Operational Level Training Guidelines

Florida State Emergency Response Commission
Operations Level Hazardous Material Training Competencies

RECORD OF CHANGES

Date	Location	Change Made	By
2/16/2010	OPS CORE	Added to preamble material of Tab 2 OPS-CORE the following statement - "As advancements in technology take place, it is critical that all individuals demonstrate competency in computers/internet access and computer interfaces utilized by the with specific scientific equipment assigned to the individual for the completion of their mission."	Response Technologies
2/16/2010	OPS-CORE 1.2.8	Added competency for E-Plan and renumbered 1.2.8 to 1.2.9 as necessary. Revision included in all applicable tabs. (Tab 2 and Tabs 4 – 12)	Response Technologies
2/16/2010	OPS-CORE 3.3.8	Added competency requiring understanding of FBI 12 step process. Revision included in all applicable tabs. (Tab 2 and Tabs 4 – 12)	Response Technologies

Tab 1

Analysis

Operational Training Guidelines

History the Florida Public Sector Hazardous Materials Training Guidelines

The Florida Hazardous Materials Training Guidelines for public sector responders was originally developed in the 1994 – 1996 timeframe by the Florida SERC Hazardous Materials Training Task Force. These guidelines were based primarily upon the requirements of the Occupational Safety and Health Administration (29 CFR 1910.120), the National Fire Protection Association (NFPA) Standard 472 "Professional Competency for Responders to Hazardous Materials Emergencies" and the FEMA National Emergency Training Center HMEP Training Guidelines. The Florida Public Sector Guidelines were subsequently revised by Florida DEM in 2002 to incorporate changes brought about to address terrorism specific competencies. No further changes have occurred since that time.

Changes to NFPA in 2008

In August of 2008, the National Fire Protection Association released their new edition of the NFPA 472 hazardous materials training standard. This consensus standard was renamed "Competence of Responders to Hazardous Materials / Weapons of Mass Destruction Incidents" in order to more closely relate to its redefined focus.

With the 2008 edition of 472 NFPA dramatically changed its traditional fire based philosophies of hazardous materials response in order to meet the growing needs of other professions. In particular, law enforcement and EMS agencies required standards that would allow for specific operations of their personnel without having the excessive fiscal and training burden brought about by the "Technician" level of training. Additionally as the industry of hazardous materials emergency response has grown and become more common place, the tradition lines between "offensive" and "defensive" operations have become blurred. Many agencies identified the need to allow traditionally defensive employees to operate in a more offensive manner during incidents in which the risks could be fully quantified and personnel properly protected. A need for an "Operations Level +PLUS" became apparent.

The major philosophical changes that NFPA adopted to meets this changing environment were:

(1) Emergency response operations at a terrorism or criminal scenario using hazardous materials are based on the basic concepts of hazardous materials response. A basic understanding of hazardous materials is absolutely necessary.

(2) The scope of the new standard must apply to all emergency responders, regardless of response discipline.

(3) Emergency responders, regardless of their discipline and organizational affiliation, should be trained to perform their expected tasks based upon real-world demands.

(4) Personnel not directly involved in providing on-scene emergency response services (e.g., hospital first-receivers) would not be covered under the scope of this standard.

(5) Competencies for emergency medical services personnel remain in NFPA 473, *Standard for Competence of EMS Responders Responding to Hazardous Materials/Weapons of Mass Destruction Incidents*.

As a result of these philosophical issues, NFPA made drastic changes to the 2008 Edition of 472 particularly at the Operations Level of Response. Those major changes involved:

- Awareness level personnel. The term responders was removed for the definition of awareness level. Awareness personnel are responsible for recognizing a hazardous materials emergency and activating the response system. They themselves do not respond to incidents.

- Operations level responders. If an individual is tasked to respond to the scene of a hazardous materials/WMD incident during the emergency phase, that individual is viewed as an operations level responder. This level includes fire, rescue, law enforcement, emergency medical services, private industry, and other allied professionals.:

(Source: NFPA 472 2008 ed)

As a result, operations level responder competencies were broken down into two major subsections, “Core” and “Mission Specific”

Core competencies are competencies required of all emergency responders at this level. Any employee called to respond to a scene involving hazardous materials or WMDs emergency must be training to these initial core competencies.

Mission-specific competencies are optional and are provided so that the authority having jurisdiction (AHJ) can match the expected tasks and duties of its personnel with the competencies required to perform those tasks. Mission-specific competencies are available for operations level responders who are assigned to perform the following tasks:

Prior to the development of this standard, the Florida Public Sector Training Guidelines addressed none of the mission specific competencies at the operations level. Therefore, any revision to the Florida Guidelines would require the addition of the mission specific competencies called for in NFPA 472 and the HMEP guidelines.

In addition to the new mission specific requirements, substantial changes were made to the operations level competencies at the core level. These competencies have been analyzed on a

line item basis in the attached print out. This analysis shows to current alignment of SERC training guidelines to the NFPA 472 core competency set.

Significant Revision Required

Based upon our findings, significant revisions to the Florida SERC Training Competencies are required. These revisions are substantial enough to warrant development of a new volume of the SERC Training Guidelines to deal specifically with the Operational Core and Mission Specific requirements. The balance of the SERC training guidelines could then be simplified and shorten to address the needs at the Awareness, Technician and Incident Commander Level. Furthermore, future efforts should be given to incorporating the competencies for Hazardous Materials Safety Officer and Hazardous Materials Supervisor.

Tab 2

Operations Core

Operations Level Training Guidelines

Florida State Emergency Response Commission
Operations Level Hazardous Material Training Competencies

GUIDELINES FOR RESPONDERS HAZARDOUS MATERIALS TRAINING

Introduction

Operations level responders shall be trained to meet all the competencies of the both the awareness and operations levels, as defined in OSHA 29 CFR 1910.120(q). In addition, operations level responders shall receive training to meet requirements of the Occupational Safety and Health Administration (OSHA, Florida Department of Financial Services, Florida Department of Environmental Protection, and the US. Environmental Protection Agency (EPA) as appropriate for their jurisdictions. All operations level personnel will be trained in the "Core Competencies" listed in these guidelines regardless of their function on scene. Responders who may perform confinement or control measures should also meet the mission specific competencies found in the "Mission Specific Competencies" section. Responders that respond or that can be expected to respond to a hazardous materials incident must be knowledgeable of 29 CFR 1910.120 and 40 CFR 311 training and emergency response requirements as well as any additional standards dictated by their professional standards development organizations.

Definition

Operations level personnel are "responders". These responders at the operations level are any personnel who are called upon to respond to releases or potential releases as part of the initial response to protect life, property, and the environment from the effects of a hazardous materials/weapons of mass destruction (WMD) emergency. All operations level responders must meet the core competencies of this document as well as any additional mission specific competencies that are specific to their job function based upon expected tasks, equipment and training as determined by the authority having jurisdiction (AHJ). Mission specific competencies must be performed under the supervision of a technician, appropriate allied professional and/or under appropriate standard operating procedures.

The following matrix recommends a "menu" type approach to the selection of mission specific competencies. The employer should select the competencies based upon the expected tasks to be performed in accordance with a written Emergency Response Plan.

Florida State Emergency Response Commission
Operations Level Hazardous Material Training Competencies

	In addition to Operations Level Core Competencies, the Operations Level Responder shall receive the following mission specific training requirements:							
Responders and Job Function	**Use PPE**	**Perform Technical or Mass Decon**	**Perform Product Control**[1]	**Perform Air Monitoring**	**Perform Victim Rescue and Removal**	**Preserve Evidence and Perform Sampling**	**Respond to Illicit Lab Incident**	**BLS or ALS Competencies**
Firefighters performing basic defensive product control measures	X	X	X					
Responders assigned to a decontamination	X	X						
Responders providing rapid rescue/extraction from a contaminated environment	X	X		X	X			
Responders providing support in the support zone (no PPE)								
Responders providing support in the contaminated environment. (Additional training based upon function)	X	X						
Law enforcement criminal investigation where hazardous materials are present	X	X		X		X	X	X
Law enforcement investigating incidents involving illicit laboratories	X	X		X		X	X	X
Public health personnel involved in the investigation of public health emergencies	X	X				X		
Environmental health and safety professionals who provide air monitoring support	X	X		X				
EMS Responder performing rescue and patient care	X	X			X			X

[1] The scope of decontamination competencies would be dependent upon whether or not the responder will establish and perform decontamination or if they will be decontaminated.

Audience

Responders at the operations level are typically those persons who are called upon to respond to a scene of a hazardous materials / WMD incident. They may be employed by law enforcement, public service, fire or emergency medical services, or a variety of private organizations. Generally they are not members of a hazardous materials team.

Related Health and Safety Standards

OSHA 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (7/1/99) and related interpretations

EPA 40 CFR 311 Worker Protection

NFPA 471 Recommended Practice for Responding to Hazardous Materials Incident (2002 Edition)

NFPA 472 Standard for Competencies for Hazardous Materials Responders (2008 Edition)

NFPA 473 Standard for Competencies of Emergency Medical Responders to Hazardous Materils Incidents.

Appropriate Methodologies

Responder operations level training is best conducted in a classroom environment with opportunities for small and large group exercises either in classroom or field exercises in conjunction with the training. Providing awareness level training in conjunction with operations level is acceptable. Lectures with small group activities are appropriate instructional delivery of much of the material. However, incident scene organization and command drill and practice will require large group simulated incidents which are best conducted in a simulator or as a field exercise.

Refresher training occurring annually should include: (1) competency re-evaluation of all response skills, (2) technical information updates, and (3) critique of incident scene decision-making using simulated emergencies.

The SERC estimates that the initial training outlined in the Core Competencies can be accomplished in a minimum of 16 hours with competent instructors knowledgeable in hazardous

materials response when personnel are trained to the awareness level. Duration of additional training related to mission specific competencies will vary depending upon the expectations defined by the employer's emergency response plan and the competencies provide within each mission specific area. Annual refresher should be accomplished with a minimum of 8 contact hours training. In any case, it is the employer's responsibility to define in the written emergency response plan the methods by which continued competency is measured and documented.

Fire Service—The Florida Department of Financial Services, Florida State Fire Marshal's Office, currently requires a minimum of 24 hours for recruit firefighters seeking a Firefighter Certificate of Compliance. This operations level training program current has provisions for the basic considerations for emergency and technical decontamination. Mission specific training would be selected based upon anticipated job functions as defined by the employer's emergency response plan.

Emergency Medical Services —The National DOT Emergency Medical Services curriculum has components for Awareness level training in the current EMT and EMT-P programs. The content is limited and would require further development to comply with the NFPA 472 and NFPA 473 training requirements.

Law Enforcement – Law enforcement academies in Florida currently provide hazardous materials training in their recruit programs. These training activities do not cover the competencies necessary for those employees to engage in mission specific operations such as evidence collection or tactical operations in the hazardous environment.

Public Works Employees – The training necessary for the public works employees could be at either the Awareness or Operations level depending upon the specific job expectations. If the public works employee would only be expected to recognize the hazardous materials incident and to activate the response system, then only Awareness Level training would be required. However, if the public works employ would be summoned to the scene to provide technical support, then Operations level training would be required. Mission specific competencies may also be required if the employee would be expected to operate in the isolation area and in personal protective equipment.

Training

Employers, including volunteer agency responsible parties, are required to ensure that responders demonstrate competency in the skills required. All responders will be trained to the operations level utilizing the Florida First Responder Operations Level Hazardous Materials Training Program, the National Fire Academy Program Hazardous Materials Core and selected mission specific training programs which are designed to comply with the First Responder Awareness and Operations Level as defined in 29 CFR 1910.120 and NFPA 472.

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:
1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:
1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1 Describing Response Objectives
NFPA 5.3.1
OSHA OPS B,D

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2 Identifying Action Options
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

Tab 3

Mission Specific Tasks

Operations Level Training Guidelines

Tab 3.1

Personal Protective Equipment

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —PERSONAL PROTECTIVE EQUIPMENT (OPS-PPE)

Introduction

The AHJ may anticipate that many of the responders in the jurisdiction who have already received training in the core competencies for operations level responders will also need to be able to use Personal Protective Equipment (PPE) beyond the level of PPE normally provided by the AHJ for their typical emergency response duties. All operations level responders who will be assigned to use such PPE shall be trained to the mission-specific competencies in this section, in order to ensure that the operations level responders are prepared to use such PPE safely and effectively. All operations level responders who have been so trained to use such PPE during a hazmat/WMD response shall then do so at the incident scene under the guidance of a hazardous materials technician, an appropriate allied professional, and/or under appropriate standard operating procedures.

Area: Personal Protective Equipment

Audience: All operations level responders who might be assigned to use PPE at an incident

Prerequisite: Core operations

Training: 4–8 hours in classroom and physical lab

Refresher: Competencies include:

- Selection of PPE
- Donning
- Working in
- Doffing

Annual refresher recommended to include retesting of PPE selection skills and re-demonstrating of donning, working in, and doffing skills.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1 Selecting Personal Protective Equipment

NFPA 472 6.2.3.1
OSHA OPS-B

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;
4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-PPE 2—Implementing the Planned Response

OPS-PPE—2.1 Using Protective Clothing and Respiratory Protection

NFPA 472 6.2.4.1
OSHA OPS-B

Given the personal protective equipment provided by the AHJ, the operations level responder assigned to use personal protective equipment shall demonstrate the ability to don, work in, and doff the equipment provided to support mission specific tasks.

OPS-PPE—2.1.1
NFPA 472 6.2.4.1(1)
OSHA OPS-B

Identify the safety procedures and emergency procedures for personnel wearing personal protective equipment.

OPS-PPE—2.1.2
NFPA 472 6.2.4.1(4)
OSHA OPS-B

Demonstrate local procedures for going through technical decontamination process.

OPS-PPE—2.1.3
NFPA 472 6.2.4.1(5)
OSHA OPS-B

Describe the maintenance, testing, inspection, storage, and documentation procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-PPE 3—Terminating the Incident

OPS-PPE—3.1 Reporting and Documenting the Incident

NFPA 472 6.2.5.1
OSHA OPS-B

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to use personal protective equipment shall identify and complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures regarding personal protective equipment.

Tab 3.2

Technical Decontamination

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —TECHNICAL DECONTAMINATION

(OPS-TD)

Introduction

Operations level responders assigned to perform technical decontamination during hazardous materials/WMD incidents shall operate under the guidance of a hazardous materials technician, emergency response plan or standard operating procedures, or an allied professional. They shall be trained to meet all competencies at the awareness and operations levels, competencies for personal protective equipment, and the competencies in this section. Operations level responders with technical decontamination operations training shall also receive additional training necessary to meet specific needs of the jurisdiction.

Area: Technical Decontamination

Audience: All operations level responders who might be assigned to use technical decontamination at an incident

Prerequisite: Core Operations, mission-specific competency in the use of PPE as required to support technical decontamination

Training: 4 hours in classroom and physical skills lab

Refresher: Competencies include:

- Selecting Decontamination Procedures
- Performing Incident Management Duties
- Performing and Evaluating Decontamination Operations
- Reporting and Documenting the Incident

Annual refresher recommended to include retesting of technical decontamination skills and re-demonstrating how to set up and implement technical decontamination operations in support of entry operations as well as for ambulatory and non-ambulatory victims.

OPS-TD 1— Planning the Response

OPS-TD—1.1 Selecting Personal Protective Equipment
NFPA 472 6.4.3.1

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2 Selecting Decontamination Procedures
NFPA 472 6.4.3.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)
Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)
Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming
12. Washing

OPS-TD—1.2.3
NFPA 472 6.4.3.2(3)
Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4
NFPA 472 6.4.3.2(4)
Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5
NFPA 472 6.4.3.2(5)
Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6
NFPA 472 6.4.3.2(6)
Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1
NFPA 472 6.4.4.1

Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2
NFPA 472 6.4.4.1(1)

Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3
NFPA 472 6.4.4.1(2)

Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1 Reporting and Documenting the Incident

NFPA 472 6.4.6.1

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1 Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.
NFPA 472 6.4.6.1(1)

OPS-TD—4.1.2 Describe the importance of personnel exposure records.
NFPA 472 6.4.6.1(2)

OPS-TD—4.1.3 Identify the steps in keeping an activity log and exposure records.
NFPA 472 6.4.6.1(3)

OPS-TD—4.1.4 Identify the requirements for filing documents and maintaining records.
NFPA 472 6.4.6.1(4)

Tab 3.3

Mass Decontamination

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —MASS DECONTAMINATION (OPS-MD)

Introduction

Operations level responders assigned to perform mass decontamination during hazardous materials/WMD incidents shall operate under the guidance of a hazardous materials technician, emergency response plan or standard operating procedures, or an allied professional. They shall be trained to meet all competencies at the awareness and operations levels, competencies for personal protective equipment, and the competencies in this section. Operations level responders with mass decontamination operations training shall also receive additional training necessary to meet specific needs of the jurisdiction.

Area: Mass Decontamination

Audience: All operations level responders who might be assigned to perform mass decontamination at an incident.

Prerequisite: Core operations, mission specific competency in the use of PPE as required to support mass decontamination.

Training: 4 hours in classroom and physical skills lab

Refresher: Competencies include:

- Selection decontamination procedures
- Performing incident management duties
- Performing and evaluating decontamination operations
- Reporting and documenting the incident

Annual recommended refresher to include retesting of mass decontamination skills and re-demonstrating how to set up and implement mass decontamination operations for ambulatory and non-ambulatory victims.

OPS-MD 1— Planning the Response

OPS-MD—1.1 Selecting Personal Protective Equipment
NFPA 472 6.3.3.1

Given an emergency response plan or standard operating procedures, the operations level responder assigned to mass decontamination shall select the personal protective equipment required to support mass decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-MD—1.2 Selecting Decontamination Procedures
NFPA 472 6.3.3.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to mass decontamination operations shall select a mass decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-MD—1.2.1 Identify the advantages and limitations mass decontamination operations.
NFPA 472 6.3.3.2(1)

OPS-MD—1.2.2 Describe the advantages and limitations of each of the following decontamination methods:
NFPA 472 6.3.3.2(2)

1. Dilution
2. Isolation
3. Washing

OPS-MD—1.2.3 Identify sources of information for determining the correct mass decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.
NFPA 472 6.3.3.2(3)

OPS-MD—1.2.4 Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.
NFPA 472 6.3.3.2(4)

OPS-MD—1.2.5 Identify procedures, equipment, and safety precautions for communicating with crowds and crowd management techniques that can be used at incidents where a large number of people might potentially be contaminated.
NFPA 472 6.3.3.2(5)

OPS-MD 2—Implementing the Planned Response

OPS-MD—2.1 Performing Incident Management Duties
NFPA 472 6.3.4.1

Given a scenario involving a hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to mass decontamination operations shall demonstrate the mass decontamination duties assigned in the incident action plan by describing the local procedures for the implementation of the mass decontamination function within the incident command system.

OPS-MD—2.2 Performing Decontamination Operations Identified in Incident Action Plan
NFPA 472 6.3.4.2

The operations level responder assigned to mass decontamination operations shall demonstrate the ability to set up and implement mass decontamination operations for ambulatory and non-ambulatory victims.

OPS-MD 3—Evaluating Progress

OPS-MD—3.1 Evaluating the Effectiveness of the Mass Decontamination Process
NFPA 472 6.3.5.1

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to mass decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-MD 4—Terminating the Incident

OPS-MD—4.1 Reporting and Documenting the Incident
NFPA 472 6.3.6.1

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to mass decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-MD—4.1.1 Identify the reports and supporting documentation required by the emergency response plan and/or standard operating procedures.
NFPA 472 6.3.6.1(1)

OPS-MD—4.1.2 Describe the importance of personnel exposure records.
NFPA 472 6.3.6.1(2)

OPS-MD—4.1.3 Identify the steps in keeping an activity log and exposure records.
NFPA 472 6.3.6.1(3)

OPS-MD—4.1.4 Identify the requirements for filing documents and maintaining records.
NFPA 472 6.3.6.1(4)

Tab 3.4

Product Control

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —PRODUCT CONTROL (OPS-PC)

Introduction

Operations level responders are permitted to conduct defensive hazardous materials control operations in accordance with the employers emergency response plan. The defensive operations must be clearly defined in the ERP and application must be guided by appropriate policies. Defensive control measures include defensive fire attacks with extinguishing agents and water additives, control of product spill after leaving the container while avoiding direct contact and remote control of leaks.

Area: Product Control

Audience: All operations level responders who might be assigned to perform product control at an incident

Prerequisite: Core Operations; mission-specific competency in the use of PPE as required to support product control

Training: 8 hours in classroom and physical skills lab

Refresher: Competencies include:

- Identifying Control Options
- Performing Control Options
- Evaluating Progress
- Terminating the Incident

Describing the local procedures for the technical decontamination process
Annual refresher recommended to include retesting of product control skills and re-demonstrating control functions set out in the incident action plan.

Florida State Emergency Response Commission
Mission Specific Competencies— Product Control (OPS-PC)

OPS-PC 1— Planning the Response

OPS-PC—1.1 Identifying Control Options
NFPA 472 6.6.3.1

Given examples of hazardous materials/WMD incidents, the operations level responder assigned to perform product control shall identify control options at the operations level for each response objective.

OPS-PC—1.1.1 Identify the procedures, equipment, and safety precautions associated with operations level control techniques.
NFPA 472 6.6.3.1(2)

OPS-PC—1.2 Selecting Decontamination Procedures
NFPA 472 6.6.3.2

Select the appropriate personal protective equipment required to perform each of the appropriate operations level control techniques.

OPS-PC 2—Implementing the Planned Response

OPS-PC—2.1 Performing Control Options
NFPA 472 6.6.4.1

Given an incident action plan for a hazardous materials/WMD incident, within the capabilities and equipment provided by the AHJ, the operations level responder assigned to perform product control shall demonstrate the ability to perform each of the appropriate control functions set out in the plan and as prescribed by the AHJ.

OPS-PC—2.1.1 Using the type of special purpose or hazard suppressing foams or agents and foam equipment furnished by the AHJ, demonstrate the application of the foam(s) or agent(s) on a spill or fire involving hazardous materials/WMD.
NFPA 472 6.6.4.1(1)

OPS-PC—2.1.2 Identify the characteristics and applicability of the following Class B foams if supplied by the AHJ:
NFPA 472 6.6.4.1(2)

1. Aqueous film-forming foam (AFFF)
2. Alcohol-resistant concentrates
3. Fluoroprotein
4. High expansion foam

OPS-PC—2.1.3 Given the required tools and equipment, demonstrate how to perform the following control activities:
NFPA 472 6.6.4.1(3)

1. Absorption
2. Adsorption
3. Damming
4. Diking
5. Dilution
6. Diversion
7. Retention
8. Remove valve shut-off
9. Vapor dispersion
10. Vapor suppression

OPS-PC—2.1.4
NFPA 472 6.6.4.1(4)
Identify the location and describe the use of emergency remote shutoff devices on MC/DOT-306/406, MC/DOT-307/407, and MC-331 cargo tanks containing flammable liquids or gases.

