

Hazardous Materials and Terrorist Incident Response Curriculum Guidelines

Hazardous Materials Officer

Response Training Considerations	Awareness	Operations	Hazardous Materials Technician	Specialist Employee	Hazardous Materials Specialist	Incident Commander	Hazardous Materials Officer	Safety Officer	BLS Responder	ALS Responder	Hospital First Receiver	Appendix A: Related Standards	Appendix B: NIMS/ICS	Appendix C: Special Topics
----------------------------------	-----------	------------	--------------------------------	---------------------	--------------------------------	--------------------	-----------------------------	----------------	---------------	---------------	-------------------------	-------------------------------	----------------------	----------------------------

Introduction

The hazardous materials officer shall be trained to meet all competencies for the first responder at the awareness, operational, and technician levels and the competencies in this section. They also shall receive any additional training to meet applicable U.S. D.O.T., U.S.E.P.A., O.S.H.A. and other appropriate state, local or provincial occupational health and safety regulatory requirements.

Definition

The hazardous materials officer (NIMS: Hazardous Materials Branch Director/Group Supervisor) is that person who is responsible for directing and coordinating all operations involving hazardous materials/ weapons of mass destruction (WMD) as assigned by the incident commander. (NFPA 472-10.1.1.1)

This function is akin to that of hazardous materials team leader and encompasses both the general command functions at the branch chief level in an incident command system and in addition includes the responsibility for technical and tactical leadership of the team of hazardous materials technicians at the incident. While the function of hazardous materials officer is not directly specified in OSHA 1910.120 or EPA 311, the officer function is a natural derivative of the incident command system requirements and incident commander delegation options which are themselves specified as required under the OSHA and EPA regulations for hazardous materials incident response.

Training Audience

The training audience for hazardous materials officer is relatively small in number and is technically advanced. The training audience should include existing members of hazardous materials response teams who have experience and training at the technician level and who have also demonstrated sufficient command and leadership potential to warrant training and subsequent assignment at the hazardous materials officer level.

Methodology Recommendations

Hazardous materials officer training is best conducted with a combination of classroom instruction using traditional lecture and small-group activities, field exercises involving group practice in simulated emergencies, and hands-on skill training in doing and supervising actual control, confinement and containment exercises. There should be a strong emphasis on field training to include incident decision-making and real time practice coordinating and directing the incident scene operations of the hazardous materials team. Content instruction should be synthesized in student activities requiring analysis of incident information to determine plans of action and requiring supervisory assessment of the performance of hazardous materials team members during operations to determine needed interventions and directions from the branch chief. Skill training and practice supervising subordinate skill evolutions should be performed on actual containers with simulated releases, using full protective equipment and proper response tools. Skill training and branch chief field supervision instruction should include instructor modeling,

student walk-throughs, and student practice under stress until competency is achieved. Proper critiques and corrective instruction are essential.

Refresher training should include (1) competency retesting of all response skills, (2) technical information updates, and (3) critique of incident scene decision-making and hazardous materials team leadership behaviors using simulated emergencies.

Summary:

Audience:	<p>Small in number.</p> <p>Members of hazmat teams at the technician level who have branch command and leadership potential.</p> <p>Prior training and demonstrated competency at the awareness, operational, and technician levels.</p>
Pre-Req:	<p>No specific length of training is recommended or commonly in use. Length of training should be sufficient to achieve competency.</p>
Training:	<ul style="list-style-type: none"> • Classroom, lab, and field exercise formats recommended. • Competencies: <ul style="list-style-type: none"> • Analyzing the incident • Planning the response • Implementing the response • Reporting and documenting the haz mat incident
Refresher:	<ul style="list-style-type: none"> • Retesting of responder skills • Technical information update • Refreshing of incident scene decision-making and branch team leadership

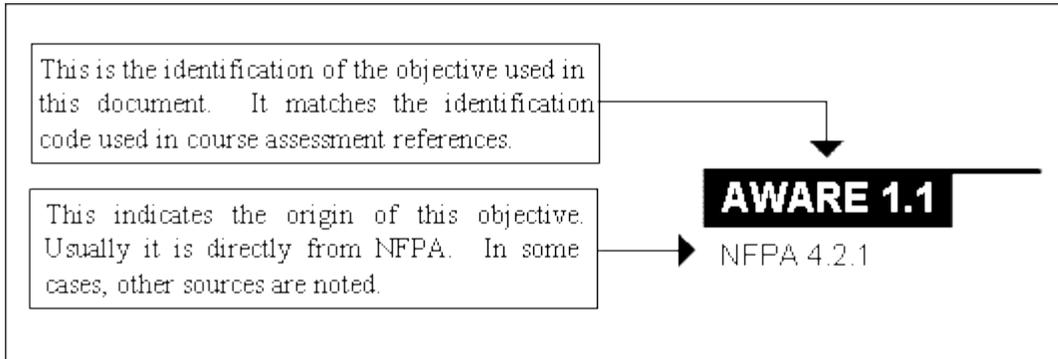
Federal Requirements for Hazardous Materials Officer

