovery mode.
- Describe the equipment needed for search, rescue, and recovery operations.
- Describe the benefits of sheltering-in-place.
- Describe and demonstrate the assists, lifts, and carries that are commonly used during rescue operations.
  - One-person walking assist.
  - Two-person walking assist.
  - Two-person extremities carry.
  - Two-person seat carry.
  - Two-person chair carry.
  - Cradle-in-arms carry.
  - Clothes drag.
  - Blanket drag.
  - Standing drag.
  - Webbing sling drag.
  - Fire fighter drag.
  - One-person emergency drag from a vehicle.
  - Long backboard rescue.

**Questions/Comments: Please contact the State Fire Academy Assistant Administrator**

Mission Specific Menu Options Student Text Edition	Lect./Lab Hrs. TOTAL	JHMOR Mission Specific Menu Options Session Goal/Description	Student Equipment and Supplies
<b>1) Air Monitoring and Sampling</b> Chapter 15 – 2 <sup>nd</sup> Chapter 14 – 1 <sup>st</sup>	2/2  4 hours	Student will understand the various types of atmospheric monitoring equipment used at the HMO level, to include identification of the various IDLH atmospheres, procedures for the selection and operation of air monitoring equipment, equipment decontamination procedures, data interpretation and management, and practical exercise using available equipment.	Multi-gas meter(s) and calibration gas used by students and/or department.
<b>2) Product Control</b> Chapter 12 – 2 <sup>nd</sup> Chapter 11 – 1 <sup>st</sup>	2/2  4 hours	Student will understand the spill control options available for personnel operating at the HMO level, to include various methods of control when dealing with liquids/gases. Remote shut off, recovery operations, foam equipment and foam application methods will be presented. Students will participate in a spill control or vapor diversion and suppression exercise using available equipment.	PPE and respiratory equipment as supplied/issued to the student by AHJ.
<b>3) Mass Decontamination</b> Chapter 10 – 2 <sup>nd</sup> Chapter 9 – 1 <sup>st</sup>	2/2  4 hours	Student will understand the advantages and limitations of mass decontamination (decon), crowd control, the equipment and steps needed to establish a mass decon operation and the ways to reduce or eliminate contamination. Mass decon procedures for ambulatory and non-ambulatory will be conducted when students participate in an exercise.	PPE, respiratory equipment as supplied/issued to the student by AHJ.
<b>4) Technical Decontamination</b> Chapter 9 – 2 <sup>nd</sup> Chapter 8 – 1 <sup>st</sup>	2/2  4 hours	Student will understand the procedures and resources to establish a technical decontamination (decon) process based on the hazards encountered and PPE available to HMO personnel. The students after review will set up a technical decon corridor for tools and personnel. Students will setup using supplies, equipment, tools available to that department.	PPE and respiratory equipment as supplied/issued to the student by AHJ.
<b>5) Victim Rescue and Recovery</b> Chapter 13 – 2 <sup>nd</sup> Chapter 12 – 1 <sup>st</sup>	2/2  4 hours	Student will understand the tactical considerations, team responsibilities and various methods to safely and effectively rescue or recover victims exposed to hazardous materials. The student, after review, will demonstrate various methods of rescue or recovery utilizing PPE and equipment available to that department.	PPE and respiratory equipment as supplied/issued to the student by AHJ.