OPS-PC—2.1.5
NFPA 472 6.6.4.1(5)
Describe the use of emergency remote shutoff devices at fixed facilities.

OPS-PC—2.2
NFPA 472 6.6.4.2
The operations level responder assigned to perform product control shall describe local procedures for going through the technical decontamination process.

Tab 3.5

Air Monitoring

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —AIR MONITORING/SAMPLING (OPS-AMS)

Introduction

Operations level responders assigned to perform air monitoring and sampling shall operate under the guidance of a hazardous materials technician, written standard operating procedures, or an allied professional. They shall be trained to meet all competencies at the awareness and operations levels, the mission-specific competencies for personal protective equipment, and the competencies in this section. Operations level responders assigned to perform air monitoring and sampling shall also receive additional training necessary to meet specific needs of the jurisdiction.

Area: Air Monitoring/Sampling

Audience: All operations level responders who might be assigned to perform air monitoring and sampling at an incident

Prerequisite: Core Operations; mission-specific competency in the use of PPE as required to support air monitoring and sampling

Training: 8–24 hours in classroom and physical skills lab

Refresher: Competencies include:

- Selecting detection or monitoring equipment suitable for solid, liquid, or gaseous hazardous materials/WMD
- Describing capabilities and limitations of local monitoring, field testing and maintenance procedures associated with each monitoring device
- Describing the local procedures for technical decontamination of themselves and their detection and monitoring devices

Annual refresher recommended to include retesting of air monitoring and sampling skills and re-demonstrating how to field test and operate each monitoring device, and how to interpret readings based on local procedures.

OPS-AMS 1— Planning the Response

OPS-AMS—1.1 NFPA 472 6.7.3.1	Given the air monitoring and sampling equipment provided by the AHJ, the operations level responder assigned to perform air monitoring and sampling shall select the detection/monitoring equipment suitable for detecting or monitoring for solid, liquid, or gaseous hazardous materials/WMD.
OPS-AMS—1.2 NFPA 472 6.7.3.2-3	Given detection/monitoring devices(s) provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall describe the operation, capabilities and limitations, local monitoring procedures, field testing, and maintenance procedures associated with each device.
OPS-AMS—1.3 NFPA 472 6.7.3.4	Selecting Personal Protective Equipment The operations level responder assigned to perform air monitoring and sampling shall select the personal protective equipment required to support air monitoring and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-AMS 2—Implementing the Planned Response

OPS-AMS—2.1 NFPA 472 6.7.4.1	Given a scenario involving hazardous materials/WMD and detection/ monitoring devices provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall demonstrate the field test and operation of each device and interpret the readings based on local procedures.
OPS-AMS—2.2 NFPA 472 6.6.4.1	Describe procedures for post-air monitoring and sampling decontamination.

Tab 3.6

Victim Rescue

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —VICTIM RESCUE/RECOVERY (OPS-VRR)

Introduction

Operations level responders assigned to perform victim rescue and recovery during hazardous materials/WMD incidents shall perform these tasks under the guidance of a hazardous materials technician, written standard operating procedures, or an allied professional. They shall be trained to meet all competencies at the awareness and operations levels, the mission-specific competencies for personal protective equipment, and the competencies in this section. Operations level responders assigned to perform victim rescue and recovery shall also receive additional training necessary to meet specific needs of the jurisdiction.

Area: Victim Rescue/Recovery

Audience: All operations level responders who might be assigned to perform victim rescue and recovery at an incident

Prerequisite: Core Operations; mission-specific competency in the use of PPE as required to support victim rescue and recovery

Training: 8 hours in classroom and physical skills lab

Refresher: Competencies include:

- Describing the safety procedures and tactical guidelines for line-of-sight, non-line-of-sight, ambulatory and non-ambulatory victims
- Discriminating between victim rescue and victim recovery operations
- Selecting and using specialized rescue equipment and procedures provided by the AHJ
- Describing local procedures for performing decontamination upon completing the victim rescue/removal mission.
- Annual refresher recommended to include retesting of victim rescue/recovery skills and re-demonstrating of the following skills:
- Determining the feasibility of conducting victim rescue and recovery operations at an incident involving a hazardous material/WMD

Selecting and using specialized rescue equipment and procedures provided by the AHJ. Annual refresher recommended to include retesting.

Florida State Emergency Response Commission
Mission Specific Competencies— Victim Rescue/Recovery (OPS-VRR)

OPS-VRR 1— Planning the Response

OPS-VRR—1.1 NFPA 472 6.8.3.1	Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to victim rescue/recovery shall determine the feasibility of conducting victim rescue/recovery operations at an incident involving a hazardous material/WMD.
OPS-VRR—1.2 NFPA 472 6.8.3.1(2)	Describe the safety procedures and tactical guidelines for line-of-sight, non-line-of-sight, ambulatory and non-ambulatory victims.
OPS-VRR—1.3 NFPA 472 6.8.3.1(2)(e)	Discriminate between victim rescue and victim recovery operations.
OPS-VRR—1.3.1 NFPA 472 6.8.3.1(3)	Determine if the options are within the capabilities of available personnel and personal protective equipment.
OPS-VRR—1.3.2 NFPA 472 6.8.3.1(4)	Describe the procedures for implementing victim rescue/recovery operations within the incident command system.

OPS- VRR 2—Implementing the Planned Response

OPS-VRR—2.1 NFPA 472 6.8.4.1(1)	Identify the different team positions and describe their main functions.
OPS-VRR—2.2 NFPA 472 6.8.4.1(2)	Select and use specialized rescue equipment and procedures provided by the AHJ to support victim rescue/recovery operations.
OPS-VRR—2.3 NFPA 472 6.8.4.1(3)	Demonstrate safe and effective methods for victim rescue/recovery.
OPS-VRR—2.4 NFPA 472 6.8.4.1(4)	Demonstrate the ability to triage victims.
OPS-VRR—2.5	Describe local procedures for performing decontamination upon completing the victim rescue/removal mission.

Tab 3.7

Evidence Preservation and Sampling

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —EVIDENCE PRESERVATION AND SAMPLING (OPS-PS)

Introduction

Operations level responders assigned to evidence preservation and sampling and assigned to perform forensic evidence preservation, take samples, and/or seize evidence during hazardous materials/WMD incidents involving potential violations of criminal statutes or governmental regulations shall be trained to meet all competencies at the awareness and operations levels, the mission-specific competencies for personal protective equipment, and the competencies in this section. They shall also receive additional training necessary to meet specific needs of the jurisdiction.

Area: Evidence Preservation and Sampling

Audience: All operations level responders who might be assigned to preserve evidence, take samples, and/or seize evidence at an incident involving potential criminal activity.

Prerequisite: Core Operations, mission-specific competency in the use of PPE as required to support evidence preservation and sampling

Training: 24 hours in classroom and physical skills lab

Refresher: Competencies include:

- Determining whether a hazardous materials/WMD incident involves criminal intent
- Identifying unique aspects of criminal hazardous materials/WMD incidents
- Identifying the law enforcement agency with investigative jurisdiction
- Describing the local procedures for the technical decontamination process.

Annual refresher recommended to include retesting of evidence preservation and sampling skills, and re-demonstrating appropriate evidence preservation and sampling techniques and documentation procedures.

OPS-PS 1— Analyzing the Incident

OPS-PS—1.1
NFPA 472 6.5.2.1

Determine If the Incident Is Potentially Criminal in Nature and Identify the Law Enforcement Agency Having Investigative Jurisdiction

Given examples of hazardous materials/WMD incidents involving potential criminal intent, the operations level responder assigned to evidence preservation and sampling shall describe the potential criminal violation and identify the law enforcement agency having investigative jurisdiction.

OPS-PS—1.1.1
NFPA 472 6.5.2.1(1)

Given examples of the following hazardous materials/WMD incidents, the operations level responder shall describe products potentially encountered in the incident associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS—1.1.2
NFPA 472 6.5.2.1(2)

Given examples of the following hazardous materials/WMD incidents, identify the agency(s) with investigative authority and the incident response considerations associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS 2—Planning the Response

OPS-PS—2.1
NFPA 472 6.5.3.1

Identify Unique Aspects of Criminal Hazardous Materials/WMD Incidents

The operations level responder assigned to evidence preservation and sampling shall be capable of identifying the unique aspects associated with illicit laboratories, hazardous materials/WMD incidents, and environmental crimes.

OPS-PS—2.1.1
NFPA 472 6.5.3.1(1)(a)-(e)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Secure, characterize, and preserve the scene
2. Document personnel and scene activities associated with incident
3. Determine whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks
4. Notify the agency with investigative authority
5. Notify the Explosive Ordnance Disposal (EOD) personnel

OPS-PS—2.1.2
NFPA 472 6.5.3.1(1)(f)-(g)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to identify:

1. Potential sample/evidence
2. The applicable sampling equipment

OPS-PS—2.1.3
NFPA 472 6.5.3.1(1)(h)-(o)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Procedures to protect samples and evidence from cross contamination
2. Documentation procedures
3. Evidentiary sampling techniques
4. Field screening protocols for sample/evidence collected
5. Evidence labeling and packaging procedures
6. Evidence decontamination procedures
7. Evidence packaging procedures for evidence transportation
8. Chain of custody procedures

OPS-PS—2.1.4
NFPA 472 6.5.3.1(2)(a)-(d)

Given an example of an illicit laboratory, the operations level responder assigned to evidence preservation and sampling shall be able to describe:

1. Hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Sampling options associated with liquid and solid sample/evidence collection
4. Field screening protocols for samples/evidence collected

OPS-PS—2.1.5
NFPA 472 6.5.3.1(3)(a)-(d)

Given an example of an environmental crime, the operations level responder assigned to evidence preservation and sampling shall be able to:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.6
NFPA 472 6.5.3.1(4)(a)-(d)

Given an example of a hazardous materials/WMD suspicious letter, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.7
NFPA 472 6.5.3.1(5)(a)-(d)

Given an example of a hazardous materials/WMD suspicious package, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.8
NFPA 472 6.5.3.1(6)

Given an example of a release/attack involving a hazardous material/WMD agent, the operations level responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.9
NFPA 472 6.5.3.1(7)

Given examples of different types of potential criminal hazardous materials/WMD incidents, the operations level responder shall identify and describe the application, use, and limitations of the various types field screening tools that can be utilized for screening the following:

1. Corrosivity
2. Flammability
3. Oxidation
4. Radioactivity
5. Volatile organic compounds (VOC)

OPS-PS—2.1.10
NFPA 472 6.5.3.1(8)

Describe the potential adverse impact of using destructive field screening techniques.

OPS-PS—2.1.11
NFPA 472 6.5.3.1(9))

Describe the procedures for maintaining the evidentiary integrity of any item removed from the crime scene.

OPS-PS—2.2
NFPA 472 6.5.3.2

Selecting Personal Protective Equipment

The operations level responder assigned to evidence preservation and sampling shall select the personal protective equipment required to support evidence preservation and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-PS 3—Implementing the Planned Response

OPS-PS—3.1 Implementing the Planned Response
NFPA 472 6.5.4.1

Given the incident action plan for a criminal incident involving hazardous materials/WMD, the operations level responder assigned to evidence preservation and sampling shall implement, or oversee the implementation of, the selected response actions safely and effectively:

OPS-PS—3.1.1 Secure, characterize, and preserve the scene.
NFPA 472 6.5.4.1(1)

OPS-PS—3.1.2 Document personnel and scene activities associated with incident.
NFPA 472 6.5.4.1(2)

OPS-PS—3.1.3 Describe whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks.
NFPA 472 6.5.4.1(3)

OPS-PS—3.1.4 Notify the agency with investigative authority.
NFPA 472 6.5.4.1(4)

OPS-PS—3.1.5 Notify the EOD personnel.
NFPA 472 6.5.4.1(5)

OPS-PS—3.1.6 Identify potential sample/evidence to be collected.
NFPA 472 6.5.4.1(6)

OPS-PS—3.1.7 Demonstrate the procedures to protect samples and evidence from cross contamination.
NFPA 472 6.5.4.1(7)

OPS-PS—3.1.8 Demonstrate the correct techniques to collect samples utilizing the equipment provided.
NFPA 472 6.5.4.1(8)

OPS-PS—3.1.9 Demonstrate the documentation procedures.
NFPA 472 6.5.4.1(9)

OPS-PS—3.1.10 Demonstrate the sampling protocols.
NFPA 472 6.5.4.1(10)

OPS-PS—3.1.11 Demonstrate field screening protocols for sample/evidence collected.
NFPA 472 6.5.4.1(11)

OPS-PS—3.1.12 Demonstrate evidence labeling and packaging procedures.
NFPA 472 6.5.4.1(12)

OPS-PS—3.1.13 Demonstrate evidence decontamination procedures.
NFPA 472 6.5.4.1(13)

OPS-PS—3.1.14 Demonstrate evidence packaging procedures for evidence transportation.
NFPA 472 6.5.4.1(14)

OPS-PS—3.2 The operations level responder assigned to evidence preservation and sampling shall describe local procedures for the technical decontamination process.
NFPA 472 6.3.6.1

Tab 3.8

Illicit Lab Incidents

Operations Level Training Guidelines

MISSION SPECIFIC COMPETENCIES —ILLICIT LAB INCIDENTS (OPS-IL)

Introduction

The AHJ may anticipate that many of the responders in the jurisdiction who have already received training in the core competencies for operations level responders will also need to be able to use personal protective equipment (PPE) beyond the level of PPE normally provided by the AHJ for their typical emergency response duties. All operations level responders who will be assigned to use such PPE shall be trained to the mission-specific competencies in this section, in order to ensure that the operations level responders are prepared to use such PPE safely and effectively. All operations level responders who have been so trained to use such PPE during a hazmat/WMD response shall then do so at the incident scene under the guidance of a hazardous materials technician, an appropriate allied professional, and/or under appropriate standard operating procedures

Operations level responders assigned to respond to illicit laboratory incidents shall be trained to meet all competencies at the awareness and operations levels, the mission-specific competencies for personal protective equipment, and the competencies in this section. They shall also receive additional training necessary to meet specific needs of the jurisdiction.

Area: Illicit Lab Incidents

Audience: All operations level responders who might be assigned to respond to incidents involving illicit laboratories.

Prerequisite: Core Operations; mission-specific competency in the use of PPE as required to support response to illicit laboratory incidents

Training: 8–16 hours in classroom and physical skills lab

Refresher: Competencies include:

- Determining if a hazardous materials/WMD incident is an illicit laboratory operation
- Identifying the possible response options to an illicit laboratory incident
- Identifying the law enforcement agency having investigative jurisdiction
- Describe safe and effective methods of securing the scene
- Demonstrate decontamination procedures for tactical law enforcement personnel (SWAT or K-9) securing an illicit laboratory
- Demonstrate methods of conducting joint hazardous materials/EOD operations in identifying safety hazards and implementing control procedures

Annual refresher recommended to include retesting of skills required for response to illicit laboratory incident, and re-demonstrating the following skills:

- Demonstrate appropriate decontamination procedures for tactical law enforcement personnel (SWAT or K-9)
- Demonstrate methods to identify potential safety hazards, potential manufacture of illicit drugs or WMD
- Demonstrate methods to conduct joint hazardous materials/EOD operations to identify safety hazards and implement control procedures

OPS-IL 1— Analyzing the Incident

OPS-IL—1.1
NFPA 472 6.9.2.1

Determine If a Hazardous Materials/WMD Incident Is an Illicit Laboratory Operation

Given examples of hazardous materials/WMD incidents involving illicit laboratory operations, the operations level responder assigned to respond to illicit laboratory incidents shall identify the potential drugs/WMD being manufactured.

OPS-IL—1.1.1
NFPA 472 6.9.2.1(1)

Given examples of illicit drug manufacturing methods, describe the operational considerations, hazards, and products involved in the illicit process.

OPS-IL—1.1.2
NFPA 472 6.9.2.1(2)

Given examples of illicit chemical WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.

OPS-IL—1.1.3
NFPA 472 6.9.2.1(3)

Given examples of illicit biological WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.

OPS-IL—1.1.4
NFPA 472 6.9.2.1(4)

Given examples of illicit laboratory operations, describe the potential booby-traps that have been encountered by response personnel.

OPS-IL—1.1.5
NFPA 472 6.9.2.1(5)

Given examples of illicit laboratory operations, describe the agencies that have investigative authority and operational responsibility to support the response.

OPS-IL 2—Planning the Response

OPS-IL—2.1
NFPA 472 6.9.3.1

Determining the Response Options

Given an analysis of hazardous materials/WMD incidents involving illicit laboratories, the operations level responder assigned to respond to illicit laboratory incidents shall identify possible response options.

OPS-IL—2.2
NFPA 472 6.9.3.2.1

Identifying Unique Aspects of Criminal Hazardous Materials/WMD Incidents

The operations level responder assigned to respond to illicit laboratory incidents shall identify the unique operational aspects associated with illicit drug manufacturing and illicit WMD manufacturing.

OPS-IL—2.2.1
NFPA 472 6.9.3.2.2

Given an incident involving illicit drug manufacturing or illicit WMD manufacturing, the operations level responder assigned to illicit laboratory incidents shall describe the following tasks:

1. Law enforcement securing and preserving the scene
2. Joint hazardous materials and EOD personnel site reconnaissance and hazard identification
3. Determining atmospheric hazards through air monitoring and detection
4. Mitigation of immediate hazards while preserving evidence
5. Coordinated crime scene operation with the law enforcement agency having investigative authority.
6. Documenting personnel and scene activities associated with incident

OPS-IL—2.3
NFPA 472 6.9.3.3

Identifying the Law Enforcement Agency Having Investigative Jurisdiction

The operations level responder assigned to respond to illicit laboratory incidents shall identify the law enforcement agency having investigative jurisdiction.

OPS-IL—2.3.1
NFPA 472 6.9.3.2(1)(a)-(c)

Given scenarios involving illicit drug manufacturing or illicit WMD, identify the law enforcement agency(s) with investigative authority for the following situations:

1. Illicit drug manufacturing
2. Illicit WMD manufacturing
3. Environmental crimes resulting from illicit laboratory operations

OPS-IL—2.4
NFPA 472 6.9.3.4.1

Identify Unique Tasks and Operations at Sites Involving Illicit Laboratories

The operations level responder assigned to respond to illicit laboratory incidents shall identify and describe the unique tasks and operations encountered at illicit laboratory scenes.

OPS-IL—2.4.1
NFPA 472 6.9.3.4.2(1)-(5)

Given scenarios involving illicit drug manufacturing or illicit WMD manufacturing describe the following:

1. Hazards, safety procedures and tactical guidelines for this type emergency
2. Factors to be evaluated in selecting the appropriate personal protective equipment for each type of tactical operation
3. Factors to be considered in selecting appropriate decontamination procedures
4. Factors to be evaluated in selection detection devices
5. Factors to consider in developing a remediation plan

OPS-IL—2.5
NFPA 472 6.9.3.5

Selecting Personal Protective Equipment

The operations level responder assigned to respond to illicit laboratory incidents shall select the personal protective equipment required to respond to illicit laboratory incidents based upon local procedures.

OPS-IL 3—Implementing the Planned Response

OPS-IL—3.1
NFPA 472 6.9.4.1

Given scenarios involving an illicit drug/WMD laboratory operation involving hazardous materials/WMD, the operations level responder assigned to respond to illicit laboratory incidents shall implement or oversee the implementation of the selected response options safely and effectively.

OPS-IL—3.1.1
NFPA 472 6.9.4.1.1(1)

Describe safe and effective methods for law enforcement to secure the scene.

OPS-IL—3.1.2
NFPA 472 6.9.4.1.1(2)

Demonstrate decontamination procedures for tactical law enforcement personnel (SWAT/K-9) securing an illicit laboratory.

OPS-IL—3.1.3
NFPA 472 6.9.4.1.1(3)

Demonstrate methods to identify and/or avoid potential unique safety hazards found at illicit laboratories such as booby-traps and releases of hazardous materials.

OPS-IL—3.1.4
NFPA 472 6.9.4.1.1(4)

Demonstrate methods to conduct joint hazardous materials/EOD operations to identify safety hazards and implement control procedures

OPS-IL—3.2
NFPA 472 6.9.4.1.2

Given a simulated illicit drug/WMD laboratory entry operation, the operations level responders assigned to respond to illicit laboratory incidents shall demonstrate methods of identifying the following:

1. The potential manufacture of illicit drugs during reconnaissance operations
2. The potential manufacture of illicit WMD materials during reconnaissance operations
3. Potential environmental crimes associated with the manufacture of illicit drugs/WMD materials during reconnaissance operations

OPS-IL—3.3
NFPA 472 6.9.4.1.3

Given a simulated illicit drug/WMD laboratory incident, the operations level responder assigned to respond to illicit laboratory incidents shall describe joint agency crime scene operations, including support to forensic crime scene processing teams.

OPS-IL—3.4
NFPA 472 6.9.4.1.4

Given a simulated illicit drug/WMD laboratory incident, the operations level responder assigned to respond to illicit laboratory incidents shall describe the policy and procedures for post–crime scene processing and site remediation operations.

OPS-IL—3.5
NFPA 472 6.9.4.1.5

The operations level responder assigned to respond to illicit laboratory incidents shall be able to describe local procedures for performing decontamination upon completing the illicit laboratory mission.

Tab 3.9

Basic Life Support

Operations Level Training Guidelines

EMERGENCY MEDICAL COMPETENCIES – BASIC LIFE SUPPORT (BLS)

Introduction

Emergency medical service (EMS) personnel at the EMS/HM Basic Life Support (BLS) responder level, in addition to their BLS or ALS certification, shall be trained to meet the requirements of the emergency responder at the Awareness level, as defined in OSHA 1910.120(q)(6)(i) and/or as defined in NFPA 472, Chapter 4: Competencies for Awareness Level Personnel, and all the competencies recommended in this section. In addition, EMS/HM BLS responders shall meet the training requirements of local occupational health and safety regulatory agencies or EPA, as appropriate for their jurisdiction.

In addition to being trained to the first responder awareness level, emergency medical service personnel who respond to hazardous materials incidents should be trained and receive regular continuing education to maintain competency in three areas: emergency medical technology, hazardous materials, and specialized topics such as hazardous materials toxicology, as approved by the authority having jurisdiction. The training program should be a comprehensive, competency-based presentation of the required subject material with applicable hands-on sessions that demonstrate the newly acquired skills.