These objectives define competencies for a response function which is not directly specified by OSHA. However, the officer function is a natural derivative of the use of the incident command system and of the performance of the incident commander, including branch level delegation, both of which are required by OSHA. Because the function of hazardous materials officer is not directly specified in OSHA 29 CFR 1910.120, the following recommended training objectives are not individually cross-referenced to specific OSHA competency requirements. The general OSHA requirements which support this function are OSHA 29 CFR 1910.120 (q) (6) (v) for On Scene Incident Commander responsibilities including branch delegation and OSHA 29 CFR 1910.120 (q) (3) (i-ix) for the use of the Incident Command System during hazardous materials response.

Response Training Considerations
Awareness
Core
Mission-Specific
Operations
Hazardous Materials Technician
Specialist Employee
Hazardous Materials Specialist
Incident Commander
Hazardous Materials Officer
Safety Officer
BLS Responder
ALS Responder
Hospital First Receiver
Appendix A: Related Standards
Appendix B: NIMS/ICS
Appendix C: Special Topics

Recommended Training Objectives

Objective Identification Legend



Hazardous Materials Officer

The hazardous materials officer shall be trained to meet all competencies for the awareness, operations, and technician levels and the competencies of this chapter. The hazardous materials officer shall also receive training to meet governmental occupational health and safety regulations.

HMO 1. - Analyzing the Incident

HMO - 1.1.

NFPA 10.2

Given scenarios involving hazardous materials/WMD incidents including the surrounding conditions and the predicted behavior of the container and its contents, the hazardous materials officer shall estimate the potential outcomes within the endangered area.

HMO 2. - Planning the Response

HMO - 2.1.

NFPA 10.3.1

Identifying the Response Objective

Given a scenario involving a hazardous materials/WMD incident, the hazardous materials officer shall identify the response objective (defensive, offensive, and nonintervention) for each incident.

HMO - 2.2.

NFPA 10.3.2

Identifying the Response Options

Given a scenario involving a hazardous materials/WMD incident, the hazardous materials officer shall identify the potential response options (defensive, offensive, and nonintervention) for each incident.

HMO - 2.3.

NFPA 10.3.3

Selecting the Level of Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the hazardous materials officer shall select the personal protective equipment for the response options specified in the incident action plan in each situation.

HMO - 2.4.

NFPA 10.3.4

Developing a Plan of Action

Given scenarios involving hazardous materials/WMD incidents, the hazardous materials officer shall develop a plan of action consistent with the emergency response plan and/or standard operating procedures that is within the capability of the available personnel, personal protective equipment, and control equipment, and shall complete the following tasks:

Response
Training
Considerations

Awareness

Core

Mission-
Specific

Operations

Hazardous
Materials
Technician

Specialist
Employee

Hazardous
Materials
Specialist

Incident
Commander

Hazardous
Materials
Officer

Safety
Officer

BLS
Responder

ALS
Responder

Hospital
First
Receiver

Appendix A:
Related
Standards

Appendix B:
NIMS/ICS

Appendix C:
Special
Topics

HMO - 2.4.1.

NFPA 10.3.4(1)

Identify the order of the steps for developing the plan of action.

HMO - 2.4.2.

NFPA 10.3.4(2)

Identify the factors to be evaluated in selecting public protective actions, including evacuation and shelter in-place.

HMO - 2.4.3.

NFPA 10.3.4(3)

Given the local emergency response plan and/or the standard operating procedures, identify procedures to accomplish the following tasks:

1. Make ongoing assessments of the situation.
2. Command on-scene personnel assigned to the hazardous materials branch/group.
3. Coordinate hazardous materials/WMD support and mutual aid.
4. Coordinate public protective actions (evacuation or shelter-in place).
5. Coordinate with fire suppression services as they relate to hazardous materials/WMD incidents.
6. Coordinate control, containment, or confinement operations.
7. Coordinate with the medical branch to ensure medical assistance (ambulance) and medical treatment (hospital).
8. Coordinate on-scene decontamination.
9. Coordinate activities with those of the environmental remediation (cleanup) services.
10. Coordinate evidence preservation and sampling in a contaminated environment.