EMS/HM BLS responders are persons who, in the course of their normal duties, may be called on to perform patient care activities in the cold zone at a hazardous materials incident. EMS/HM BLS responders shall provide pre-hospital care only to those individuals who no longer pose a significant risk of secondary contamination, such as decontaminated patients in the cold zone.

Audience: Large training audience. All paramedics and emergency medical technicians who respond to emergencies, including all transportation accidents that may involve hazmat.

Prerequisite:

- Awareness training
- BLS or ALS certification

Training:

- Classroom, physical skills lab, and simulator/field instruction, with emphasis on decision making and treatment.
- Assessing incident scene hazards and risks of patient secondary contamination.
- Incident scene response planning, including determining personal protective equipment needs and defining roles and responsibilities of EMS BLS responder.
- Ability to perform EMS/HM BLS patient preparation, care, preparation for transport, and patient transport as appropriate.
- Ability to perform medical support of HM incident response personnel.
- Ability to perform post-incident EMS reporting, documentation, and follow-up

Refresher:

- Technical updates
- Changes in response protocols and incident command system SOP's
- Renewal and retesting of incident scene decision making and warm zone decontamination and treatment skills.

BLS 1—Analyzing the Hazardous Materials Incident

BLS—1.1
NFPA 4.2.1

Surveying Hazardous Materials/WMD Incidents

Given scenarios of hazardous materials/WMD incidents, the BLS level responder shall assess the nature and severity of the incident as it relates to anticipated or actual EMS responsibilities at the scene.

BLS—1.1.1
NFPA 4.2.1.1

Given examples of the following types of containers, the BLS level responder shall identify the potential mechanisms of injury/harm and possible treatment modalities:

1. Pressure
2. Nonpressure
3. Cryogenic
4. Radioactive

BLS—1.1.2
NFPA 4.2.1.2

Given examples of the nine U.S. Department of Transportation (DOT) hazard classes, the BLS level responder shall identify possible treatment modalities associated with each hazard class.

BLS—1.1.3
NFPA 4.2.1.3

Given examples of various hazardous materials/WMD incidents at fixed facilities, the BLS level responder shall identify the following available health-related resource personnel:

1. Environmental health and safety representatives
2. Radiation safety officers
3. Occupational physicians and nurses
4. Site emergency response teams
5. Product or container specialists

BLS—1.1.4
NFPA 4.2.1.4

Given various scenarios of hazardous materials/WMD incidents, the BLS level responder, working within an incident command system, shall evaluate the off-site consequences of the release based on the physical and chemical nature of the released substance and the prevailing environmental factors, to determine the need to evacuate or to shelter in place affected persons.

BLS—1.1.5
NFPA 4.2.1.5

Given examples of the following biological threat agents, the ALS level responder shall define the various types of biological threat agents, including the signs and symptoms of exposure, mechanism of toxicity, incubation periods, possible disease patterns, and likely means of dissemination:

1. Variola virus (smallpox)
2. Botulinum toxin
3. E. coli O157:H7
4. Ricin toxin
5. B. anthracis (anthrax)
6. Venezuelan equine encephalitis virus
7. Rickettsia
8. Yersinia pestis (plague)
9. Tularemia
10. Viral hemorrhagic fever
11. Other CDC Category A–listed organism or threat

BLS—1.1.6
NFPA 4.2.1.6

Given examples of various types of hazardous materials/WMD incidents involving toxic industrial chemicals (TICs) and toxic industrial materials (TIMs) e.g., corrosives, reproductive hazards, carcinogens, nerve agents, flammable and/or explosive hazards, blister agents, blood agents, choking agents, and irritants), the BLS level responder shall determine the general health risks to patients exposed to those substances in the case of any release with the following:

1. A visible cloud
2. Liquid pooling
3. Solid dispersion

BLS—1.2
NFPA 4.2.1.7

Determining If a Hazardous Materials/WMD Incident Is an Illicit Laboratory Operation

Given examples of hazardous materials/WMD incidents involving illicit laboratory operations, BLS level responders assigned to respond to illicit laboratory incidents shall identify the potential drugs/WMD being manufactured.

BLS—1.2.1
NFPA 4.2.1.7(1)

Given examples of illicit drug manufacturing methods, describe the operational considerations, hazards, and products involved in the illicit process.

BLS—1.2.2
NFPA 4.2.1.7(2)

Given examples of illicit chemical WMD methods, describe the operational considerations, hazards and products involved in the illicit process.

BLS—1.2.3
NFPA 4.2.1.7(3)

Given examples of illicit biological WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.

BLS—1.2.4
NFPA 4.2.1.7(4)

Given examples of illicit laboratory operations, describe the potential booby traps that have been encountered by response personnel

BLS—1.2.5
NFPA 4.2.1.7(5)

Given examples of illicit laboratory operations, describe the agencies that have investigative authority and operational responsibility to support the response.

BLS—1.3
NFPA 4.2.1.8

Determining Potential Patient Outcomes of Exposure to Radiation

Given examples of a hazardous materials/WMD incident involving radioactive materials, including radiological dispersion devices, the BLS level responder shall determine the probable health risks potential patient outcomes.

BLS—1.3.1
NFPA 4.2.1.8(1)

Determine the most likely exposure pathways for a given radiation exposure, including inhalation, ingestion, and direct skin exposure.

BLS—1.3.2
NFPA 4.2.1.8(2)

Identify the difference between radiation exposure and radioactive contamination and the health concerns associated with each.

BLS—1.3.3
NFPA 4.2.1.9

Given three examples of pesticide labels and labeling, the BLS level responder shall use the following information to determine the associated health risks:

1. Hazard statement
2. Precautionary statement
3. Signal word
4. Pesticide name

BLS—1.4
NFPA 4.2.2

Collecting and Interpreting Hazard and Response Information

The BLS level responder shall obtain information from the following sources to determine the nature of the medical problem and potential health effects:

1. Hazardous materials databases
2. Clinical monitoring
3. Reference materials
4. Technical information centers (e.g., CHEMTREC, CANUTEC, and SETIQ) and local state and federal authorities.
5. Technical information specialists
6. Regional poison control centers

BLS—1.5
NFPA 4.2.3

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the BLS level responder shall identify how to establish and enforce scene control, including control zones and emergency decontamination, and communications between responders and to the public.

BLS—1.5.1
NFPA 4.2.3(1)

Identify the procedures for establishing scene control through control zones.

BLS—1.5.2
NFPA 4.2.3(2)

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

BLS—1.5.3
NFPA 4.2.3(3)

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering-in-place protection

BLS—1.5.4
NFPA 4.2.3(4)

Demonstrate the ability to perform emergency decontamination.

BLS—1.5.5
NFPA 4.2.3(5)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities.

BLS—1.5.6
NFPA 4.2.3(2)

Identify the procedures for ensuring coordinated communication between responders and to the public.

BLS 2—Planning the Response

BLS—2.1
NFPA 4.3.1.1(1) – (3)

Identifying High Risk Areas for Potential Exposures

The BLS level responder, given an events calendar and pre-incident plans, which can include the local emergency planning committee plan, as well as the agency's emergency response plan and standard operating procedures (SOPs), shall identify the venues for mass gatherings, industrial facilities, potential targets for terrorism, and any other location where an accidental or intentional release of a harmful substance can pose an unreasonable health risk to any person in the local geographical area as determined by the AHJ and shall identify the following:

1. Locations where hazardous materials/WMD are used, stored, or transported
2. Areas and locations that present a potential for a high loss of life or rate of injury in the event of an accidental or intentional release of hazardous materials/WMD
3. External factors that may complicate a hazardous materials/WMD incident

BLS—2.2
NFPA 4.3.2.1(1)-(10)

Determining the Capabilities of the Local Hospital Network

The BLS level responder shall identify the following methods and vehicles available to transport hazardous materials patients and shall determine the location and potential routes of travel to the medically appropriate local and regional hospitals, based on the patients' needs:

1. Adult trauma centers
2. Pediatric trauma centers
3. Adult burn centers
4. Pediatric burn centers
5. Hyperbaric chambers
6. Established field hospitals
7. Dialysis centers
8. Supportive care facilities
9. Forward deployable assets
10. Other specialty hospitals or medical centers

BLS—2.2.1
NFPA 4.3.2.2

Given a list of receiving hospitals in the region, the BLS level responder shall describe the location, availability, and capability of hospital-based decontamination facilities.

BLS—2.2.2
NFPA 4.3.2.3

The BLS level responder shall describe the BLS protocols and SOPs at hazardous materials WMD incidents as developed by the AHJ and the prescribed role of medical control and poison control centers, as follows:

1. During mass casualty incidents
2. Where exposures have occurred
3. In the event of disrupted radio communications

BLS—2.2.3
NFPA 4.3.2.4

The BLS level responder shall identify the formal and informal mutual aid resource (hospital- and non-hospital-based) for the field management of multi-casualty incidents, as follows:

1. Mass-casualty trailers with medical supplies
2. Mass-decedent capabilities
3. Regional decontamination units
4. Replenishment of medical supplies during long-term incidents
5. Rehabilitation units for the EMS responders
6. Replacement transport units for vehicles lost to mechanical trouble, collision, theft, and contamination

BLS—2.2.4
NFPA 4.3.2.5

The BLS level responder shall identify the special hazards associated with inbound and outbound air transportation of patients exposed to hazardous materials/WMD.

BLS—2.3
NFPA 4.3.3.1(1)-(2)

Identifying Incident Communications

Given an incident communications plan, the BLS level responder shall identify the following:

1. Medical components of the communications plan
2. Ability to communicate with other responders, transport units, and receiving facilities

BLS—2.3.1
NFPA 4.3.3.2

Given examples of various patient exposure scenarios, the BLS level responder shall describe the following information to be transmitted to the medical or poison control center or the receiving hospital prior to arrival:

1. The name of the substance(s) involved
2. Physical and chemical properties of the substance(s) involved
3. Number of victims being transported
4. Age and sex of transported patient
5. Patient condition and chief complaint
6. Medial history
7. Circumstances and history of the exposure, such as duration of exposure and primary route of exposure
8. Vital signs, initial and current
9. Symptoms described by the patient, initial and current
10. Presence of associated injuries, such as burns and trauma
11. Decontamination status
12. Treatment rendered or in progress
13. Patient response to treatment(s)
14. Estimated time of arrival

BLS—2.4
NFPA 4.3.4.1

Identifying the Role of the BLS Level Responder

Given scenarios involving hazardous materials/WMD, the BLS level responder shall identify his or her role during hazardous materials/WMD incidents as specified in the emergency response plan and SOPs developed by the AHJ.

BLS—2.4.1
NFPA 4.3.4.1(1)
Describe the purpose, benefits, and elements of the incident command system as it relates to the BLS level responder.

BLS—2.4.2
NFPA 4.3.4.1(2)
Describe the typical incident command structure, for the emergency medical component of a hazardous materials/WMD incident as specified in the emergency response plan and SOPs, as developed by the AHJ.

BLS—2.4.3
NFPA 4.3.4.1(3)
Demonstrate the ability of the BLS level responder to function within the incident command system.

BLS—2.4.4
NFPA 4.3.4.1(4)
Demonstrate the ability to implement an incident command system for a hazardous materials/WMD incident where an ICS does not currently exist.

BLS—2.4.5
NFPA 4.3.4.1(5)
Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

BLS—2.4.6
NFPA 4.3.4.2
The hazardous materials/WMD BLS responder shall describe his or her role within the hazardous materials response plan developed by the AHJ or identified in the local emergency response plan, as follows:

1. Determine the toxic effect of hazardous materials/WMD
2. Estimate the number of patients
3. Recognize and assess the presence and severity of symptoms
4. Take and record vital signs
5. Determine resource maximization and assessment
6. Assess the impact on the health care system
7. Perform appropriate patient monitoring
8. Communicate pertinent information

BLS 3—Implementing the Planned Response

BLS—3.1
NFPA 4.4.1

Determining the Nature of the Incident/Providing Medical Care

The BLS level responder shall demonstrate the ability to identify the mechanisms of injury or harm and the clinical implications and provide emergency medical care to those patients exposed to hazardous materials/WMD agent by completing the following tasks:

BLS—3.1.1
NFPA 4.4.1(1)
Determine the physical state of the released substance, in addition to the environmental influences surrounding the release, as follows:

1. Solid
2. Liquid
3. Gas
4. Vapor
5. Dust
6. Mist
7. Aerosol

BLS—3.1.2
NFPA 4.4.1(2)

Identify potential routes of exposure and correlate those routes of exposure to the physical state of the released substance, to determine the origin of the illness or injury, as follows:

1. Inhalation
2. Absorption
3. Ingestion
4. Injection

BLS—3.1.3
NFPA 4.4.1(3)

Describe the potential routes of entry into the body, the common signs and symptoms of exposure, and the BLS treatment options approved by the HAJ for exposure (s) to the following classification of substances:

1. Corrosives
2. Pesticides
3. Chemical asphyxiants
4. Simple asphyxiants
5. Organic solvents
6. Nerve agents
7. Vesicants and blister agents
8. Blood agents
9. Choking agents
10. Irritants
11. Biological agents and toxins
12. Incapacitating agents
13. Radiological materials
14. Nitrogen compounds
15. Opiate compounds
16. Flourine compounds
17. Phenolic compounds

BLS—3.1.4
NFPA 4.4.1(4)

Describe the basic toxicological principles relative to assessment and treatment of persons exposed to hazardous materials, including the following:

1. Acute and delayed effects
2. Local and systemic effects
3. Dose-response relationship

BLS—3.1.5
NFPA 4.4.1(5)

Given examples of various hazardous materials/WMD, define the basic toxicological terms as applied to patient care:

1. Threshold limit value-time-weighted average (TLV-TWA)
2. Permissible exposure limit (PEL)
3. Threshold limit value – short-term exposure limit (TLV-STEL)
4. Immediately dangerous to life and health (IDLH)
5. Threshold limit value – ceiling (TLV-C)
6. Parts per million/ parts per billion/ parts per trillion (ppm/ ppb/ ppt)

BLS—3.2
NFPA 4.4.1(6)

Evaluating Progress and Effectiveness of Medical Care Providers

Given examples of hazardous materials/WMD incidents with exposed patients, evaluate the progress and effectiveness of the medical care provided at a hazardous materials/WMD incident to ensure that the overall incident response objectives, along with patient care goals.

BLS—3.2.1
NFPA 4.4.1(6)(a)
Locate and track all exposed patients at a hazardous materials/WMD incident, from triage and treatment to transport to a medically appropriate facility.

BLS—3.2.2
NFPA 4.4.1(6)(b)
Review the incident objectives at periodic intervals to ensure that patient care is being carried out within the overall incident action plan.

BLS—3.2.3
NFPA 4.4.1(6)(c)
Ensure that the required incident command system forms are completed, along with the patient care forms, during the course of the incident.

BLS—3.2.4
NFPA 4.4.1(6)(d)
Evaluate the need for trained and qualified EMS personnel, medical equipment, transport units, and other supplies based on the scope and duration of the incident.

BLS—3.3
NFPA 4.4.2(1)

Determine if Decontamination Was Performed

Given the emergency response plan and SOPs developed by the AHJ, the BLS level responder shall determine if patient decontamination activities were performed prior to accepting responsibility and transferring care of exposed patients.

BLS—3.4
NFPA 4.4.2(2)

Determine the Need and Location for Patient Decontamination

Given the emergency response plan and SOPs developed by the AHJ, the BLS level responder shall determine the need and location for patient decontamination, including mass casualty decontamination, in the event none has been performed prior to arrival of EMS personnel.

BLS—3.4.1
NFPA 4.4.2(2)(a)
Given the emergency response plan and SOPs developed by the AHJ, identify sources of information for determining the appropriate decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

BLS—3.4.2
NFPA 4.4.2(2)(b)
Given the emergency response plan and SOPs developed by the AHJ, identify (within the plan) the supplies and equipment required to set up and implement emergency decontamination operations and mass decontamination operations for ambulatory and non-ambulatory patients.

BLS—3.4.3
NFPA 4.4.2(2)(c)
Identify procedures, equipment, and safety precautions for the treatment and handling of emergency service animals brought to the decontamination corridor at hazardous materials/WMD incidents.

BLS—3.4.4
NFPA 4.4.2(2)(d)
Identify procedures, equipment, and safety precautions for communicating with critical, urgent, and potentially exposed patients and identify population prioritization as it relates to decontamination purposes.

BLS—3.4.5
NFPA 4.4.2(2)(e)
Identify procedures, equipment, and safety precautions for preventing cross contamination.

BLS—3.5 Determining the Ongoing Need for Medical Supplies
NFPA 4.4.3.1

Given examples of single-patient and multi-casualty hazardous materials/WMD incidents, the BLS level responder shall determine the following:

1. If the available medical equipment will meet or exceed patient care needs throughout the duration of the incident.
2. If the available transport units will meet or exceed patient care needs throughout the duration of the incident.

BLS—3.6 Preserving Evidence
NFPA 4.4.4

Given examples of hazardous materials/WMD incidents where criminal acts are suspected, the BLS level responder shall make every attempt to preserve evidence during the course of delivering patient care.

BLS—3.6.1
NFPA 4.4.4(1)
Determine if the incident is potentially criminal in nature and cooperate with the law enforcement agency having investigative jurisdiction.

BLS—3.6.2
NFPA 4.4.4(2)
Identify the unique aspects of criminal hazardous materials/WMD incidents, including crime scene preservation and evidence preservation, to avoid the destruction of potential evidence on medical patients during the decontamination process.

BLS—3.6.3
NFPA 4.4.4(3)
Identify within the emergency response plan and SOPs developed by the AHJ procedures, equipment, and safety precautions for securing evidence during decontamination operations at hazardous materials/WMD incidents.

BLS—3.6.4
NFPA 4.4.4(4)
Ensure that any information regarding suspects, sequence of events during a potentially criminal act, and observations made based on patient presentation or during patient assessment are documented and communicated to the law enforcement agency having investigative jurisdiction.

BLS—3.7 Medical Support at Hazardous Materials/WMD Incidents
NFPA 4.4.5

Given examples of hazardous materials/WMD incident, the BLS level responder shall describe the procedures of the AHJ for performing medical monitoring and support of hazardous materials incident response personnel.

BLS—3.7.1
NFPA 4.4.5(1)(a)
Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall demonstrate the ability to set up and operate a medical monitoring station.

BLS—3.7.2
NFPA 4.4.5(1)(b)
Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall demonstrate the ability to recognize the signs and symptoms of heat stress, cold stress, heat exhaustion, and heat stroke.

BLS—3.7.3
NFPA 4.4.5(1)(c)

Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall determine the BLS needs for responders exhibiting the effects of heat stress, cold stress, and heat exhaustion.

BLS—3.7.4
NFPA 4.4.5(1)(d)

Given examples of various hazardous materials/WMD incidents requiring the use chemical protective ensembles, the BLS level responder shall describe the medical significance of heat stroke and the importance of rapid transport to an appropriate medical receiving facility.

BLS—3.7.5
NFPA 4.4.5(1)(e)

Given a simulated hazardous materials incident, demonstrate the appropriate documentation of medical monitoring activities.

BLS—3.7.6
NFPA 4.4.5(2)

The BLS level responder responsible for pre-entry medical monitoring shall obtain hazard and toxicity information on the hazardous materials/WMD from the designated hazardous materials technical reference resource or other sources of information at the scene.

BLS—3.7.7
NFPA 4.4.5(3)

The following information shall be conveyed to the entry team, incident safety officer, hazardous materials officer, other EMS personnel at the scene, and any other responders responsible for the health and well-being of those personnel operating at the scene:

1. Chemical name
2. Hazard class
3. Multiple hazards and toxicity information
4. Applicable decontamination methods and procedures
5. Potential for cross contamination
6. Procedure for transfer of patients from the constraints of the incident to the EMS
7. Prehospital management of medical emergencies and exposures.

BLS—3.7.8
NFPA 4.4.5(4)

The BLS level responder shall evaluate the pre-entry health status of responders to hazardous materials/WMD incidents prior to their donning personal protective equipment (PPE) by performing the following tasks (consideration shall be given to excluding responders if they do not meet criteria specified by the AHJ prior to working in chemical protective clothing):

1. A full set of vital signs
2. Body weight measurements to address hydration considerations
3. General health observations
4. Core body temperature: hypothermia/hyperthermia
5. Blood pressure: hypotension/hypertension
6. Pulse rate: bradycardia/tachycardia as defined
7. Respiratory rate: bradypnea/tachypnea

BLS—3.7.9
NFPA 4.4.5(5)

The BLS level responder shall determine how the following factors influence heat stress on hazardous materials/WMD response personnel:

1. Baseline level of hydration
2. Underlying physical fitness
3. Environmental factors
4. Activity levels during the entry
5. Level of PPE worn
6. Duration of entry
7. Cold stress

BLS—3.7.10
NFPA 4.4.5(6)

The BLS level responder shall medically evaluate all team members after decontamination and PPE removal, using the following criteria:

1. Pulse rate determined within the first minute
2. Pulse rate determined 3 minutes after initial evaluation
3. Temperature
4. Body weight
5. Blood pressure
6. Respiratory rate

BLS—3.7.11
NFPA 4.4.5(7)

The BLS level responder shall recommend that any hazardous materials team member be prohibited from redonning chemical protective clothing if any of the following criteria is exhibited:

1. Signs or symptoms of heat stress or heat exhaustion
2. Pulse rate: tachycardia/bradycardia
3. Core body temperature: hyperthermia/hypothermia
4. Recovery heart rate with a trend toward normal rate and rhythm
5. Blood pressure: hypertension/hypotension
6. Weight loss of >5 percent

Any team member exhibiting the signs or symptoms of extreme heat exhaustion or heat stroke shall be transported to the medical facility.

BLS—3.7.12
NFPA 4.4.5(8)

The BLS level responder responsible for medical monitoring and support shall immediately notify the persons designated by the incident action plan that a team member required significant medical treatment or transport. Transportation shall be arranged through the designee identified in the emergency response plan.

BLS—3.8 Reporting and Documenting the Incident

NFPA 4.5

Given a scenario involving a hazardous materials/WMD incident, the responder assigned to use PPE shall complete the reporting and documentation requirements consistent with the emergency response plan or SOPs and identify the reports and supporting documentation required by the emergency response plan or SOPs.

BLS—3.9 Compiling Incident Reports

NFPA 4.6

The BLS responder shall describe his or her role in compiling incident reports that meet federal, state, local, and organizational requirements.

BLS—3.9.1
NFPA 4.4.

List the information to be gathered regarding the exposure of all patient(s) and describe the reporting procedures, including the following:

1. Detailed information on the substances released
2. Pertinent information on each patient treated and transported
3. Routes, extent, and duration of exposures
4. Actions taken to limit exposure
5. Decontamination activities

BLS—3.9.2
NFPA 4.4.

At the conclusion of the hazardous materials/WMD incident, identify the methods used by the AHJ to evaluate transport units that might have been contaminated and the process and locations available to decontaminate those units.

Tab 3.10

Advanced Life Support

Operations Level Training Guidelines

EMERGENCY MEDICAL COMPETENCIES – ADVANCED LIFE SUPPORT (ALS)

Introduction

Emergency Medical Service/Hazardous Materials/WMD Advanced Life Support (EMS/HM ALS) Responders shall be certified at the EMT-B level or higher, shall meet all the competencies for EMS/HM BLS Responder as defined in NFPA 473 and in these guidelines, and shall meet all the competencies recommended in NFPA 473 and in this section for EMS/HM ALS Responder. In addition, EMS/HM ALS responders shall meet the training requirements of local occupational health and safety agencies, OSHA, and EPA, and emergency medical technician A certification standards, as appropriate for or required by their jurisdiction.

Decontamination of patients or rescue personnel is a critical task. These individuals have come in contact with a foreign agent that will cause either short- or long-term medical problems. Whether the ramifications of contact with the foreign agent are long-term, chronic or acute, the need to have medically trained personnel, emergency medical technicians, and paramedics conducting decontamination procedures is imperative and self-explanatory. Using certified emergency medical technicians and paramedics trained in hazardous materials to conduct the decontamination operation will result in a higher level of care and the ability to provide effective and efficient patient assessment and prehospital care that will benefit all who are involved with these types of operations.

EMS/HM ALS Responders are expected to be able to analyze and determine the magnitude of problem areas at hazardous materials incidents and at criminal and terrorist incidents involving hazardous materials or related weapons of mass destruction. They also are expected to plan a response and provide the appropriate level of emergency medical care and decontamination to persons involved in such incidents, provide medical support to hazardous materials response personnel, and implement and terminate the response.

EMS/HM ALS Responders are persons who, in the course of their normal activities, may be called on to perform patient care and decontamination activities in the warm zone (the area where personnel and equipment decontamination and hot zone support take place) at hazardous materials incidents or at criminal and terrorist incidents involving hazardous materials or related weapons of mass destruction. EMS/HM ALS Responders are called on to provide care to individuals who still pose a significant risk of secondary contamination. In addition, personnel at this level shall be able to coordinate EMS activities at a hazardous materials incident and provide medical support to and decontamination of hazardous materials response personnel.

Audience: Moderate size audience. Paramedics and emergency medical technicians who may be called upon to conduct decontamination and patient care in the warm and hot zone of a hazmat incident or a hazmat-related criminal or terrorist incident scene.

Florida State Emergency Response Commission
Emergency Medical Competencies—Advance Life Support (ALS)

Prerequisite:

- Awareness training
- EMS/HM BLS responder training
- EMT-B certification

Training: Classroom, physical skills lab, and simulator/field instruction, with emphasis on decision making and treatment skills

Competencies:

- Assessing incident scene hazards and risks of patient secondary contamination
- Incident scene response planning, including determining personal protective equipment needs and defining roles and responsibilities of the EMS/HM ALS responder
- Ability to perform EMS/HM ALS patient decontamination and treatment in the warm zone at an incident scene
- Ability to perform post-incident EMS reporting, documentation, and follow-up

Refresher:

- Technical updates
- Changes in response protocols and incident command system SOP's
- Renewal and retesting of incident scene decision making and warm zone decontamination and treatment skills

ALS 1—Analyzing the Incident

ALS—1.1
NFPA 473 5.2.1

Surveying the Hazardous Materials/WMD Incidents

Given scenarios of hazardous materials/WMD incidents, the ALS level responder shall assess the nature and severity of the incident as it relates to anticipated or actual EMS responsibilities at the scene.

ALS—1.1.1
NFPA 473 5.2.1.1

Given examples of the following marked transport vehicles (and their corresponding shipping papers or identification systems) that can be involved in hazardous materials/WMD incidents, the ALS level responder shall evaluate the general health risks based on the physical and chemical properties of the anticipated contents:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment, including tank containers
3. Rail transport vehicles, including tank cars

ALS—1.1.2
NFPA 473 5.2.1.2(1)

Given examples of various hazardous materials/WMD incidents at fixed facilities, the ALS level responder shall demonstrate the ability to identify a variety of containers and their markings, including bulk and nonbulk packages and containers, drums, underground and aboveground storage tanks, specialized storage tanks, or any other specialized containers found in the AHJ's geographic area, and evaluate the general health risks based on the physical and chemical properties of the anticipated contents.

ALS—1.1.3
NFPA 473 5.2.1.2(2)

Given examples of various hazardous materials/WMD incidents at fixed facilities, the ALS level responder shall demonstrate the ability to identify the following job functions of health-related resource personnel available at fixed facility hazardous materials/WMD incidents:

1. Environmental heath and safety representatives
2. Radiation safety officers
3. Occupational physicians and nurses
4. Site emergency response teams
5. Specialized experts

ALS—1.1.4
NFPA 473 5.2.1.3

The ALS level responder shall identify two ways to obtain a material safety data sheet (MSDS) at a hazardous materials/WMD incident and shall demonstrate the ability to identify the following health-related information:

1. Proper chemical name or synonyms
2. Physical and chemical properties
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Emergency medical procedures or recommendations
8. Responsible party contact

ALS—1.1.5
NFPA 473 5.2.1.4

Given scenarios at various fixed facilities, transportation incidents, pipeline release scenarios, maritime incidents, or any other unexpected hazardous materials/WMD incident, the ALS level responder, working within an incident command system must evaluate the off-site consequences of the release, based on the physical and chemical nature of the released substance, and the prevailing environmental factors to determine the need to evacuate or shelter in place affected persons.

ALS—1.1.6
N NFPA 473 5.2.1.5

Given examples of the following biological threat agents, the ALS level responder shall define the various types of biological threat agents, including the signs and symptoms of exposure, mechanism of toxicity, incubation periods, possible disease patterns, and likely means of dissemination:

1. Variola virus (smallpox)
2. Botulinum toxin
3. E. coli O157:H7
4. Ricin toxin
5. B. anthracis (anthrax)
6. Venezuelan equine encephalitis virus
7. Rickettsia
8. Yersinia pestis (plague)
9. Tularemia
10. Viral hemorrhagic fever
11. Other CDC Category A–listed organism or threat

ALS—1.1.7
NFPA 473 5.2.1.6*

Given examples of various types of hazardous materials/WMD incidents involving toxic industrial chemicals (TICs), toxic industrial materials (TIMs), blister agents, blood agents, nerve agents, choking agents and irritants, the ALS level responder shall determine the general health risks to patients exposed to those substances and identify those patients who may be candidates for antidotes.

ALS—1.1.8
NFPA 473 5.2.1.7*

Given examples of hazardous materials/WMD found at illicit laboratories, the ALS level responder shall identify general health hazards associated with the chemical substances that are expected to be encountered.

ALS—1.1.9
NFPA 473 5.2.1.8

Given examples of a hazardous materials/WMD incident involving radioactive materials, including radiological dispersion devices, the ALS level responder shall determine the probable health risks and potential patient outcomes.

ALS—1.1.9.1
NFPA 473 5.2.1.8(1)

Determine the types of radiation (alpha, beta, gamma, and neutron) and potential health effects of each.

ALS—1.1.9.2
NFPA 473 5.2.1.8(2)

Determine the most likely exposure pathways for a given radiation exposure, including inhalation, ingestion, and direct skin exposure.

ALS—1.1.9.3
NFPA 473 5.2.1.8(3)

Describe how the potential for cross contamination differs for electromagnetic waves compared to radioactive solids, liquids, or vapors.

ALS—1.1.9.4
NFPA 473 5.2.1.8(4)

Identify priorities for decontamination in scenarios involving radioactive materials.

ALS—1.1.9.5
NFPA 473 5.2.1.8(5)
Describe the manner in which acute medical illness or traumatic injury can influence decisions about decontamination and patient transport.

ALS—1.1.10
NFPA 473 5.2.1.9
Given examples of typical labels found on pesticide containers, the ALS level responder shall define the following terms:

- Pesticide name
- Pesticide classification (e.g., insecticide, rodenticide, organophosphate, carbamate, organochlorine.
- Environmental Protection Agency (EPA) registration number
- Manufacturer name
- Ingredients broken down by percentage
- Cautionary statement (e.g., Danger, Warning, Caution, Keep from Waterways)
- Strength and concentration
- Treatment information

ALS—1.2
NFPA 473 5.2.2(1)-(11)
Surveying Hazardous Materials/WMD Incidents

Collecting and Interpreting Hazard and Response Information. The ALS level responder shall demonstrate the ability to utilize various reference sources at a hazardous materials/WMD incident, including the following:

1. MSDS
2. CHEMTREC/CANUTEC/SETIQ
3. Regional poison control centers
4. DOT Emergency Response Guidebook
5. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response identification system.
6. Hazardous Materials Information System (HMIS)
7. Local, state, federal, and provincial authorities
8. Shipper/manufacturer contacts
9. Agency for Toxic Substances and Disease Registry (ATSDR) medical management guidelines
10. Medical toxicologists
11. Electronic databases

ALS—1.3
NFPA 473 5.2.2.1
Identifying Secondary Devices

Given scenarios involving hazardous materials/WMD, the ALS level responders shall describe the importance of evaluating the scene for secondary devices prior to rendering patient care.

ALS—1.3.1
NFPA 473 5.2.2.1(1)
Evaluate the scene for likely areas where secondary devices can be placed.

ALS—1.3.2
NFPA 473 5.2.2.1(2)
Visually scan operating areas for a secondary device before providing patient care.

ALS—1.3.3
NFPA 473 5.2.2.1(3)
Avoid touching or moving anything that can conceal an explosive device.

ALS—1.3.4
NFPA 473 5.2.2.1(4)
Designate and enforce scene control zones.

ALS—1.3.5
NFPA 473 5.2.2.1(5)

Evacuate victims, other responders, and nonessential personnel as quickly and safely as possible.

ALS 2—Planning the Response

ALS—2.1
NFPA 473 5.3.1.1

Identifying High-Risk Areas for Potential Exposures

The ALS level responder, given an events calendar and pre-incident plans, which can include the local emergency planning committee plan as well as the agency's emergency response plan and SOPs, shall identify the venues for mass gatherings, industrial facilities, potential targets for terrorism, or any other locations where an accidental or intentional release of a harmful substance can pose an unreasonable health risk to any person within the local geographical area as determined by the AHJ.

ALS—2.1.1
NFPA 473 5.3.1.1(1)

Identify locations where hazardous materials/WMD are used, stored, or transported.

ALS—2.1.2
NFPA 473 5.3.1.1(2)

Identify areas and locations presenting a potential for a high loss of life or rate of injury in the event of an accidental/intentional release of a hazardous materials/WMD substance.

ALS—2.1.3
NFPA 473 5.3.1.1(3)

Evaluate the geographic and environmental factors that can complicate a hazardous materials/WMD incident, including prevailing winds, water supply, vehicle and pedestrian traffic flow, ventilation systems, and other natural or man-made influences, including air and rail corridors.

ALS—2.2
NFPA 473 5.3.2.1

Determining the Capabilities of the Local Hospital Network

The ALS level responder shall identify the methods and vehicles available to transport hazardous materials patients and shall determine the location and potential routes of travel to the following appropriate local and regional hospitals, based on patient need:

1. Adult trauma centers
2. Pediatric trauma centers
3. Adult burn centers
4. Pediatric burn centers
5. Hyperbaric chambers
6. Established field hospitals
7. Other specialty hospitals or medical centers

ALS—2.2.1
NFPA 473 5.3.2.2

Given a list of local receiving hospitals in the AHJ's geographic area, the ALS level responder shall describe the location and availability of hospital-based decontamination facilities.

ALS—2.2.2
NFPA 473 5.3.2.3

The ALS level responder shall describe the ALS protocols and SOPs developed by the AHJ and the prescribed role of medical control and poison control centers during mass casualty incidents, at hazardous materials/WMD incidents where exposures have occurred, and in the event of disrupted radio communications.

ALS—2.2.3
NFPA 473 5.3.2.4(1)-(5)

The ALS level responder shall identify the following mutual aid resources (hospital and non-hospital based) identified by the AHJ for the field management of multi-casualty incidents:

1. Mass-casualty trailers with medical supplies
2. Mass-decedent capability
3. Regional decontamination units
4. Replenishment of medical supplies during long-term incidents
5. Locations and availability of mass-casualty antidotes for selected exposures, including but not limited to the following:
6. Nerve agents and organophosphate pesticides
7. Biological agents and other toxins
8. Blood agents
9. Opiate exposures
10. Selected radiological exposures
11. Rehabilitation units for the EMS responders
12. Replacement transport units for those vehicles lost to mechanical trouble, collision, theft, and contamination

ALS—2.2.4
NFPA 473 5.3.2.5

The ALS level responder shall identify the special hazards associated with inbound and outbound air transportation of patients exposed to hazardous materials/WMD.

ALS—2.2.5
NFPA 473 5.3.2.6

The ALS level responder shall describe the available medical information resources concerning hazardous materials toxicology and response.

ALS—2.3
NFPA 473 5.3.3.1

Identifying Incident Communications

The ALS level responder shall identify the components of the communication plan within the AHJ geographic area and determine that the EMS providers have the ability to communicate with other responders on the scene, with transport units, and with local hospitals

ALS—2.3.1
NFPA 473 5.3.3.2(1)-(13)

Given examples of various patient exposure scenarios, the ALS level responder shall describe the following information to be transmitted to the medical control or poison control center or the receiving hospital prior to arrival:

- The exact name of the substance(s) involved
- The physical and chemical properties of the substance(s) involved
- Number of victims being transported
- Age and sex of transported patients
- Patient condition and chief complaint
- Medical history
- Circumstances and history of the exposure, such as duration of exposure and primary route of exposure
- Vital signs, initial and current
- Symptoms described by the patient, initial and current
- Presence of associated injuries, such as burns and trauma
- Decontamination status
- Treatment rendered or in progress, including the effectiveness of antidotes administered
- Estimated time of arrival

ALS—2.4 Identifying the Role of the ALS Level Responder
NFPA 473 5.3.4

Given scenarios involving hazardous materials/WMD, the ALS level responder shall identify his or her role during hazardous materials/WMD incidents as specified in the emergency response plan and SOPs developed by the AHJ.

ALS—2.4.1 NFPA 473 5.3.4.1(1) Describe the purpose, benefits, and elements of the incident command system as it relates to the ALS level responder.

ALS—2.4.2 NFPA 473 5.3.4.1(2) Describe the typical incident command structure for the emergency medical component of a hazardous materials/WMD incident as specified in the emergency response plan and SOPs developed by the AHJ.

ALS—2.4.3 NFPA 473 5.3.4.1(3) Demonstrate the ability of the ALS level responder to function within the incident command system.

ALS—2.4.4 NFPA 473 5.3.4.1(4) Demonstrate the ability to implement an incident command system for a hazardous materials/WMD incident where an ICS does not currently exist.

ALS—2.4.5 NFPA 473 5.3.4.1(5) Identify the procedures for requesting additional resources at a hazardous materials/WMD incident

ALS—2.4.6 NFPA 473 5.3.4.2 Describe the hazardous materials/WMD ALS responder's role in the hazardous materials/WMD response plan developed by the AHJ or identified in the local emergency response plan as follows:

ALS—2.4.6.1 NFPA 473 5.3.4.2(1) Determine the toxic effect of hazardous materials/WMD.

ALS—2.4.6.2 NFPA 473 5.3.4.2(2) Estimate the number of patients.

ALS—2.4.6.3 NFPA 473 5.3.4.2(3) Recognize and assess the presence and severity of symptoms.

ALS—2.4.6.4 NFPA 473 5.3.4.2(4) Assess the impact on the health care system.

ALS—2.4.6.5 NFPA 473 5.3.4.2(5) Perform appropriate patient monitoring as follows:

1. Pulse oximetry
2. Cardiac monitor
3. End tidal CO2

ALS—2.4.6.6 NFPA 473 5.3.4.2(6) Communicate pertinent information.

ALS—2.4.6.7 NFPA 473 5.3.4.2(7) Estimate pharmacological need.

ALS—2.4.6.8 NFPA 473 5.3.4.2(8) Address threat potential for clinical latency.

ALS—2.4.6.9 Estimate dosage – exposure.
NFPA 473 5.3.4.2(9)

ALS—2.4.6.10 Estimate dosage – treatment.
NFPA 473 5.3.4.2(10)

ALS—2.4.6.11 Train in appropriate monitoring.
NFPA 473 5.3.4.2(11)

ALS—2.5 Supplemental Medical Resources
NFPA 473 5.3.5

Given scenarios of various hazardous materials/WMD mass casualty incidents, the ALS level responder shall identify the supplemental medical resources available to the AHJ, including the following:

ALS—2.5.1
NFPA 473 5.3.5(1)

Describe the strategic national stockpile (SNS) program, including the following components:

1. Intent and goals of the SNS program
2. Procedures and requirements for deploying the SNS to a local jurisdiction
3. Typical supplies contained in 12-hour push package
4. Role of the technical advisory response unit (TARU)

ALS—2.5.2

Describe the metropolitan medical response system(MMRS) including the following components:

1. Scope, intent, and goals of the MMRS
2. Capabilities and resources of the MMRS
3. Eight capability focus areas of the MMRS

ALS 3—Implementing the Planned Response

ALS—3.1 Determining the Nature of the Incident and Providing Medical Care
NFPA 473 5.4.1

The ALS level responder shall demonstrate the ability to provide emergency medical care to those patients exposed to hazardous materials/WMD by completing the following tasks:

ALS—3.1.1
NFPA 473 5.4.1(1)

The ALS level responder shall determine the physical state of the released substance and the environmental influences surrounding the release, as follows:

1. Solid
2. Liquid
3. Gas, vapor, dust, mist, aerosol

ALS—3.1.2
NFPA 473 5.4.1(2)*

The ALS level responder shall identify potential routes of exposure, and correlate those routes of exposure to the physical state of the released substance, to determine the origin of the illness or injury, as follows:

1. Inhalation
2. Absorption
3. Ingestion
4. Injection

ALS—3.1.3
NFPA 473 5.4.1(3)

The ALS level responder shall describe the potential routes of entry into the body, the common signs and symptoms of exposure, and the ALS treatment options approved by the AHJ (e.g., advanced airway management, drug therapy), including antidote administration where appropriate for exposure(s) to the following classification of substances:

1. Corrosives
2. Pesticides
3. Chemical asphyxiants
4. Simple asphyxiants
5. Organic solvents
6. Nerve agents
7. Vesicants
8. Blood agents
9. Choking agents
10. Irritants (riot control agents)
11. Biological agents and toxins
12. Incapacitating agents
13. Radiological materials
14. Nitrogen compounds
15. Opiate compounds
16. Fluorine compounds
17. Phenolic compounds

ALS—3.1.4
NFPA 473 5.4.1(4)

The ALS level responder shall describe the basic toxicological principles relative to assessment and treatment of persons exposed to hazardous materials, including the following:

1. Acute and delayed toxicological effects
2. Local and systemic effects
3. Dose-response relationship

ALS—3.1.5
NFPA 473 5.4.1(5)

Given examples of various hazardous substances, the ALS level responder shall define the basic toxicological terms as they relate to the treatment of an exposed patient, as follows:

1. Threshold limit value – time weighted average (TLVTWA)
2. Lethal doses and concentrations, as follows:
    - 2.a. LDlo
    - 2.b. LD50
    - 2.c. LDhi
    - 2.d. LClo
    - 2.e. LC50
    - 2.f. LChi
3. Parts per million/parts per billion/parts per trillioin (ppm/ppb/ppt)
4. Immediately dangerous to life and health (IDLH)
5. Permissible exposure limit (PEL)
6. Threshold limit value – short-term exposure limit (TLV-STEL)
7. Threshold limit value – ceiling (TLV-C)
8. Solubility
9. Poison – a substance that causes injury, illness, or death
10. Toxic – harmful nature related to amount and concentration

ALS—3.2
NFPA 473 5.4.1(6)

Evaluating the Progress and Effectiveness of Medical Care

Given examples of hazardous materials/WMD incidents with exposed patients, the ALS level responder shall evaluate the progress and effectiveness of the medical care provided at a hazardous materials/WMD incident, to ensure that the overall incident response objectives, along with patient care goals, are being met.

ALS—3.2.1
NFPA 473 5.4.1(6)a

Locate and track all exposed patients at a hazardous materials/WMD incident, from triage and treatment to transport to the appropriate hospital.

ALS—3.2.2
NFPA 473 5.4.1(6)b

Review the incident objectives at periodic intervals to ensure that patient care is being carried out within the overall incident response plan.

ALS—3.2.3
NFPA 473 5.4.1(6)c
Ensure that the incident command system forms are completed, along with the patient care forms required by the AHJ, during the course of the incident.

ALS—3.2.4
NFPA 473 5.4.1(6)d
Evaluate the need for trained and qualified EMS personnel, medical equipment, transport units, and other supplies, including antidotes based on the scope and duration of the incident.

ALS—3.3
NFPA 473 5.4.2*
Decontaminating Exposed Patients
Given the emergency response plan and SOPs developed by the AHJ and given examples of hazardous materials/WMD incidents with exposed patients, the ALS level responder shall do as follows:

ALS—3.3.1
NFPA 473 5.4.2(1)
Given the emergency response plan and SOPs developed by the AHJ, identify and evaluate the patient decontamination activities performed prior to accepting responsibility for and transferring care of exposed patients.

ALS—3.3.2
NFPA 473 5.4.2
Determine the need and location for patient decontamination, including mass-casualty decontamination, in the event none has been performed prior to arrival of EMS personnel.

ALS—3.3.2.1
NFPA 473 5.4.2(2)a
Given the emergency response plan and SOPs developed by the AHJ, identify and evaluate the patient decontamination activities performed prior to accepting responsibility for and transferring care of exposed patients; identify sources of information for determining the appropriate decontamination procedure and how to access those resources in a hazardous materials/WMD incident.

ALS—3.3.2.2
NFPA 473 5.4.2(2)b
Given the emergency response plan and SOPs developed by the AHJ, identify and evaluate the patient decontamination activities performed prior to accepting responsibility for and transferring care of exposed patients.