HMO - 2.4.4.

NFPA 10.3.4(4)

Identify the process for determining the effectiveness of an action option on the potential outcomes.

HMO - 2.4.5.

NFPA 10.3.4(5)

Identify the procedures for presenting a safety briefing prior to allowing personnel to work on a hazardous materials/WMD incident.

HMO 3. - Implementing the Planned Response

HMO - 3.1.

NFPA 10.4.1

Implementing the Functions within the Incident Management System

Given a copy of the emergency response plan, the hazardous materials officer shall identify the requirements of the plan, including the required procedures for notification and utilization of non-local resources (private, state, and federal government personnel), and shall complete the following tasks:

<p>HMO - 3.1.1. NFPA 10.4.1(1)</p>	<p>Identify the process and procedures for obtaining cleanup and remediation services in the emergency response plan and/or standard operating procedures.</p>	Response Training Considerations			
<p>HMO - 3.1.2. NFPA 10.4.1(2)</p>	<p>Identify the steps for implementing the emergency response plans as required under SARA Title III Section 303 of the federal regulations or other emergency response planning legislation.</p>	Awareness			
<p>HMO - 3.1.3. NFPA 10.4.1(3)</p>	<p>Given the local emergency planning documents, identify the elements of each of the documents.</p>	<table border="1"> <tr> <td data-bbox="1463 317 1539 411">Core</td> <td data-bbox="1463 415 1539 548" rowspan="2">Operations</td> </tr> <tr> <td data-bbox="1463 436 1539 548">Mission-Specific</td> </tr> </table>	Core	Operations	Mission-Specific
Core	Operations				
Mission-Specific					
<p>HMO - 3.1.4. NFPA 10.4.1(4)</p>	<p>Identify the elements of the incident management system necessary to coordinate response activities at hazardous materials/WMD incidents.</p>	Hazardous Materials Technician			
<p>HMO - 3.1.5. NFPA 10.4.1(5)</p>	<p>Identify the primary local, state, regional, and federal government agencies and identify the scope of their regulatory authority (including the regulations) pertaining to the production, transportation, storage, and use of hazardous materials/WMD and the disposal of hazardous wastes.</p>	Specialist Employee			
<p>HMO - 3.1.6. NFPA 10.4.1(6)</p>	<p>Identify the governmental agencies and resources offering assistance to the hazardous materials branch/group during a hazardous materials/ WMD incident and identify their role and type of assistance or resources available.</p>	Hazardous Materials Specialist			
<p>HMO - 3.1.7. NFPA 10.4.1(7)</p>	<p>Identify the governmental agencies and resources offering assistance during a hazardous materials incident involving criminal or terrorist activities, and identify their role and the type of assistance or resources available.</p>	Incident Commander			
<p>HMO - 3.2. NFPA 10.4.2</p>	<p>Directing Resources (Private and Governmental) Given a scenario involving a hazardous materials/WMD incident and the necessary resources to implement the planned response, the hazardous materials officer shall demonstrate the ability to direct the hazardous materials branch/group resources in a safe and efficient manner consistent with the capabilities of those resources.</p>	Hazardous Materials Officer			
<p>HMO - 3.3. NFPA 10.4.3</p>	<p>Providing a Focal Point for Information Transfer to Media and Elected Officials Given a scenario involving a hazardous materials/WMD incident, the hazardous materials officer shall demonstrate the ability to act as a resource to provide information to the incident commander or the public information officer for distribution to the media and local, state, and federal officials and shall complete the following tasks:</p>	Safety Officer			
		BLS Responder			
		ALS Responder			
		Hospital First Receiver			
		Appendix A: Related Standards			
		Appendix B: NIMS/ICS			
		Appendix C: Special Topics			

HMO - 3.3.1.

Identify the local policy for providing information to the media.

NFPA 10.4.3(1)

HMO - 3.3.2.

Identify the responsibilities of the public information officer at a hazardous materials/WMD incident.

NFPA 10.4.3(2)

HMO 4. - Evaluating Progress

HMO - 4.1.

Evaluating Progress

NFPA 10.5

Given scenarios involving hazardous materials/WMD incidents, the hazardous materials officer shall evaluate the progress of the incident action plan to determine whether the efforts are accomplishing the response objectives and shall complete the following tasks:

HMO - 4.1.1.

Identify the procedures for evaluating whether the response options are effective in accomplishing the objectives.

NFPA 10.5(1)

HMO - 4.1.2.

Identify the steps for comparing actual behavior of the material and the container to that predicted in the analysis process.