ALS—3.3.2.3
NFPA 473 5.4.2(2)c
Given the emergency response plan and SOPs provided by the AHJ, identify the supplies and equipment required to set up and implement technical or mass-casualty decontamination operations for ambulatory and non-ambulatory patients.

ALS—3.3.2.4
NFPA 473 5.4.2(2)d
Given the emergency response plan and SOPs developed by the AHJ, identify the procedures, equipment, and safety precautions for securing evidence during decontamination operations at hazardous materials/WMD incidents.

ALS—3.3.2.5
NFPA 473 5.4.2(2)e
Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, and law enforcement and K-9 search dogs brought to the decontamination corridor at hazardous materials/WMD incidents.

ALS—3.3.2.6
NFPA 473 5.4.2(2)f
Identify procedures, equipment, and safety precautions for communicating with critically, urgently, and potentially exposed patients, and population prioritization and management techniques.

ALS—3.3.2.7
NFPA 473 5.4.2(2)g

Determine the threat of cross contamination to all responders and patients by completing the following tasks:

1. Identify hazardous materials/WMD with a high risk of cross contamination.
2. Identify hazardous materials/WMD agents with a low risk of cross contamination.
3. Describe how the physical state of the hazardous materials/WMD provides clues to its potential for secondary contamination, when the exact identity of the hazardous materials/WMD is not known.

ALS—3.4 Evaluating the Need for Medical Supplies

NFPA 473 5.4.3

Given examples of single-patient and multi-casualty hazardous materials/WMD incidents, the ALS level responder shall determine if the available medical equipment, transport units, and other supplies, including antidotes, will meet or exceed expected patient care needs throughout the duration of the incident.

ALS—3.5 Evidence Preservation

NFPA 473 5.4.4

Given examples of hazardous materials/WMD incidents where criminal acts are suspected, the ALS level responder shall make every attempt to preserve evidence during the course of delivering patient care.

ALS—3.5.1
NFPA 473 5.4.4(1)

Determine if the incident is potentially criminal in nature and cooperate with the law enforcement agency having investigative jurisdiction.

ALS—3.5.2
NFPA 473 5.4.4(2)

Identify the unique aspects of criminal hazardous materials/WMD incidents, including crime scene preservation, evidence preservation, and destruction of potential evidence found on medical patients, and/or the destruction of evidence during the decontamination process.

ALS—3.5.3
NFPA 473 5.4.4(3)

Ensure that any information regarding suspects, sequence of events during a potential criminal act, or observations made based on patient presentation or during patient assessment are documented and communicated and passed on to the law enforcement agency having investigative jurisdiction.

ALS—3.6 Medical Support at Hazardous Materials/WMD Incidents

NFPA 473 5.4.5

Given the emergency response plan and SOPs developed by the AHJ and examples of various hazardous materials/WMD incidents, the ALS level responder shall describe the procedures for performing medical support of hazardous materials/WMD incident response personnel.

ALS—3.6.1
NFPA 473 5.4.5(1)

The ALS level responder responsible for pre-entry medical monitoring shall obtain hazard and toxicity information on the released substance from the designated hazardous materials technical reference resource or other reliable sources of information at the scene. The following information shall be conveyed to the entry team, incident safety officer, hazardous materials officer, other EMS personnel at the scene, and any other responders responsible for the health and well-being of those personnel operating at the scene:

1. Chemical name
2. Hazard class
3. Hazard and toxicity information
4. Applicable decontamination methods and procedures
5. Potential for secondary contamination
6. Procedure for transfer of patients from the constraints of the incident to the emergency medical system
7. Prehospital management of medical emergencies and exposures, including antidote administration

ALS—3.6.2
NFPA 473 5.4.5(2)

The ALS level responder shall evaluate the pre-entry health status of hazardous materials/WMD responders prior to donning PPE by performing the following tasks:

1. Record a full set of vital signs
2. Record body weight measurements
3. Record general health observations

ALS—3.6.3
NFPA 473 5.4.5(3)

The ALS level responder shall determine the medical fitness of those personnel charged with donning chemical protective clothing, using the criteria set forth in the emergency action plan (EAP) and the SOP developed by the AHJ. Consideration shall be given to excluding responders if they do not meet the following criteria prior to working in chemical protective clothing:

1. Core body temperature: hypothermia/hyperthermia
2. Blood pressure: hypotension/hypertension
3. Heart rate: bradycardia/tachycardia
4. Respiratory rate: bradypnea/tachypnea

ALS—3.6.4
NFPA 473 5.4.5(4)

The ALS level responder shall determine how the following factors influence heat stress on hazardous materials/WMD response personnel:

1. Baseline level of hydration
2. Underlying physical fitness
3. Environmental factors
4. Activity levels during the entry
5. Level of PPE worn
6. Duration of entry
7. Cold stress

ALS—3.6.5
NFPA 473 5.4.5(5)

Given examples of various hazardous materials/WMD incidents requiring the use of chemical protective ensembles, the ALS level responder shall complete the following tasks:

1. Demonstrate the ability to set up and operate a medical monitoring station.
2. Demonstrate the ability to recognize the signs and symptoms of heat stress, heat exhaustion, and heat stroke.
3. Determine the ALS needs for responders exhibiting the effects of heat stress, cold stress, and heat exhaustion.
4. Describe the medical significance of heat stroke and the importance of rapid transport to an appropriate medical receiving facility.

ALS—3.6.6
NFPA 473 5.4.5(6)

Given a simulated hazardous materials/WMD incident, the ALS level responder shall demonstrate documentation of medical monitoring activities.

ALS—3.6.7
NFPA 473 5.4.5(7)

The ALS level responder shall evaluate all team members after decontamination and PPE removal, using the following criteria:

1. Pulse rate — done within the first minute
2. Pulse rate — 3 minutes after initial evaluation
3. Temperature
4. Body weight
5. Blood pressure
6. Respiratory rate

ALS—3.6.8
NFPA 473 5.4.5(8)

The ALS level responder shall recommend that any hazardous materials team member exhibiting any of the following signs be prohibited from redonning chemical protective clothing:

1. Heat stress or heat exhaustion
2. Pulse rate: tachycardia/bradycardia
3. Core body temperature: hyperthermia/hypothermia
4. Recovery heart rate with a trend toward normal rate and rhythm
5. Blood pressure: hypertension/hypotension
6. Weight loss of >5 percent
7. Signs or symptoms of extreme heat exhaustion or heat stroke, which requires transport by ALS ambulance to the appropriate hospital

ALS—3.6.9
NFPA 473 5.4.5(9)

The ALS level responder shall notify immediately the appropriate persons designated by the emergency response plan if a team member requires significant medical treatment or transport (arranged through the appropriate designee identified by the emergency response plan).

ALS 4—Terminating the Incident

ALS—4.1 Reporting and Documenting the Incident
NFPA 473 5.5

Upon termination of the hazardous materials/WMD incident, the ALS level responder shall complete the reporting, documentation, and EMS termination activities as required by the local emergency response plan or the organization's SOPs.

ALS—4.1.1 Identify the reports and supporting documentation required by the emergency response plan or SOPs.
NFPA 473 5.5(1)

ALS—4.1.2 Demonstrate completion of the reports required by the emergency response plan or SOPs.
NFPA 473 5.5(2)

ALS—4.1.3 Describe the importance of personnel exposure records.
NFPA 473 5.5(3)

ALS—4.1.4 Describe the importance of debriefing records.
NFPA 473 5.5(4)

ALS—4.1.5 Describe the importance of critique records.
NFPA 473 5.5(5)

ALS—4.1.6 Identify the steps in keeping an activity log and exposure records.
NFPA 473 5.5(6)

ALS—4.1.7 Identify the steps to be taken in compiling incident reports that meet federal, state, local, and organizational requirements.
NFPA 473 5.5(7)

ALS—4.1.8 Identify the requirements for compiling personal protective equipment logs.
NFPA 473 5.5(8)

ALS—4.1.9 Identify the requirements for filing documents and maintaining records, as follows:
NFPA 473 5.5(9)

ALS—4.1.9.1 List the information to be gathered regarding the exposure of all patient(s) and describe the reporting procedures, including the following:
NFPA 473 5.5(9)a

1. Detailed information on the substances released
2. Pertinent information on each patient treated or transported
3. Routes, extent, and duration of exposures
4. Actions taken to limit exposure
5. Decontamination activities

ALS—4.1.9.2 Identify the methods used by the AHJ to evaluate transport units for potential contamination and the process and locations available to decontaminate those units.
NFPA 473 5.5(9)b

Tab 4

Firefighters Product Control

Operations Level Training Guidelines

FIREFIGHTER PERFORMING BASIC DEFENSIVE PRODUCT CONTROL MEASURES

Introduction

This section addresses the competencies required for a firefighter who would be expected to engage in defensive product control activities. Those activities may include activation of remote shut-offs, defensive spill control in advance of the product while avoiding direct product contact and defensive fire suppression activities.

Applicable Competency Areas:

Operations Core
Use of PPE
Technical Decontamination
Product Control

Anticipated Duration

24 – 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents
NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2
NFPA 472 6.4.3.2

Selecting Decontamination Procedures

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)

Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)

Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming

12. Washing

OPS-TD—1.2.3
NFPA 472 6.4.3.2(3)
Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4
NFPA 472 6.4.3.2(4)
Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5
NFPA 472 6.4.3.2(5)
Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6
NFPA 472 6.4.3.2(6)
Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1
NFPA 472 6.4.4.1
Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2
NFPA 472 6.4.4.1(1)
Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3
NFPA 472 6.4.4.1(2)
Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)
Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)
Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)
Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4
NFPA 472 6.4.6.1(4)
Identify the requirements for filing documents and maintaining records.

OPS-PC 1— Planning the Response

OPS-PC—1.1 Identifying Control Options
NFPA 472 6.6.3.1

Given examples of hazardous materials/WMD incidents, the operations level responder assigned to perform product control shall identify control options at the operations level for each response objective.

OPS-PC—1.1.1 Identify the procedures, equipment, and safety precautions associated with operations level control techniques.
NFPA 472 6.6.3.1(2)

OPS-PC—1.2 Selecting Decontamination Procedures
NFPA 472 6.6.3.2

Select the appropriate personal protective equipment required to perform each of the appropriate operations level control techniques.

OPS-PC 2—Implementing the Planned Response

OPS-PC—2.1 Performing Control Options
NFPA 472 6.6.4.1

Given an incident action plan for a hazardous materials/WMD incident, within the capabilities and equipment provided by the AHJ, the operations level responder assigned to perform product control shall demonstrate the ability to perform each of the appropriate control functions set out in the plan and as prescribed by the AHJ.

OPS-PC—2.1.1 Using the type of special purpose or hazard suppressing foams or agents and foam equipment furnished by the AHJ, demonstrate the application of the foam(s) or agent(s) on a spill or fire involving hazardous materials/WMD.
NFPA 472 6.6.4.1(1)

OPS-PC—2.1.2 Identify the characteristics and applicability of the following Class B foams if supplied by the AHJ:
NFPA 472 6.6.4.1(2)

1. Aqueous film-forming foam (AFFF)
2. Alcohol-resistant concentrates
3. Fluoroprotein
4. High expansion foam

OPS-PC—2.1.3 Given the required tools and equipment, demonstrate how to perform the following control activities:
NFPA 472 6.6.4.1(3)

1. Absorption
2. Adsorption
3. Damming
4. Diking
5. Dilution
6. Diversion
7. Retention
8. Remove valve shut-off
9. Vapor dispersion
10. Vapor suppression

OPS-PC—2.1.4 Identify the location and describe the use of emergency remote shutoff

NFPA 472 6.6.4.1(4) devices on MC/DOT-306/406, MC/DOT-307/407, and MC-331 cargo tanks containing flammable liquids or gases.

OPS-PC—2.1.5 Describe the use of emergency remote shutoff devices at fixed facilities.
NFPA 472 6.6.4.1(5)

OPS-PC—2.2 The operations level responder assigned to perform product control shall describe local procedures for going through the technical decontamination process.
NFPA 472 6.6.4.2

Tab 5

Responders Decontamination

Operations Level Training Guidelines

RESPONDERS PERFORMING TECHNICAL AND MASS DECONTAMINATION AT HAZARDOUS MATERIALS EMERGENCIES

Introduction

This section addresses the competencies required of the responder who would be expected to perform either technical or mass decontamination. This responder could be a member of a fire department, EMS agencies, hospital emergency departments or any organization that would be called upon to decontaminate responders or victims during a hazardous materials emergency.

Applicable Competency Areas:

Operations Core
Use of PPE
Technical Decontamination
Mass Decontamination

Anticipated Duration

24 – 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2 Selecting Decontamination Procedures
NFPA 472 6.4.3.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1 NFPA 472 6.4.3.2(1) Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2 NFPA 472 6.4.3.2(2) Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming
12. Washing

OPS-TD—1.2.3 NFPA 472 6.4.3.2(3) Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4 NFPA 472 6.4.3.2(4) Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5 NFPA 472 6.4.3.2(5) Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6 NFPA 472 6.4.3.2(6) Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1 Performing Incident Management Duties
NFPA 472 6.4.4.1

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2
NFPA 472 6.4.4.1(1)

Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3
NFPA 472 6.4.4.1(2)

Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)

Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)

Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)

Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4 Identify the requirements for filing documents and maintaining records.
NFPA 472 6.4.6.1(4)

OPS-MD 1— Planning the Response

OPS-MD—1.1 Selecting Personal Protective Equipment
NFPA 472 6.3.3.1

Given an emergency response plan or standard operating procedures, the operations level responder assigned to mass decontamination shall select the personal protective equipment required to support mass decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-MD—1.2 Selecting Decontamination Procedures
NFPA 472 6.3.3.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to mass decontamination operations shall select a mass decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-MD—1.2.1 Identify the advantages and limitations mass decontamination operations.
NFPA 472 6.3.3.2(1)

OPS-MD—1.2.2 Describe the advantages and limitations of each of the following decontamination methods:
NFPA 472 6.3.3.2(2)

1. Dilution
2. Isolation
3. Washing

OPS-MD—1.2.3 Identify sources of information for determining the correct mass decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.
NFPA 472 6.3.3.2(3)

OPS-MD—1.2.4 Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.
NFPA 472 6.3.3.2(4)

OPS-MD—1.2.5 Identify procedures, equipment, and safety precautions for communicating with crowds and crowd management techniques that can be used at incidents where a large number of people might potentially be contaminated.
NFPA 472 6.3.3.2(5)

OPS-MD 2—Implementing the Planned Response

OPS-MD—2.1
NFPA 472 6.3.4.1

Performing Incident Management Duties

Given a scenario involving a hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to mass decontamination operations shall demonstrate the mass decontamination duties assigned in the incident action plan by describing the local procedures for the implementation of the mass decontamination function within the incident command system.

OPS-MD—2.2
NFPA 472 6.3.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The operations level responder assigned to mass decontamination operations shall demonstrate the ability to set up and implement mass decontamination operations for ambulatory and non-ambulatory victims.

OPS-MD 3—Evaluating Progress

OPS-MD—3.1
NFPA 472 6.3.5.1

Evaluating the Effectiveness of the Mass Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to mass decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-MD 4—Terminating the Incident

OPS-MD—4.1
NFPA 472 6.3.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to mass decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-MD—4.1.1 *NFPA 472 6.3.6.1(1)* Identify the reports and supporting documentation required by the emergency response plan and/or standard operating procedures.

OPS-MD—4.1.2 *NFPA 472 6.3.6.1(2)* Describe the importance of personnel exposure records.

OPS-MD—4.1.3 Identify the steps in keeping an activity log and exposure records.

NFPA 472 6.3.6.1(3)

OPS-MD—4.1.4 Identify the requirements for filing documents and maintaining records.
NFPA 472 6.3.6.1(4)

Tab 6

Responders Rescue/Extraction

Operations Level Training Guidelines

RESPONDERS PERFORMING RESCUE OR RECOVERY OPERATIONS AT HAZARDOUS MATERIALS EMERGENCIES

Introduction

This section addresses the competencies required for responders who would be expected to perform victim rescue or recovery operations at a hazardous materials or WMD emergency. Personnel would be required to wear personal protective equipment appropriate for the hazards and would be required to be decontaminated upon completion of rescue/recovery activities.

Applicable Competency Areas:

Operations Core
Use of PPE
Technical Decontamination
Victim Rescue / recovery

Anticipated Duration

24 – 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2
NFPA 472 6.4.3.2

Selecting Decontamination Procedures

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)

Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)

Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming

12. Washing

OPS-TD—1.2.3 NFPA 472 6.4.3.2(3)	Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.
OPS-TD—1.2.4 NFPA 472 6.4.3.2(4)	Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.
OPS-TD—1.2.5 NFPA 472 6.4.3.2(5)	Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.
OPS-TD—1.2.6 NFPA 472 6.4.3.2(6)	Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1
NFPA 472 6.4.4.1

Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2 NFPA 472 6.4.4.1(1)	Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.
OPS-TD—2.3 NFPA 472 6.4.4.1(2)	Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)
Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)
Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)
Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4
NFPA 472 6.4.6.1(4)
Identify the requirements for filing documents and maintaining records.

OPS-AMS 1— Planning the Response

OPS-AMS—1.1
NFPA 472 6.7.3.1

Given the air monitoring and sampling equipment provided by the AHJ, the operations level responder assigned to perform air monitoring and sampling shall select the detection/monitoring equipment suitable for detecting or monitoring for solid, liquid, or gaseous hazardous materials/WMD.

OPS-AMS—1.2
NFPA 472 6.7.3.2-3

Given detection/monitoring devices(s) provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall describe the operation, capabilities and limitations, local monitoring procedures, field testing, and maintenance procedures associated with each device.

OPS-AMS—1.3
NFPA 472 6.7.3.4

Selecting Personal Protective Equipment

The operations level responder assigned to perform air monitoring and sampling shall select the personal protective equipment required to support air monitoring and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-AMS 2—Implementing the Planned Response

OPS-AMS—2.1
NFPA 472 6.7.4.1

Given a scenario involving hazardous materials/WMD and detection/ monitoring devices provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall demonstrate the field test and operation of each device and interpret the readings based on local procedures.

OPS-AMS—2.2
NFPA 472 6.6.4.1

Describe procedures for post-air monitoring and sampling decontamination.

OPS-VRR 1— Planning the Response

OPS-VRR—1.1
NFPA 472 6.8.3.1

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to victim rescue/recovery shall determine the feasibility of conducting victim rescue/recovery operations at an incident involving a hazardous material/WMD.

OPS-VRR—1.2
NFPA 472 6.8.3.1(2)

Describe the safety procedures and tactical guidelines for line-of-sight, non-line-of-sight, ambulatory and non-ambulatory victims.

OPS-VRR—1.3
NFPA 472 6.8.3.1(2)(e)

Discriminate between victim rescue and victim recovery operations.

OPS-VRR—1.3.1
NFPA 472 6.8.3.1(3)

Determine if the options are within the capabilities of available personnel and personal protective equipment.

OPS-VRR—1.3.2 NFPA 472 6.8.3.1(4)	Describe the procedures for implementing victim rescue/recovery operations within the incident command system.

OPS- VRR 2—Implementing the Planned Response

OPS-VRR—2.1 NFPA 472 6.8.4.1(1)	Identify the different team positions and describe their main functions.
OPS-VRR—2.2 NFPA 472 6.8.4.1(2)	Select and use specialized rescue equipment and procedures provided by the AHJ to support victim rescue/recovery operations.
OPS-VRR—2.3 NFPA 472 6.8.4.1(3)	Demonstrate safe and effective methods for victim rescue/recovery.
OPS-VRR—2.4 NFPA 472 6.8.4.1(4)	Demonstrate the ability to triage victims.
OPS-VRR—2.5	Describe local procedures for performing decontamination upon completing the victim rescue/removal mission.

Tab 7

Responders Support Cold Zone

Operations Level Training Guidelines

RESPONDERS PERFORMING COLD ZONE SUPPORT OPERATIONS WITHOUT POTENTIAL FOR CONTAMINATION

Introduction

This section addresses the competencies required for personnel who would provide support or technical assistance in the cold zone of operations. These personnel would not be exposed to potential contamination and therefore would not be required to wear personal protective equipment. These individuals are likely associated with public works, utilities or other technical subject matter experts on site for advisory purposes.

Applicable Competency Areas:

Operations Core

Anticipated Duration

16 – 24 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

Tab 8

Responders Support Exclusion Zone

Operations Level Training Guidelines

RESPONDERS PROVIDING SUPPORT IN THE CONTROL ZONE OF OPERATIONS

Introduction

This section addresses the competencies required responders who are called to the scene to provide support in the control zone of operations. These personnel would be required to wear personal protective equipment appropriate for the hazards and would require decontamination when exiting the control zones. In addition to the competencies provide here, the support responder operating in the control zone would require training specific to the function they would be expected to perform.

Applicable Competency Areas:

Operations Core
Use of PPE
Technical Decontamination

Anticipated Duration

24 – 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2
NFPA 472 6.4.3.2

Selecting Decontamination Procedures

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)

Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)

Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming

12. Washing

OPS-TD—1.2.3 NFPA 472 6.4.3.2(3) Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4 NFPA 472 6.4.3.2(4) Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5 NFPA 472 6.4.3.2(5) Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6 NFPA 472 6.4.3.2(6) Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1 NFPA 472 6.4.4.1 Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2 NFPA 472 6.4.4.1(1) Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3 NFPA 472 6.4.4.1(2) Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)
Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)
Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)
Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4
NFPA 472 6.4.6.1(4)
Identify the requirements for filing documents and maintaining records.

Tab 9

Law Enforcement Investigations

Operations Level Training Guidelines

LAW ENFORCEMENT PERSONNEL CONDUCTING INVESTIGATIONS AT HAZMAT/WMD OR ILLICIT LABORATORY CRIME SCENES

Introduction

This section addresses the competencies required for law enforcement or other forensic response personnel who have been called to the scene to conduct a criminal investigation. This investigation may include monitoring, detection and analysis and the identification and collection of samples or other evidence within the hazardous environment. These personnel would operate in appropriate personal protective equipment and would require decontamination when exiting the control zone.

Applicable Competency Areas:

Operations Core
Use of PPE
Technical Decontamination
Perform Air Monitoring
Preserve Evidence and Perform Sampling
Response to Illicit Labs

Anticipated Duration

40 - 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2
NFPA 472 6.4.3.2

Selecting Decontamination Procedures

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)

Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)

Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming

12. Washing

OPS-TD—1.2.3 NFPA 472 6.4.3.2(3) Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4 NFPA 472 6.4.3.2(4) Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5 NFPA 472 6.4.3.2(5) Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6 NFPA 472 6.4.3.2(6) Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1 NFPA 472 6.4.4.1 Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2 NFPA 472 6.4.4.1(1) Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3 NFPA 472 6.4.4.1(2) Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)
Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)
Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)
Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4
NFPA 472 6.4.6.1(4)
Identify the requirements for filing documents and maintaining records.

OPS-AMS 1— Planning the Response

OPS-AMS—1.1 NFPA 472 6.7.3.1	Given the air monitoring and sampling equipment provided by the AHJ, the operations level responder assigned to perform air monitoring and sampling shall select the detection/monitoring equipment suitable for detecting or monitoring for solid, liquid, or gaseous hazardous materials/WMD.
OPS-AMS—1.2 NFPA 472 6.7.3.2-3	Given detection/monitoring devices(s) provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall describe the operation, capabilities and limitations, local monitoring procedures, field testing, and maintenance procedures associated with each device.
OPS-AMS—1.3 NFPA 472 6.7.3.4	Selecting Personal Protective Equipment The operations level responder assigned to perform air monitoring and sampling shall select the personal protective equipment required to support air monitoring and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-AMS 2—Implementing the Planned Response

OPS-AMS—2.1 NFPA 472 6.7.4.1	Given a scenario involving hazardous materials/WMD and detection/ monitoring devices provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall demonstrate the field test and operation of each device and interpret the readings based on local procedures.
OPS-AMS—2.2 NFPA 472 6.6.4.1	Describe procedures for post-air monitoring and sampling decontamination.

OPS-PS 1— Analyzing the Incident

OPS-PS—1.1
NFPA 472 6.5.2.1

Determine If the Incident Is Potentially Criminal in Nature and Identify the Law Enforcement Agency Having Investigative Jurisdiction

Given examples of hazardous materials/WMD incidents involving potential criminal intent, the operations level responder assigned to evidence preservation and sampling shall describe the potential criminal violation and identify the law enforcement agency having investigative jurisdiction.

OPS-PS—1.1.1
NFPA 472 6.5.2.1(1)

Given examples of the following hazardous materials/WMD incidents, the operations level responder shall describe products potentially encountered in the incident associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS—1.1.2
NFPA 472 6.5.2.1(2)

Given examples of the following hazardous materials/WMD incidents, identify the agency(s) with investigative authority and the incident response considerations associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS 2—Planning the Response

OPS-PS—2.1
NFPA 472 6.5.3.1

Identify Unique Aspects of Criminal Hazardous Materials/WMD Incidents

The operations level responder assigned to evidence preservation and sampling shall be capable of identifying the unique aspects associated with illicit laboratories, hazardous materials/WMD incidents, and environmental crimes.

OPS-PS—2.1.1
NFPA 472 6.5.3.1(1)(a)-(e)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Secure, characterize, and preserve the scene
2. Document personnel and scene activities associated with incident
3. Determine whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks
4. Notify the agency with investigative authority
5. Notify the Explosive Ordnance Disposal (EOD) personnel

OPS-PS—2.1.2
NFPA 472 6.5.3.1(1)(f)-(g)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to identify:

1. Potential sample/evidence
2. The applicable sampling equipment

OPS-PS—2.1.3
NFPA 472 6.5.3.1(1)(h)-(o)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Procedures to protect samples and evidence from cross contamination
2. Documentation procedures
3. Evidentiary sampling techniques
4. Field screening protocols for sample/evidence collected
5. Evidence labeling and packaging procedures
6. Evidence decontamination procedures
7. Evidence packaging procedures for evidence transportation
8. Chain of custody procedures

OPS-PS—2.1.4
NFPA 472 6.5.3.1(2)(a)-(d)

Given an example of an illicit laboratory, the operations level responder assigned to evidence preservation and sampling shall be able to describe:

1. Hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Sampling options associated with liquid and solid sample/evidence collection
4. Field screening protocols for samples/evidence collected

OPS-PS—2.1.5
NFPA 472 6.5.3.1(3)(a)-(d)

Given an example of an environmental crime, the operations level responder assigned to evidence preservation and sampling shall be able to:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.6
NFPA 472 6.5.3.1(4)(a)-(d)

Given an example of a hazardous materials/WMD suspicious letter, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.7
NFPA 472 6.5.3.1(5)(a)-(d)

Given an example of a hazardous materials/WMD suspicious package, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.8
NFPA 472 6.5.3.1(6)

Given an example of a release/attack involving a hazardous material/WMD agent, the operations level responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.9
NFPA 472 6.5.3.1(7)

Given examples of different types of potential criminal hazardous materials/WMD incidents, the operations level responder shall identify and describe the application, use, and limitations of the various types field screening tools that can be utilized for screening the following:

1. Corrosivity
2. Flammability
3. Oxidation
4. Radioactivity
5. Volatile organic compounds (VOC)

OPS-PS—2.1.10 Describe the potential adverse impact of using destructive field screening techniques.
NFPA 472 6.5.3.1(8)

OPS-PS—2.1.11 Describe the procedures for maintaining the evidentiary integrity of any item removed from the crime scene.
NFPA 472 6.5.3.1(9))

OPS-PS—2.2 Selecting Personal Protective Equipment
NFPA 472 6.5.3.2

The operations level responder assigned to evidence preservation and sampling shall select the personal protective equipment required to support evidence preservation and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-PS 3—Implementing the Planned Response

OPS-PS—3.1 Implementing the Planned Response
NFPA 472 6.5.4.1

Given the incident action plan for a criminal incident involving hazardous materials/WMD, the operations level responder assigned to evidence preservation and sampling shall implement, or oversee the implementation of, the selected response actions safely and effectively:

OPS-PS—3.1.1 Secure, characterize, and preserve the scene.
NFPA 472 6.5.4.1(1)

OPS-PS—3.1.2 Document personnel and scene activities associated with incident.
NFPA 472 6.5.4.1(2)

OPS-PS—3.1.3 Describe whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks.
NFPA 472 6.5.4.1(3)

OPS-PS—3.1.4 Notify the agency with investigative authority.
NFPA 472 6.5.4.1(4)

OPS-PS—3.1.5 Notify the EOD personnel.
NFPA 472 6.5.4.1(5)

OPS-PS—3.1.6 Identify potential sample/evidence to be collected.
NFPA 472 6.5.4.1(6)

OPS-PS—3.1.7 Demonstrate the procedures to protect samples and evidence from cross contamination.
NFPA 472 6.5.4.1(7)

OPS-PS—3.1.8 Demonstrate the correct techniques to collect samples utilizing the equipment provided.
NFPA 472 6.5.4.1(8)

OPS-PS—3.1.9 Demonstrate the documentation procedures.
NFPA 472 6.5.4.1(9)

OPS-PS—3.1.10 Demonstrate the sampling protocols.
NFPA 472 6.5.4.1(10)

OPS-PS—3.1.11 Demonstrate field screening protocols for sample/evidence collected.
NFPA 472 6.5.4.1(11)

OPS-PS—3.1.12 Demonstrate evidence labeling and packaging procedures.
NFPA 472 6.5.4.1(12)

OPS-PS—3.1.13 Demonstrate evidence decontamination procedures.
NFPA 472 6.5.4.1(13)

OPS-PS—3.1.14 Demonstrate evidence packaging procedures for evidence transportation.
NFPA 472 6.5.4.1(14)

OPS-PS—3.2 The operations level responder assigned to evidence preservation and sampling shall describe local procedures for the technical decontamination process.
NFPA 472 6.3.6.1

OPS-IL 1— Analyzing the Incident

OPS-IL—1.1 Determine If a Hazardous Materials/WMD Incident Is an Illicit Laboratory Operation
NFPA 472 6.9.2.1

Given examples of hazardous materials/WMD incidents involving illicit laboratory operations, the operations level responder assigned to respond to illicit laboratory incidents shall identify the potential drugs/WMD being manufactured.

OPS-IL—1.1.1 Given examples of illicit drug manufacturing methods, describe the operational considerations, hazards, and products involved in the illicit process.
NFPA 472 6.9.2.1(1)

OPS-IL—1.1.2 Given examples of illicit chemical WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.
NFPA 472 6.9.2.1(2)

OPS-IL—1.1.3 Given examples of illicit biological WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.
NFPA 472 6.9.2.1(3)

OPS-IL—1.1.4 Given examples of illicit laboratory operations, describe the potential booby-traps that have been encountered by response personnel.
NFPA 472 6.9.2.1(4)

OPS-IL—1.1.5 Given examples of illicit laboratory operations, describe the agencies that have investigative authority and operational responsibility to support the response.
NFPA 472 6.9.2.1(5)

OPS-IL 2—Planning the Response

OPS-IL—2.1
NFPA 472 6.9.3.1

Determining the Response Options

Given an analysis of hazardous materials/WMD incidents involving illicit laboratories, the operations level responder assigned to respond to illicit laboratory incidents shall identify possible response options.

OPS-IL—2.2
NFPA 472 6.9.3.2.1

Identifying Unique Aspects of Criminal Hazardous Materials/WMD Incidents

The operations level responder assigned to respond to illicit laboratory incidents shall identify the unique operational aspects associated with illicit drug manufacturing and illicit WMD manufacturing.

OPS-IL—2.2.1
NFPA 472 6.9.3.2.2

Given an incident involving illicit drug manufacturing or illicit WMD manufacturing, the operations level responder assigned to illicit laboratory incidents shall describe the following tasks:

1. Law enforcement securing and preserving the scene
2. Joint hazardous materials and EOD personnel site reconnaissance and hazard identification
3. Determining atmospheric hazards through air monitoring and detection
4. Mitigation of immediate hazards while preserving evidence
5. Coordinated crime scene operation with the law enforcement agency having investigative authority.
6. Documenting personnel and scene activities associated with incident

OPS-IL—2.3
NFPA 472 6.9.3.3

Identifying the Law Enforcement Agency Having Investigative Jurisdiction

The operations level responder assigned to respond to illicit laboratory incidents shall identify the law enforcement agency having investigative jurisdiction.

OPS-IL—2.3.1
NFPA 472 6.9.3.2(1)(a)-(c)

Given scenarios involving illicit drug manufacturing or illicit WMD, identify the law enforcement agency(s) with investigative authority for the following situations:

1. Illicit drug manufacturing
2. Illicit WMD manufacturing
3. Environmental crimes resulting from illicit laboratory operations

OPS-IL—2.4
NFPA 472 6.9.3.4.1

Identify Unique Tasks and Operations at Sites Involving Illicit Laboratories

The operations level responder assigned to respond to illicit laboratory incidents shall identify and describe the unique tasks and operations encountered at illicit laboratory scenes.

OPS-IL—2.4.1
NFPA 472 6.9.3.4.2(1)-(5)

Given scenarios involving illicit drug manufacturing or illicit WMD manufacturing describe the following:

1. Hazards, safety procedures and tactical guidelines for this type emergency
2. Factors to be evaluated in selecting the appropriate personal protective equipment for each type of tactical operation
3. Factors to be considered in selecting appropriate decontamination procedures
4. Factors to be evaluated in selection detection devices
5. Factors to consider in developing a remediation plan

OPS-IL—2.5
NFPA 472 6.9.3.5

Selecting Personal Protective Equipment

The operations level responder assigned to respond to illicit laboratory incidents shall select the personal protective equipment required to respond to illicit laboratory incidents based upon local procedures.

OPS-IL 3—Implementing the Planned Response

OPS-IL—3.1
NFPA 472 6.9.4.1

Given scenarios involving an illicit drug/WMD laboratory operation involving hazardous materials/WMD, the operations level responder assigned to respond to illicit laboratory incidents shall implement or oversee the implementation of the selected response options safely and effectively.

OPS-IL—3.1.1
NFPA 472 6.9.4.1.1(1)

Describe safe and effective methods for law enforcement to secure the scene.

OPS-IL—3.1.2
NFPA 472 6.9.4.1.1(2)

Demonstrate decontamination procedures for tactical law enforcement personnel (SWAT/K-9) securing an illicit laboratory.

OPS-IL—3.1.3
NFPA 472 6.9.4.1.1(3)

Demonstrate methods to identify and/or avoid potential unique safety hazards found at illicit laboratories such as booby-traps and releases of hazardous materials.

OPS-IL—3.1.4
NFPA 472 6.9.4.1.1(4)

Demonstrate methods to conduct joint hazardous materials/EOD operations to identify safety hazards and implement control procedures

OPS-IL—3.2
NFPA 472 6.9.4.1.2

Given a simulated illicit drug/WMD laboratory entry operation, the operations level responders assigned to respond to illicit laboratory incidents shall demonstrate methods of identifying the following:

1. The potential manufacture of illicit drugs during reconnaissance operations
2. The potential manufacture of illicit WMD materials during reconnaissance operations
3. Potential environmental crimes associated with the manufacture of illicit drugs/WMD materials during reconnaissance operations

OPS-IL—3.3
NFPA 472 6.9.4.1.3

Given a simulated illicit drug/WMD laboratory incident, the operations level responder assigned to respond to illicit laboratory incidents shall describe

joint agency crime scene operations, including support to forensic crime scene processing teams.

OPS-IL—3.4
NFPA 472 6.9.4.1.4

Given a simulated illicit drug/WMD laboratory incident, the operations level responder assigned to respond to illicit laboratory incidents shall describe the policy and procedures for post–crime scene processing and site remediation operations.

OPS-IL—3.5
NFPA 472 6.9.4.1.5

The operations level responder assigned to respond to illicit laboratory incidents shall be able to describe local procedures for performing decontamination upon completing the illicit laboratory mission.

Tab 10

Public Health

Operations Level Training Guidelines

PUBLIC HEALTH INVESTIGATORS OF HM/WMD PUBLIC HEALTH EMERGENCIES

Introduction

This section addresses the competencies required for public health responders who may be called to the scene of a hazardous materials/WMD emergency for the purpose of conducting a public health investigation. This investigation would likely include the collection of samples or specimens necessary for the determination of public health risk or epidemiological indicators. These personnel would operate in the area of contamination and would be required to utilizied personal protective equipment appropriate for the hazard and would be required to be decontaminated when exiting the control zone

Applicable Competency Areas:

Operations Core
Use of PPE
Preserve Evidence and Perform Sampling

Anticipated Duration

24 - 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2
NFPA 472 6.4.3.2

Selecting Decontamination Procedures

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)

Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)

Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming

12. Washing

OPS-TD—1.2.3 NFPA 472 6.4.3.2(3) Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4 NFPA 472 6.4.3.2(4) Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5 NFPA 472 6.4.3.2(5) Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6 NFPA 472 6.4.3.2(6) Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1 NFPA 472 6.4.4.1 Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2 NFPA 472 6.4.4.1(1) Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3 NFPA 472 6.4.4.1(2) Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)
Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)
Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)
Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4
NFPA 472 6.4.6.1(4)
Identify the requirements for filing documents and maintaining records.

OPS-PS 1— Analyzing the Incident

OPS-PS—1.1
NFPA 472 6.5.2.1

Determine If the Incident Is Potentially Criminal in Nature and Identify the Law Enforcement Agency Having Investigative Jurisdiction

Given examples of hazardous materials/WMD incidents involving potential criminal intent, the operations level responder assigned to evidence preservation and sampling shall describe the potential criminal violation and identify the law enforcement agency having investigative jurisdiction.

OPS-PS—1.1.1
NFPA 472 6.5.2.1(1)

Given examples of the following hazardous materials/WMD incidents, the operations level responder shall describe products potentially encountered in the incident associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS—1.1.2
NFPA 472 6.5.2.1(2)

Given examples of the following hazardous materials/WMD incidents, identify the agency(s) with investigative authority and the incident response considerations associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS 2—Planning the Response

OPS-PS—2.1
NFPA 472 6.5.3.1

Identify Unique Aspects of Criminal Hazardous Materials/WMD Incidents

The operations level responder assigned to evidence preservation and sampling shall be capable of identifying the unique aspects associated with illicit laboratories, hazardous materials/WMD incidents, and environmental crimes.

OPS-PS—2.1.1
NFPA 472 6.5.3.1(1)(a)-(e)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Secure, characterize, and preserve the scene
2. Document personnel and scene activities associated with incident
3. Determine whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks
4. Notify the agency with investigative authority
5. Notify the Explosive Ordnance Disposal (EOD) personnel

OPS-PS—2.1.2
NFPA 472 6.5.3.1(1)(f)-(g)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to identify:

1. Potential sample/evidence
2. The applicable sampling equipment

OPS-PS—2.1.3
NFPA 472 6.5.3.1(1)(h)-(o)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Procedures to protect samples and evidence from cross contamination
2. Documentation procedures
3. Evidentiary sampling techniques
4. Field screening protocols for sample/evidence collected
5. Evidence labeling and packaging procedures
6. Evidence decontamination procedures
7. Evidence packaging procedures for evidence transportation
8. Chain of custody procedures

OPS-PS—2.1.4
NFPA 472 6.5.3.1(2)(a)-(d)

Given an example of an illicit laboratory, the operations level responder assigned to evidence preservation and sampling shall be able to describe:

1. Hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Sampling options associated with liquid and solid sample/evidence collection
4. Field screening protocols for samples/evidence collected

OPS-PS—2.1.5
NFPA 472 6.5.3.1(3)(a)-(d)

Given an example of an environmental crime, the operations level responder assigned to evidence preservation and sampling shall be able to:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.6
NFPA 472 6.5.3.1(4)(a)-(d)

Given an example of a hazardous materials/WMD suspicious letter, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.7
NFPA 472 6.5.3.1(5)(a)-(d)

Given an example of a hazardous materials/WMD suspicious package, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.8
NFPA 472 6.5.3.1(6)

Given an example of a release/attack involving a hazardous material/WMD agent, the operations level responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.9
NFPA 472 6.5.3.1(7)

Given examples of different types of potential criminal hazardous materials/WMD incidents, the operations level responder shall identify and describe the application, use, and limitations of the various types field screening tools that can be utilized for screening the following:

1. Corrosivity
2. Flammability
3. Oxidation
4. Radioactivity
5. Volatile organic compounds (VOC)

OPS-PS—2.1.10 Describe the potential adverse impact of using destructive field screening techniques.
NFPA 472 6.5.3.1(8)

OPS-PS—2.1.11 Describe the procedures for maintaining the evidentiary integrity of any item removed from the crime scene.
NFPA 472 6.5.3.1(9))

OPS-PS—2.2 Selecting Personal Protective Equipment
NFPA 472 6.5.3.2

The operations level responder assigned to evidence preservation and sampling shall select the personal protective equipment required to support evidence preservation and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-PS 3—Implementing the Planned Response

OPS-PS—3.1 Implementing the Planned Response
NFPA 472 6.5.4.1

Given the incident action plan for a criminal incident involving hazardous materials/WMD, the operations level responder assigned to evidence preservation and sampling shall implement, or oversee the implementation of, the selected response actions safely and effectively:

OPS-PS—3.1.1 Secure, characterize, and preserve the scene.
NFPA 472 6.5.4.1(1)

OPS-PS—3.1.2 Document personnel and scene activities associated with incident.
NFPA 472 6.5.4.1(2)

OPS-PS—3.1.3 Describe whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks.
NFPA 472 6.5.4.1(3)

OPS-PS—3.1.4 Notify the agency with investigative authority.
NFPA 472 6.5.4.1(4)

OPS-PS—3.1.5 Notify the EOD personnel.
NFPA 472 6.5.4.1(5)

OPS-PS—3.1.6 Identify potential sample/evidence to be collected.
NFPA 472 6.5.4.1(6)

OPS-PS—3.1.7 Demonstrate the procedures to protect samples and evidence from cross contamination.
NFPA 472 6.5.4.1(7)

OPS-PS—3.1.8 Demonstrate the correct techniques to collect samples utilizing the equipment provided.
NFPA 472 6.5.4.1(8)

OPS-PS—3.1.9 Demonstrate the documentation procedures.
NFPA 472 6.5.4.1(9)

OPS-PS—3.1.10 Demonstrate the sampling protocols.
NFPA 472 6.5.4.1(10)

OPS-PS—3.1.11 Demonstrate field screening protocols for sample/evidence collected.
NFPA 472 6.5.4.1(11)

OPS-PS—3.1.12 Demonstrate evidence labeling and packaging procedures.
NFPA 472 6.5.4.1(12)

OPS-PS—3.1.13 Demonstrate evidence decontamination procedures.
NFPA 472 6.5.4.1(13)

OPS-PS—3.1.14 Demonstrate evidence packaging procedures for evidence transportation.
NFPA 472 6.5.4.1(14)

OPS-PS—3.2 The operations level responder assigned to evidence preservation and sampling shall describe local procedures for the technical decontamination process.
NFPA 472 6.3.6.1

Tab 11

Environmental Health (Monitoring)

Operations Level Training Guidelines

ENVIRONMENTAL HEALTH AND SAFETY RESPONDERS

Introduction

This section addresses the competencies required for responders who would be expected to perform environment health and safety assessments concerning hazardous materials and WMD contamination levels. These individuals would like perform air monitoring and sampling procedures necessary to quantify the risks to response personnel, the general public and the environment. Due to their proximity to the hazardous materials and their operations within the exclusion zones, these individuals would be required to wear appropriate personal protective equipment and would require decontamination upon exiting the controlled areas.

Applicable Competency Areas:

Operations Core
Use of PPE
Technical Decontamination
Performing Air Monitoring
Preserving Evidence and Sampling

Anticipated Duration

40 – 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents
NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:
1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:
1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:
1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:
1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:
1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

OPS-PPE 1— Planning the Response

OPS-PPE—1.1
NFPA 472 6.2.3.1
OSHA OPS-B

Selecting Personal Protective Equipment

Given scenarios involving hazardous materials/WMD incidents with known and unknown hazardous materials/WMD, the operations level responder assigned to use personal protective equipment shall select the personal protective equipment required to support mission-specific tasks at hazardous materials/WMD incidents based upon local procedures.

OPS-PPE—1.1.1
NFPA 472 6.2.3.1(1)
OSHA OPS-B

Describe the types of personal protective equipment and EPA levels of protection.

OPS-PPE—1.1.1.1
NFPA 472 6.2.3.1(3)(c)
OSHA OPS-B

Identify the different designs of vapor-protective and splash-protective clothing.

OPS-PPE—1.1.1.2
NFPA 472 6.2.3.1(3)(d)
OSHA OPS-B

Identify the advantages and disadvantages of different types of heat exchange units.