NFPA 10.5(2)

HMO - 4.1.3.

Determine the effectiveness of the following:

1. Personnel being used
2. Control zones
3. Personal protective equipment
4. Control, containment, or confinement operations
5. Decontamination

NFPA 10.5(3)

HMO - 4.1.4.

Make appropriate modifications to the incident action plan.

NFPA 10.5(4)

HMO 5. - Terminating the Incident

HMO - 5.1.

Terminating the Emergency Phase of the Incident

NFPA 10.6.1

Given a scenario involving a hazardous materials/WMD incident, the hazardous materials officer shall demonstrate the ability to terminate the emergency phase of the incident consistent with the emergency response plan and/or standard operating procedures and shall complete the following tasks:

Response
Training
Considerations

HMO - 5.1.1. Identify the steps required in terminating the emergency phase of a hazardous materials/WMD incident.
NFPA 10.6.1(1)

Awareness

HMO - 5.1.2. Identify the procedures for conducting incident debriefings at a hazardous materials/WMD incident.
NFPA 10.6.1(2)

Operations
Core
Mission-Specific

HMO - 5.2. Conducting a Debriefing
NFPA 10.6.2
Given a scenario involving a hazardous materials/WMD incident, the hazardous materials officer shall demonstrate the ability to conduct a debriefing of the incident for all units assigned to the hazardous materials branch/group and shall complete the following tasks:

Hazardous
Materials
Technician

HMO - 5.2.1. Describe three components of an effective debriefing.
NFPA 10.6.2(1)

Specialist
Employee

HMO - 5.2.2. Describe the key topics in an effective debriefing.
NFPA 10.6.2(2)

Hazardous
Materials
Specialist

HMO - 5.2.3. Describe when a debriefing should take place.
NFPA 10.6.2(3)

Incident
Commander

HMO - 5.2.4. Describe who should be involved in a debriefing.
NFPA 10.6.2(4)

Hazardous
Materials
Officer

HMO - 5.2.5. Identify the procedures for conducting incident debriefings at a hazardous materials/WMD incident.
NFPA 10.6.2(5)

Safety
Officer

HMO - 5.3. Conducting a Critique
NFPA 10.6.3
Given the details of a scenario involving a hazardous materials/WMD incident, the hazardous materials officer shall demonstrate the ability to conduct a critique of the incident for all units assigned to the hazardous materials branch/group and shall complete the following tasks:

BLS
Responder

ALS
Responder

HMO - 5.3.1. Describe three components of an effective critique.
NFPA 10.6.3(1)

Hospital
First
Receiver

HMO - 5.3.2. Describe who should be involved in a critique.
NFPA 10.6.3(2)

Appendix A:
Related
Standards

Appendix B:
NIMS/
ICS

Appendix C:
Special
Topics

HMO - 5.3.3.

NFPA 10.6.3(3)

Describe why an effective critique is necessary after a hazardous materials/WMD incident.

HMO - 5.3.4.

NFPA 10.6.3(4)

Describe what written documents should be prepared as a result of the critique.

HMO - 5.3.5.

NFPA 10.6.3(5)

Identify the procedure for conducting a critique of the incident.

HMO - 5.3.6.

NFPA 10.6.3(6)

Identify the requirements for conducting a post-incident analysis as defined in the emergency response plan; the standard operating procedures; or local, state, and federal regulations.

HMO - 5.4.

NFPA 10.6.4

Reporting and Documenting the Incident

Given an example of a hazardous materials/WMD incident, the hazardous materials officer shall demonstrate the ability to report and document the incident consistent with the local, state, and federal requirements and shall complete the following tasks:

HMO - 5.4.1.

NFPA 10.6.4(1)

Identify the reporting requirements of federal, state, and local agencies.

HMO - 5.4.2.

NFPA 10.6.4(2)

Identify the importance of documentation for a hazardous materials incident/WMD, including training records, exposure records, incident reports, and critique reports.

HMO - 5.4.3.

NFPA 10.6.4(3)

Identify the steps in keeping an activity log and exposure records for hazardous materials/WMD incidents.

HMO - 5.4.4.

NFPA 10.6.4(4)

Identify the requirements found in the emergency response plan and/or standard operating procedures for compiling hazardous materials/WMD incident reports.

HMO - 5.4.5.

NFPA 10.6.4(5)

Identify the requirements for filing documents and maintaining records as defined in the emergency response plan and/or standard operating procedures.

HMO - 5.4.6.

NFPA 10.6.4(6)

Identify the procedures required for legal documentation and chain of custody/continuity described in the standard operating procedures or the emergency response plan.