OPS-PPE—1.1.1.3
NFPA 472 6.2.3.1(2)
OSHA OPS-B

Describe personal protective equipment options for the following hazards:

1. Thermal
2. Radiological
3. Asphyxiating;

4. Chemical
5. Etiological/biological
6. Mechanical

OPS-PPE—1.1.1.4
NFPA 472 6.2.3.1(3)(a)
OSHA OPS-B

Describe the following terms and explain their impact and significance on the selection of chemical-protective clothing:

1. Degradation
2. Penetration
3. Permeation

OPS-PPE—1.1.1.5
NFPA 472 6.2.3.1(3)(b)
OSHA OPS-B

Identify at least three indications of material degradation of chemical-protective clothing.

OPS-PPE—1.1.1.6
NFPA 472 6.2.3.1(3)(f)
OSHA OPS-B

Describe local procedures for going through technical decontamination process.

OPS-PPE—1.1.2
NFPA 472 6.2.3.1(3)(e)
OSHA OPS-B

Identify the physiological and psychological stresses of using personal protective equipment.

OPS-TD 1— Planning the Response

OPS-TD—1.1
NFPA 472 6.4.3.1

Selecting Personal Protective Equipment

Given an emergency response plan or standard operating procedures, the operations level responder assigned to technical decontamination operations shall select personal protective equipment required to support technical decontamination at hazardous materials/WMD incidents based upon local procedures.

OPS-TD—1.2
NFPA 472 6.4.3.2

Selecting Decontamination Procedures

Given scenarios involving hazardous materials/WMD incidents, the operations level responder assigned to technical decontamination operations shall select a technical decontamination procedure that will minimize the hazard and spread of contamination, determine the equipment required to implement that procedure.

OPS-TD—1.2.1
NFPA 472 6.4.3.2(1)

Identify the advantages and limitations of technical decontamination operations.

OPS-TD—1.2.2
NFPA 472 6.4.3.2(2)

Describe the advantages and limitations of each of the following technical decontamination methods:

1. Absorption
2. Adsorption
3. Chemical degradation
4. Dilution
5. Disinfection
6. Evaporation
7. Isolation and disposal
8. Neutralization
9. Sterilization
10. Solidification
11. Vacuuming

12. Washing

OPS-TD—1.2.3 NFPA 472 6.4.3.2(3) Identify sources of information for determining the correct technical decontamination procedure and identify how to access those resources in a hazardous materials/WMD incident.

OPS-TD—1.2.4 NFPA 472 6.4.3.2(4) Given resources provided by the AHJ, identify the supplies and equipment required to set up and implement technical decontamination operations.

OPS-TD—1.2.5 NFPA 472 6.4.3.2(5) Identify the procedures equipment, and safety precautions for processing evidence during technical decontamination operations at hazardous materials/WMD incidents.

OPS-TD—1.2.6 NFPA 472 6.4.3.2(6) Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, criminal suspects, and law enforcement/search canines brought to the decontamination corridor at hazardous materials/WMD incidents.

OPS-TD 2—Implementing the Planned Response

OPS-TD—2.1 NFPA 472 6.4.4.1 Performing Incident Management Duties

Given a scenario involving hazardous materials/WMD incident and the emergency response plan and/or standard operating procedures, the operations level responder assigned to technical decontamination operations shall demonstrate the technical decontamination duties assigned in the incident action plan.

OPS-TD—2.2 NFPA 472 6.4.4.1(1) Identify the role of the operations level responder assigned to technical decontamination operations during hazardous materials/WMD incidents.

OPS-TD—2.3 NFPA 472 6.4.4.1(2) Describe the procedures for implementing technical decontamination operations within the incident command system.

OPS-TD—2.4
NFPA 472 6.4.4.2

Performing Decontamination Operations Identified in Incident Action Plan

The responder assigned to technical decontamination operations shall demonstrate the ability to set up and implement the following types of decontamination operations:

Technical decontamination operations in support of entry operations.

Technical decontamination operations for ambulatory and non-ambulatory victims.

OPS-TD 3—Evaluating Progress

OPS-TD—3.1
NFPA 472 6.4.5.1

Evaluating the Effectiveness of the Technical Decontamination Process

Given examples of contaminated items that have undergone the required decontamination, the operations level responder assigned to technical decontamination operations shall identify procedures for determining whether the items have been fully decontaminated according to the standard operating procedures of the authority having jurisdiction and/or incident action plan.

OPS-TD 4—Terminating the Incident

OPS-TD—4.1
NFPA 472 6.4.6.1

Reporting and Documenting the Incident

Given a scenario involving a hazardous materials/WMD incident, the operations level responder assigned to technical decontamination operations shall complete the reporting and documentation requirements consistent with the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.1
NFPA 472 6.4.6.1(1)
Identify the reports and supporting technical documentation required by the emergency response plan and/or standard operating procedures.

OPS-TD—4.1.2
NFPA 472 6.4.6.1(2)
Describe the importance of personnel exposure records.

OPS-TD—4.1.3
NFPA 472 6.4.6.1(3)
Identify the steps in keeping an activity log and exposure records.

OPS-TD—4.1.4
NFPA 472 6.4.6.1(4)
Identify the requirements for filing documents and maintaining records.

OPS-AMS 1— Planning the Response

OPS-AMS—1.1 NFPA 472 6.7.3.1	Given the air monitoring and sampling equipment provided by the AHJ, the operations level responder assigned to perform air monitoring and sampling shall select the detection/monitoring equipment suitable for detecting or monitoring for solid, liquid, or gaseous hazardous materials/WMD.
OPS-AMS—1.2 NFPA 472 6.7.3.2-3	Given detection/monitoring devices(s) provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall describe the operation, capabilities and limitations, local monitoring procedures, field testing, and maintenance procedures associated with each device.
OPS-AMS—1.3 NFPA 472 6.7.3.4	Selecting Personal Protective Equipment The operations level responder assigned to perform air monitoring and sampling shall select the personal protective equipment required to support air monitoring and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-AMS 2—Implementing the Planned Response

OPS-AMS—2.1 NFPA 472 6.7.4.1	Given a scenario involving hazardous materials/WMD and detection/ monitoring devices provided by the AHJ, the operations level responders assigned to perform air monitoring and sampling shall demonstrate the field test and operation of each device and interpret the readings based on local procedures.
OPS-AMS—2.2 NFPA 472 6.6.4.1	Describe procedures for post-air monitoring and sampling decontamination.

OPS-PS 1— Analyzing the Incident

OPS-PS—1.1
NFPA 472 6.5.2.1

Determine If the Incident Is Potentially Criminal in Nature and Identify the Law Enforcement Agency Having Investigative Jurisdiction

Given examples of hazardous materials/WMD incidents involving potential criminal intent, the operations level responder assigned to evidence preservation and sampling shall describe the potential criminal violation and identify the law enforcement agency having investigative jurisdiction.

OPS-PS—1.1.1
NFPA 472 6.5.2.1(1)

Given examples of the following hazardous materials/WMD incidents, the operations level responder shall describe products potentially encountered in the incident associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS—1.1.2
NFPA 472 6.5.2.1(2)

Given examples of the following hazardous materials/WMD incidents, identify the agency(s) with investigative authority and the incident response considerations associated with each situation:

1. Hazardous materials/WMD suspicious letter
2. Hazardous materials/WMD suspicious package
3. Hazardous materials/WMD illicit laboratory
4. Release/attack with a WMD agent
5. Environmental crimes

OPS-PS 2—Planning the Response

OPS-PS—2.1
NFPA 472 6.5.3.1

Identify Unique Aspects of Criminal Hazardous Materials/WMD Incidents

The operations level responder assigned to evidence preservation and sampling shall be capable of identifying the unique aspects associated with illicit laboratories, hazardous materials/WMD incidents, and environmental crimes.

OPS-PS—2.1.1
NFPA 472 6.5.3.1(1)(a)-(e)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Secure, characterize, and preserve the scene
2. Document personnel and scene activities associated with incident
3. Determine whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks
4. Notify the agency with investigative authority
5. Notify the Explosive Ordnance Disposal (EOD) personnel

OPS-PS—2.1.2
NFPA 472 6.5.3.1(1)(f)-(g)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to identify:

1. Potential sample/evidence
2. The applicable sampling equipment

OPS-PS—2.1.3
NFPA 472 6.5.3.1(1)(h)-(o)

Given an incident involving illicit laboratories, a hazardous materials/ WMD incident, or an environmental crime, the responder shall be able to describe the following procedures:

1. Procedures to protect samples and evidence from cross contamination
2. Documentation procedures
3. Evidentiary sampling techniques
4. Field screening protocols for sample/evidence collected
5. Evidence labeling and packaging procedures
6. Evidence decontamination procedures
7. Evidence packaging procedures for evidence transportation
8. Chain of custody procedures

OPS-PS—2.1.4
NFPA 472 6.5.3.1(2)(a)-(d)

Given an example of an illicit laboratory, the operations level responder assigned to evidence preservation and sampling shall be able to describe:

1. Hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Sampling options associated with liquid and solid sample/evidence collection
4. Field screening protocols for samples/evidence collected

OPS-PS—2.1.5
NFPA 472 6.5.3.1(3)(a)-(d)

Given an example of an environmental crime, the operations level responder assigned to evidence preservation and sampling shall be able to:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.6
NFPA 472 6.5.3.1(4)(a)-(d)

Given an example of a hazardous materials/WMD suspicious letter, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.7
NFPA 472 6.5.3.1(5)(a)-(d)

Given an example of a hazardous materials/WMD suspicious package, the responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination, and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.8
NFPA 472 6.5.3.1(6)

Given an example of a release/attack involving a hazardous material/WMD agent, the operations level responder assigned to evidence preservation and sampling shall be able to perform the following tasks:

1. Describe the hazards, safety procedures, decontamination and tactical guidelines for this type of incident
2. Describe the factors to be evaluated in selecting the personal protective equipment, sampling equipment, detection devices, and sample/evidence packaging and transport containers
3. Describe the sampling options associated with liquid and solid sample/evidence collection
4. Describe the field screening protocols for samples/evidence collected

OPS-PS—2.1.9
NFPA 472 6.5.3.1(7)

Given examples of different types of potential criminal hazardous materials/WMD incidents, the operations level responder shall identify and describe the application, use, and limitations of the various types field screening tools that can be utilized for screening the following:

1. Corrosivity
2. Flammability
3. Oxidation
4. Radioactivity
5. Volatile organic compounds (VOC)

OPS-PS—2.1.10
NFPA 472 6.5.3.1(8)

Describe the potential adverse impact of using destructive field screening techniques.

OPS-PS—2.1.11 Describe the procedures for maintaining the evidentiary integrity of any item removed from the crime scene.
NFPA 472 6.5.3.1(9))

OPS-PS—2.2 Selecting Personal Protective Equipment
NFPA 472 6.5.3.2

The operations level responder assigned to evidence preservation and sampling shall select the personal protective equipment required to support evidence preservation and sampling at hazardous materials/WMD incidents based upon local procedures.

OPS-PS 3—Implementing the Planned Response

OPS-PS—3.1 Implementing the Planned Response
NFPA 472 6.5.4.1

Given the incident action plan for a criminal incident involving hazardous materials/WMD, the operations level responder assigned to evidence preservation and sampling shall implement, or oversee the implementation of, the selected response actions safely and effectively:

OPS-PS—3.1.1 Secure, characterize, and preserve the scene.
NFPA 472 6.5.4.1(1)

OPS-PS—3.1.2 Document personnel and scene activities associated with incident.
NFPA 472 6.5.4.1(2)

OPS-PS—3.1.3 Describe whether or not the responders are within their legal authority to perform evidence preservation and sampling tasks.
NFPA 472 6.5.4.1(3)

OPS-PS—3.1.4 Notify the agency with investigative authority.
NFPA 472 6.5.4.1(4)

OPS-PS—3.1.5 Notify the EOD personnel.
NFPA 472 6.5.4.1(5)

OPS-PS—3.1.6 Identify potential sample/evidence to be collected.
NFPA 472 6.5.4.1(6)

OPS-PS—3.1.7 Demonstrate the procedures to protect samples and evidence from cross contamination.
NFPA 472 6.5.4.1(7)

OPS-PS—3.1.8 Demonstrate the correct techniques to collect samples utilizing the equipment provided.
NFPA 472 6.5.4.1(8)

OPS-PS—3.1.9 Demonstrate the documentation procedures.
NFPA 472 6.5.4.1(9)

OPS-PS—3.1.10 Demonstrate the sampling protocols.
NFPA 472 6.5.4.1(10)

OPS-PS—3.1.11 Demonstrate field screening protocols for sample/evidence collected.
NFPA 472 6.5.4.1(11)

OPS-PS—3.1.12 Demonstrate evidence labeling and packaging procedures.
NFPA 472 6.5.4.1(12)

OPS-PS—3.1.13 Demonstrate evidence decontamination procedures.
NFPA 472 6.5.4.1(13)

OPS-PS—3.1.14 Demonstrate evidence packaging procedures for evidence transportation.
NFPA 472 6.5.4.1(14)

OPS-PS—3.2 The operations level responder assigned to evidence preservation and sampling shall describe local procedures for the technical decontamination process.
NFPA 472 6.3.6.1

Tab 12

EMS - Patient Care BLS

Operations Level Training Guidelines

EMS RESPONDERS PERFORMING PATIENT CARE AFTER DECONTAMINATION

Introduction

This section addresses the competencies required for EMS responders would be expected to perform patient care in the support zone of operations. These responders would care for the patient after decontamination and would treat at either the basic life support or the advance life support level of care. If these EMS personal were expected to wear personal protective equipment or operate in the exclusion zone of operations, then addition mission specific competencies would be required based upon performance expectations.

Applicable Competency Areas:

Operations Core
BLS or ALS Treatment Competencies

Anticipated Duration

24 – 48 Hours

OPS-CORE 1—Surveying the Incident

OPS-CORE 1.1 Surveying the Hazardous Materials/WMD Incidents

NFPA 5.2.1
OSHA OPS-A
OSHA AWARE-B

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall survey the incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions.

OPS-CORE—1.1.1
NFPA 5.2.1.1
OSHA OPS-A
OSHA AWARE-C

Given three examples each of liquid, gas, and solid hazardous materials or WMD, including various hazard classes, operations level personnel shall identify the general shapes of containers in which the hazardous materials/WMD are typically found.

OPS-CORE—1.1.1.1
NFPA 5.2.1.1.1
OSHA OPS-A
OSHA AWARE-C

Given examples of the following tank cars, identify each tank car by type, as follows:

1. Cryogenic liquid tank cars
2. Nonpressure tank cars (general service or low pressure cars)
3. Pressure tank cars

OPS-CORE—1.1.1.2
NFPA 5.2.1.1.2
OSHA OPS-A
OSHA AWARE-C

Given examples of the following intermodal tanks, identify each intermodal tank by type, as follows:

1. Nonpressure intermodal tanks
2. Pressure intermodal tanks
3. Specialized intermodal tanks, including the following:
4. Cryogenic intermodal tanks
5. Tube modules

OPS-CORE—1.1.1.3
NFPA 5.2.1.1.3
OSHA OPS-A
OSHA AWARE-C

Given examples of the following cargo tanks, identify each cargo tank by type, as follows:

1. Compressed gas tube trailers
2. Corrosive liquid tanks
3. Cryogenic liquid tanks
4. Dry bulk cargo tanks
5. High pressure tanks
6. Low pressure chemical tanks
7. Nonpressure liquid tanks

OPS-CORE—1.1.1.4
NFPA 5.2.1.1.4
OSHA OPS-A
OSHA AWARE-C

Given examples of the following storage tanks, identify each tank by type, as follows:

1. Cryogenic liquid tank
2. Nonpressure tank
3. Pressure tank

OPS-CORE—1.1.1.5
NFPA 5.2.1.1.5
OSHA OPS-A
OSHA AWARE-C

Given examples of the following nonbulk packaging, identify each package by type, as follows:

1. Bags
2. Carboys
3. Cylinders
4. Drums
5. Dewars flask (cryogenic liquids)

OPS-CORE—1.1.1.6
NFPA 5.2.1.1.6
OSHA OPS-A

Given examples of the following radioactive material packages, identify the characteristics of each container/package by type, as follows:

1. Excepted
2. Industrial
3. Type A
4. Type B
5. Type C

OPS-CORE—1.1.2
NFPA 5.2.1.2
OSHA OPS-A

Given examples of containers, identify the markings that differentiate one container from another.

OPS-CORE—1.1.2.1
NFPA 5.2.1.2.1
OSHA OPS-A

Given examples of the following marked transport vehicles and their corresponding shipping papers, identify the vehicle or tank identification marking:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment including tank containers
3. Rail transport vehicles, including tank cars

OPS-CORE—1.1.2.2
NFPA 5.2.1.2.2
OSHA OPS-A

Given examples of facility containers, identify the markings indicating container size, product contained, and/or site identification numbers.

OPS-CORE—1.1.3
NFPA 5.2.1.3
OSHA OPS-A
OSHAAWARE-E

Given examples of hazardous materials incidents, identify the name(s) of the hazardous material(s).

OPS-CORE—1.1.3.1
NFPA 5.2.1.3.1
OSHA OPS-A
OSHAAWARE-E

Identify the following information on a pipeline marker:

1. Emergency telephone number
2. Owner
3. Product

OPS-CORE—1.1.3.2
NFPA 5.2.1.3.2
OSHA OPS-A
OSHAAWARE-E

Given a pesticide label, identify each of the following pieces of information, then match the piece of information to its significance in surveying the hazardous materials incident:

1. Active ingredient
2. Hazard statement
3. Name of pesticide
4. Pest control product (PCP) number (in Canada)
5. Precautionary statement
6. Signal word

OPS-CORE—1.1.3.3
NFPA 5.2.1.3.3
OSHA OPS-A

Given a label for a radioactive material, identify the type or category of label, contents, activity, transport index, and criticality safety index as applicable.

OPS-CORE—1.1.4
NFPA 5.2.1.4
OSHA OPS-A

Identify and list the surrounding conditions that should be noted when a hazardous materials/WMD incident is surveyed.

OPS-CORE—1.1.5
NFPA 5.2.1.5
OSHA OPS-A

Give examples of ways to verify information obtained from the survey of a hazardous materials/WMD incident.

OPS-CORE—1.1.6
NFPA 5.2.1.6
OSHA OPS-A

The operations level responder shall identify at least three additional hazards that could be associated with an incident involving terrorist or criminal activities.

OPS-CORE—1.2
NFPA 5.2.2
OSHA OPS-A

Collecting Hazard and Response Information

Given scenarios involving hazardous materials/WMD, the operations level responder shall collect hazard and response information using MSDS, CHEMTREC/CANUTEC/SETIQ, governmental authorities, and shipper/manufacturer.

OPS-CORE—1.2.1
NFPA 5.2.2(1)
OSHA OPS-A
OSHA AWARE-E

Match the definitions associated with the UN/DOT hazard classes and divisions of hazardous materials/WMD, including refrigerated liquefied gases and cryogenic liquids, with the class or division.

OPS-CORE—1.2.2
NFPA 5.2.2(2)
OSHA OPS-A

Identify two ways to obtain an MSDS in an emergency.

OPS-CORE—1.2.3
NFPA 5.2.2(3)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Using an MSDS for a specified material, identify the following hazard and response information:

1. Physical and chemical characteristics
2. Physical hazards of the material
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Responsible party contact
8. Precautions for safe handling (including hygiene practices, protective measures, procedures for cleanup of spills or leaks)
9. Applicable control measures including personal protective equipment
10. Emergency and first-aid procedures

OPS-CORE—1.2.4
NFPA 5.2.2(4)
OSHA OPS-A
OSHA AWARE-E

Identify the following:

1. Type of assistance provided by CHEMTREC/CANUTEC/SETIQ, and governmental authorities
2. Procedure for contacting CHEMTREC/CANUTEC/SETIQ, and governmental authorities
3. Information to be furnished to CHEMTREC/CANUTEC/SETIQ, and governmental authorities

OPS-CORE—1.2.5
NFPA 5.2.2(5)
OSHA OPS-A
OSHA AWARE-E

Identify two methods of contacting the manufacturer or shipper to obtain hazard and response information.

OPS-CORE—1.2.6
NFPA 5.2.2(6)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the type of assistance provided by governmental authorities with respect to criminal or terrorist activities involving the release or potential release of hazardous materials/WMD.

OPS-CORE—1.2.7
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

Identify the procedure for contacting local, state, and federal authorities as specified in the local emergency response plan and/or standard operating procedures.

OPS-CORE—1.2.8
NFPA 5.2.2(7)
OSHA OPS-A
OSHA AWARE-E
OSHA I.C.-C.4

The Operations Level Responder at the core competency level shall identify the following items related to "E-Plan"

The basic function and role of E-Plan
How to access E-Plan on the internet and its URL
How to apply for E-Plan access

The type of information E-Plan can provide during planning or an emergency

OPS-CORE—1.2.9
NFPA 5.2.2(8)
OSHA OPS-A,B,C,D,F
OSHA AWARE-A
OSHA I.C.-C.4

Describe the properties and characteristics of the following:

1. Alpha radiation
2. Beta radiation
3. Gamma rays
4. Neutron radiation

OPS-CORE—1.3
NFPA 5.2.3
OSHA OPS-A

Predicting the Likely Behavior of a Material and its Container

Given scenarios involving hazardous materials/WMD incidents, each with a single hazardous material/WMD, the operations level responder shall predict the likely behavior of the material/agent and its container.

OPS-CORE—1.3.1
NFPA 5.2.3(1)
OSHA OPS-A,C

Interpret the hazard and response information obtained from the current edition of the Emergency Response Guidebook; MSDS; CHEMTREC/CANUTEC/SETIQ; governmental authorities; and shipper/manufacturer contacts.

OPS-CORE—1.3.1.1
NFPA 5.2.3(1)(a)
OSHA OPS-A,C

Match the following chemical and physical properties with their significance and impact on the behavior of the container and/or its contents:

1. Boiling point
2. Chemical reactivity
3. Corrosivity (pH)
4. Flammable (explosive) range (LEL & UEL)
5. Flash point
6. Ignition (auto ignition) temperature
7. Particle Size
8. Persistence
9. Physical state (solid, liquid, gas)
10. Radiation (ionizing and non-ionizing)
11. Specific gravity
12. Toxic products of combustion
13. Vapor density
14. Vapor pressure
15. Water solubility

OPS-CORE—1.3.1.2
NFPA 5.2.3(1)(b)
OSHA OPS-A,C

Identify the differences between the following terms:

1. Contamination and secondary contamination
2. Exposure and contamination
3. Exposure and hazard
4. Infectious and contagious
5. Acute effects and chronic effects
6. Acute exposures and chronic exposures

OPS-CORE—1.3.2
NFPA 5.2.3(2)
OSHA OPS-A

Identify three types of stress that could cause a container system to release its contents.

OPS-CORE—1.3.3
NFPA 5.2.3(3)
OSHA OPS-A

Identify five ways in which containers can breach.

OPS-CORE—1.3.4
NFPA 5.2.3(4)
OSHA OPS-A

Identify four ways in which containers can release their contents.

OPS-CORE—1.3.5
(See Spec Topics)

Identify the general testing requirements for “Type A,” ”Type B,” and “Special Form” packaging used for radioactive material transportation.

Rad. 1st Resp.

OPS-CORE—1.3.6
Rad. 1st Resp.
(See Spec Topics)

Identify common “industrial radiography” sources and any specialized large-quantity radioactive materials packages commonly transported through the local jurisdiction by their shapes and characteristics.

OPS-CORE—1.3.7
NFPA 5.2.3(5)
OSHA OPS-A

Identify at least four dispersion patterns that can be created upon release of a hazardous material.

OPS-CORE—1.3.8
NFPA 5.2.3(6)
OSHA OPS-A

Identify the time frames for estimating the duration that hazardous materials/WMD will present an exposure risk.

OPS-CORE—1.3.9
NFPA 5.2.3(7)
OSHA OPS-A

Identify the health and physical hazards that could cause harm.

OPS-CORE—1.3.10
NFPA 5.2.3(8)
OSHA OPS-A,C

Identify the health hazards associated with the following terms:

1. Alpha, beta, gamma, and neutron radiation
2. Asphyxiant
3. Carcinogen
4. Convulsant
5. Corrosive
6. Highly toxic
7. Irritant
8. Sensitizer/allergen
9. Target organ effects
10. Toxic

OPS-CORE—1.3.11
NFPA 5.2.3(9)
OSHA OPS-A,C

Given the following, identify the corresponding UN/DOT hazard class and division:

1. Blood agents
2. Biological agents and biological toxins
3. Choking agents
4. Irritants (riot control agents)
5. Nerve agents
6. Radiological materials
7. Vesicants (blister agents)

OPS-CORE—1.4
NFPA 5.2.4
OSHA OPS-A

Estimating the Potential Harm

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall estimate the potential harm within the endangered area at each incident.

OPS-CORE—1.4.1
NFPA 5.2.4(1)
OSHA OPS-A

Identify a resource for determining the size of an endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.2
NFPA 5.2.4(2)
OSHA OPS-A

Given the dimensions of the endangered area and the surrounding conditions at a hazardous materials/WMD incident, estimate the number and type of exposures within that endangered area.

OPS-CORE—1.4.3
NFPA 5.2.4(3)
OSHA OPS-A

Identify resources available for determining the concentrations of a released hazardous material/WMD within an endangered area.

OPS-CORE—1.4.4
NFPA 5.2.4(4)
OSHA OPS-A

Given the concentrations of the released material, identify the factors for determining the extent of physical, health, and safety hazards within the endangered area of a hazardous materials/WMD incident.

OPS-CORE—1.4.5
NFPA 5.2.4(5)
OSHA OPS-A

Describe the impact that time, distance, and shielding have on exposure to radioactive materials specific to the expected dose rate.

OPS-CORE 2—Planning the Response

OPS-CORE—2.1
NFPA 5.3.1
OSHA OPS B,D

Describing Response Objectives

Given at least two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the response objectives for each example.

OPS-CORE—2.1.1
NFPA 5.3.1(1)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident and the exposures, determine the number of exposures that could be saved with the resources provided by the AHJ.

OPS-CORE—2.1.2
NFPA 5.3.1(2)
OSHA OPS B,D

Given an analysis of a hazardous materials/WMD incident, describe the steps for determining response objectives.

OPS-CORE—2.1.3
NFPA 5.3.1(3)
OSHA OPS B,D

Describe how to assess the risk to a responder for each hazard class in rescuing injured persons at a hazardous materials/WMD incident.

OPS-CORE—2.1.4
NFPA 5.3.1(4)
OSHA OPS B,D

Assess the potential for secondary attacks/devices at criminal or terrorist events.

OPS-CORE—2.2
NFPA 5.3.2
OSHA OPS-B
OSHA IC-B.1,C.2

Identifying Action Options

Given examples of hazardous materials/WMD incidents(facility and transportation), including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment applicable to performing assigned tasks.

OPS-CORE—2.2.1
NFPA 5.3.2(1)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the options to accomplish a given response objective

OPS-CORE—2.2.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the prioritization of emergency medical care and removal of victims from the hazard area relative to exposure

OPS-CORE—2.3 Determining Suitability of Personal Protective Equipment.
NFPA 5.3.3

Given examples of hazardous materials/WMD incidents, including the name of the hazardous material/WMD involved and the anticipated type of exposure, the operations level responder shall determine whether available personal protective equipment is applicable to performing assigned tasks.

OPS-CORE—2.3.1
NFPA 5.3.3(1)
OSH OPS-B
OSHA IC-B.1,C.2

Identify the respiratory protection required for a given response option.

OPS-CORE—2.3.1.1
NFPA 5.3.2(1)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:

1. Positive pressure self-contained breathing apparatus (SCBA)
2. Positive pressure air-line respirators with required escape unit
3. Closed circuit SCBA
4. Powered air-purifying respirators (PAPR)
5. Air-purifying respirators (APR)
6. Particulate respirator

OPS-CORE—2.3.1.2
NFPA 5.3.2(1)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the required physical capabilities and limitations of personnel working in respiratory protection.

OPS-CORE—2.3.2
NFPA 5.3.2(2)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the personal protective clothing required for a given option.

OPS-CORE—2.3.2.1
NFPA 5.3.2(2)(a)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify skin contact hazards encountered at hazardous materials/WMD incidents.

OPS-CORE—2.3.2.2
NFPA 5.3.2(2)(b)
OSHA OPS-B
OSHA IC-B.1,C.2

Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:

1. Chemical-protective clothing
2. Liquid splash–protective clothing
3. Vapor-protective clothing
4. High temperature–protective clothing
5. Proximity suit
6. Entry suits
7. Structural fire-fighting protective clothing

OPS-CORE—2.4 Identifying Decontamination Issues
NFPA 5.3.4
OSHA OPS-E,F

Given scenarios involving hazardous materials/WMD incidents, operations level responders shall identify when emergency decontamination is needed.

OPS-CORE—2.4.1
NFPA 5.3.4(1)
OSHA OPS-A

Identify ways that people, personal protective equipment, apparatus, tools and equipment become contaminated.

OPS-CORE—2.4.2
NFPA 5.3.4(2)
OSHA OPS-A

Describe how the potential for cross contamination determines the need for decontamination.

OPS-CORE—2.4.3
NFA 5.3.4(3)
OSHA OPS-E,F

Explain the importance and limitations of decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.4
NFPA 5.3.4(4)
OSHA OPS-A,E,F

Identify the purpose of emergency decontamination procedures at hazardous materials incidents.

OPS-CORE—2.4.5
NFPA 5.3.4(5)
OSHA OPS-A,E,F

Identify the factors that should be considered in emergency decontamination.

OPS-CORE—2.4.6
NFPA 5.3.4(6)
OSHA OPS-A,E,F

Identify the advantages and limitations of emergency decontamination procedures.

OPS-CORE—2.4.7
Rad. 1st Resp.
(See Spec. Topics)

Describe the procedure listed in the local Emergency Response Plan or the organization's Standard Operating Procedures for decontamination of a large number of people exposed to hazardous materials.

OPS-CORE 3—Implementing the Planned Response

OPS-CORE—3.1
NFPA 5.4.1
OSHA OPS-F
OSHA I.C.-B,D

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall identify how to establish and enforce scene control including control zones, emergency decontamination, and communications between responders and to the public.

OPS-CORE—3.1.1
NFPA 5.4.1(1)
OSHA OPS-F
OSHA I.C.-B,D

Identify the procedures for establishing scene control through control zones.

OPS-CORE—3.1.2
NFPA 5.4.1(2)
OSHA I.C.-B,D

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

OPS-CORE—3.1.3
NFPA 5.4.1(3)
OSHA I.C.-B,D

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering in-place protection

OPS-CORE—3.1.4
NFPA 5.4.1(4)
OSHA OPS-E

Demonstrate the ability to perform emergency decontamination.

OPS-CORE—3.1.5
NFPA 5.4.1(5)
OSHA OPS-F
OSHA I.C.-B.1
(See Special Topics: Terrorism)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities

OPS-CORE—3.1.6
NFPA 5.4.1(6)
OSHA OPS-E

Identify the procedures for insuring coordinated communication between responders and to the public.

OPS-CORE—3.2 Preserving Evidence

NFPA 5.4.2

Given two scenarios involving hazardous materials/WMD incidents, the operations level responder shall describe the process to preserve evidence as listed in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3 Initiating the Incident Command System

NFPA 5.4.3
OSHA I.C.-A,A.2

Given scenarios involving hazardous materials/WMD incidents, the operations level responder shall initiate the incident command system specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.1
NFPA 5.4.3(1)
OSHA OPS-F
OSHA I.C.-D

Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.

OPS-CORE—3.3.2
NFPA 5.4.3(2)
OSHA I.C.-D

Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

OPS-CORE—3.3.3
NFPA 5.4.3(3)
OSHA I.C.-A,A.1,A.2,B,D

Identify the purpose, need, benefits, and elements of the incident command system (ICS) for hazardous materials/WMD incidents.

OPS-CORE—3.3.4
NFPA 5.4.3(4)
OSHA I.C.-A.3,C.1

Identify the duties and responsibilities of the following functions within the incident management system:

1. Incident safety officer
2. Hazardous materials branch/group

OPS-CORE—3.3.5
NFPA 5.4.3(5)
OSHA I.C.-A,B,D

Identify the considerations for determining the location of the command post for a hazardous materials/WMD incident.

OPS-CORE—3.3.6
NFPA 5.4.3(6)
OSHA I.C.-A,B,D

Identify the procedures for requesting additional resources at a hazardous materials/WMD incident.

OPS-CORE—3.3.7
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

OPS-CORE—3.3.8
NFPA 5.4.3(7)
OSHA I.C.-A.3,C.1

The Operations level responder shall describe the roll of the FBI 12 step process of evidence collection at the illicit hazardous materials incident

OPS-CORE—3.4 Using Personal Protective Equipment
NFPA 5.4.4
OSHA OPS-B

The operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ.

OPS-CORE—3.4.1
NFPA 5.4.4(1)
OSHA I.C.-C.5

Identify the importance of the buddy system.

OPS-CORE—3.4.2
NFPA 5.4.4(2)
OSHA I.C.-C.2

Identify the importance of the backup personnel.

OPS-CORE—3.4.3
NFPA 5.4.4(3)
OSHA OPS-F

Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents.

OPS-CORE—3.4.4
NFPA 5.4.4(4)
OSHA OPS-F

Identify the signs and symptoms of heat and cold stress and procedures for their control.

OPS-CORE—3.4.5
NFPA 5.4.4(5)
OSHA I.C.-C

Identify the capabilities and limitations of personnel working in the personal protective equipment as provided by the AHJ.

OPS-CORE—3.4.6
NFPA 5.4.4(6)
OSHA OPS-C

Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AJH.

OPS-CORE—3.4.7
NFPA 5.4.4(7)
OSHA 29 CFR 1910.134

Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations.

OPS-CORE 4— Evaluating Progress

OPS-CORE—4.1 Evaluating the Status of the Planned Response
NFPA 5.5.1
OSHA OPS-D

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall evaluate the status of the actions taken in accomplishing the response objectives.

OPS-CORE—4.1.1
NFPA 5.5.1(1)
OSHA OPS-A,D
OSHA I.C.-A,D

Identify the considerations for evaluating whether actions taken were effective in accomplishing the objectives.

OPS-CORE—4.1.2
NFPA 5.5.1(2)
OSHA OPS-A,D
OSHA I.C.-A,D

Describe the circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

OPS-CORE—4.2
NFPA 5.2.2
OSHA OPS-D

Communicating the Status of the Planned Response

Given two scenarios involving hazardous materials/WMD incidents, including the incident action plan, the operations level responder shall communicate the status of the planned response through the normal chain of command.

OPS-CORE—4.2.1
NFPA 5.2.2(1)
OSHA OPS-D

Identify the methods for communicating the status of the planned response through the normal chain of command.

OPS-CORE—4.2.2
NFPA 5.2.2(2)
OSHA OPS-A,D

Identify the methods for immediate notification of the incident commander and other response personnel about critical emergency conditions at the incident.

BLS 1—Analyzing the Hazardous Materials Incident

BLS—1.1 Surveying Hazardous Materials/WMD Incidents
NFPA 4.2.1

Given scenarios of hazardous materials/WMD incidents, the BLS level responder shall assess the nature and severity of the incident as it relates to anticipated or actual EMS responsibilities at the scene.

BLS—1.1.1
NFPA 4.2.1.1

Given examples of the following types of containers, the BLS level responder shall identify the potential mechanisms of injury/harm and possible treatment modalities:

1. Pressure
2. Nonpressure
3. Cryogenic
4. Radioactive

BLS—1.1.2
NFPA 4.2.1.2

Given examples of the nine U.S. Department of Transportation (DOT) hazard classes, the BLS level responder shall identify possible treatment modalities associated with each hazard class.

BLS—1.1.3
NFPA 4.2.1.3

Given examples of various hazardous materials/WMD incidents at fixed facilities, the BLS level responder shall identify the following available health-related resource personnel:

1. Environmental health and safety representatives
2. Radiation safety officers
3. Occupational physicians and nurses
4. Site emergency response teams
5. Product or container specialists

BLS—1.1.4
NFPA 4.2.1.4

Given various scenarios of hazardous materials/WMD incidents, the BLS level responder, working within an incident command system, shall evaluate the off-site consequences of the release based on the physical and chemical nature of the released substance and the prevailing environmental factors, to determine the need to evacuate or to shelter in place affected persons.

BLS—1.1.5
NFPA 4.2.1.5

Given examples of the following biological threat agents, the ALS level responder shall define the various types of biological threat agents, including the signs and symptoms of exposure, mechanism of toxicity, incubation periods, possible disease patterns, and likely means of dissemination:

1. Variola virus (smallpox)
2. Botulinum toxin
3. E. coli O157:H7
4. Ricin toxin
5. B. anthracis (anthrax)
6. Venezuelan equine encephalitis virus
7. Rickettsia
8. Yersinia pestis (plague)
9. Tularemia
10. Viral hemorrhagic fever
11. Other CDC Category A–listed organism or threat

BLS—1.1.6
NFPA 4.2.1.6

Given examples of various types of hazardous materials/WMD incidents involving toxic industrial chemicals (TICs) and toxic industrial materials (TIMs) e.g., corrosives, reproductive hazards, carcinogens, nerve agents, flammable and/or explosive hazards, blister agents, blood agents, choking agents, and irritants), the BLS level responder shall determine the general health risks to patients exposed to those substances in the case of any release with the following:

1. A visible cloud
2. Liquid pooling
3. Solid dispersion

BLS—1.2
NFPA 4.2.1.7

Determining If a Hazardous Materials/WMD Incident Is an Illicit Laboratory Operation

Given examples of hazardous materials/WMD incidents involving illicit laboratory operations, BLS level responders assigned to respond to illicit laboratory incidents shall identify the potential drugs/WMD being manufactured.

BLS—1.2.1
NFPA 4.2.1.7(1)

Given examples of illicit drug manufacturing methods, describe the operational considerations, hazards, and products involved in the illicit process.

BLS—1.2.2
NFPA 4.2.1.7(2)

Given examples of illicit chemical WMD methods, describe the operational considerations, hazards and products involved in the illicit process.

BLS—1.2.3
NFPA 4.2.1.7(3)

Given examples of illicit biological WMD methods, describe the operational considerations, hazards, and products involved in the illicit process.

BLS—1.2.4
NFPA 4.2.1.7(4)

Given examples of illicit laboratory operations, describe the potential booby traps that have been encountered by response personnel

BLS—1.2.5
NFPA 4.2.1.7(5)

Given examples of illicit laboratory operations, describe the agencies that have investigative authority and operational responsibility to support the response.

BLS—1.3
NFPA 4.2.1.8

Determining Potential Patient Outcomes of Exposure to Radiation

Given examples of a hazardous materials/WMD incident involving radioactive materials, including radiological dispersion devices, the BLS level responder shall determine the probable health risks potential patient outcomes.

BLS—1.3.1
NFPA 4.2.1.8(1)

Determine the most likely exposure pathways for a given radiation exposure, including inhalation, ingestion, and direct skin exposure.

BLS—1.3.2
NFPA 4.2.1.8(2)

Identify the difference between radiation exposure and radioactive contamination and the health concerns associated with each.

BLS—1.3.3
NFPA 4.2.1.9

Given three examples of pesticide labels and labeling, the BLS level responder shall use the following information to determine the associated health risks:

1. Hazard statement
2. Precautionary statement
3. Signal word
4. Pesticide name

BLS—1.4
NFPA 4.2.2

Collecting and Interpreting Hazard and Response Information

The BLS level responder shall obtain information from the following sources to determine the nature of the medical problem and potential health effects:

1. Hazardous materials databases
2. Clinical monitoring
3. Reference materials
4. Technical information centers (e.g., CHEMTREC, CANUTEC, and SETIQ) and local state and federal authorities.
5. Technical information specialists
6. Regional poison control centers

BLS—1.5
NFPA 4.2.3

Establishing and Enforcing Scene Control Procedures

Given two scenarios involving hazardous materials/WMD incidents, the BLS level responder shall identify how to establish and enforce scene control, including control zones and emergency decontamination, and communications between responders and to the public.

BLS—1.5.1
NFPA 4.2.3(1)

Identify the procedures for establishing scene control through control zones.

BLS—1.5.2
NFPA 4.2.3(2)

Identify the criteria for determining the locations of the control zones at hazardous materials/WMD incidents.

BLS—1.5.3
NFPA 4.2.3(3)

Identify the basic techniques for the following protective actions at hazardous materials/WMD incidents:

1. Evacuation
2. Sheltering-in-place protection

BLS—1.5.4
NFPA 4.2.3(4)

Demonstrate the ability to perform emergency decontamination.

BLS—1.5.5
NFPA 4.2.3(5)

Identify the items to be considered in a safety briefing prior to allowing personnel to work at the following:

1. Hazardous materials incidents
2. Hazardous materials/WMD incidents involving criminal activities.

BLS—1.5.6
NFPA 4.2.3(2)

Identify the procedures for ensuring coordinated communication between responders and to the public.

BLS 2—Planning the Response

BLS—2.1
NFPA 4.3.1.1(1) – (3)

Identifying High Risk Areas for Potential Exposures

The BLS level responder, given an events calendar and pre-incident plans, which can include the local emergency planning committee plan, as well as the agency's emergency response plan and standard operating procedures (SOPs), shall identify the venues for mass gatherings, industrial facilities, potential targets for terrorism, and any other location where an accidental or intentional release of a harmful substance can pose an unreasonable health risk to any person in the local geographical area as determined by the AHJ and shall identify the following:

1. Locations where hazardous materials/WMD are used, stored, or transported
2. Areas and locations that present a potential for a high loss of life or rate of injury in the event of an accidental or intentional release of hazardous materials/WMD
3. External factors that may complicate a hazardous materials/WMD incident

BLS—2.2
NFPA 4.3.2.1(1)-(10)

Determining the Capabilities of the Local Hospital Network

The BLS level responder shall identify the following methods and vehicles available to transport hazardous materials patients and shall determine the location and potential routes of travel to the medically appropriate local and regional hospitals, based on the patients' needs:

1. Adult trauma centers
2. Pediatric trauma centers
3. Adult burn centers
4. Pediatric burn centers
5. Hyperbaric chambers
6. Established field hospitals
7. Dialysis centers
8. Supportive care facilities
9. Forward deployable assets
10. Other specialty hospitals or medical centers

BLS—2.2.1
NFPA 4.3.2.2

Given a list of receiving hospitals in the region, the BLS level responder shall describe the location, availability, and capability of hospital-based decontamination facilities.

BLS—2.2.2
NFPA 4.3.2.3

The BLS level responder shall describe the BLS protocols and SOPs at hazardous materials WMD incidents as developed by the AHJ and the prescribed role of medical control and poison control centers, as follows:

1. During mass casualty incidents
2. Where exposures have occurred
3. In the event of disrupted radio communications

ALS 1—Analyzing the Incident

ALS—1.1
NFPA 473 5.2.1

Surveying the Hazardous Materials/WMD Incidents

Given scenarios of hazardous materials/WMD incidents, the ALS level responder shall assess the nature and severity of the incident as it relates to anticipated or actual EMS responsibilities at the scene.

ALS—1.1.1
NFPA 473 5.2.1.1

Given examples of the following marked transport vehicles (and their corresponding shipping papers or identification systems) that can be involved in hazardous materials/WMD incidents, the ALS level responder shall evaluate the general health risks based on the physical and chemical properties of the anticipated contents:

1. Highway transport vehicles, including cargo tanks
2. Intermodal equipment, including tank containers
3. Rail transport vehicles, including tank cars

ALS—1.1.2
NFPA 473 5.2.1.2(1)

Given examples of various hazardous materials/WMD incidents at fixed facilities, the ALS level responder shall demonstrate the ability to identify a variety of containers and their markings, including bulk and nonbulk packages and containers, drums, underground and aboveground storage tanks, specialized storage tanks, or any other specialized containers found in the AHJ's geographic area, and evaluate the general health risks based on the physical and chemical properties of the anticipated contents.

ALS—1.1.3
NFPA 473 5.2.1.2(2)

Given examples of various hazardous materials/WMD incidents at fixed facilities, the ALS level responder shall demonstrate the ability to identify the following job functions of health-related resource personnel available at fixed facility hazardous materials/WMD incidents:

1. Environmental heath and safety representatives
2. Radiation safety officers
3. Occupational physicians and nurses
4. Site emergency response teams
5. Specialized experts

ALS—1.1.4
NFPA 473 5.2.1.3

The ALS level responder shall identify two ways to obtain a material safety data sheet (MSDS) at a hazardous materials/WMD incident and shall demonstrate the ability to identify the following health-related information:

1. Proper chemical name or synonyms
2. Physical and chemical properties
3. Health hazards of the material
4. Signs and symptoms of exposure
5. Routes of entry
6. Permissible exposure limits
7. Emergency medical procedures or recommendations
8. Responsible party contact

ALS—1.1.5
NFPA 473 5.2.1.4

Given scenarios at various fixed facilities, transportation incidents, pipeline release scenarios, maritime incidents, or any other unexpected hazardous materials/WMD incident, the ALS level responder, working within an incident command system must evaluate the off-site consequences of the release, based on the physical and chemical nature of the released substance, and the prevailing environmental factors to determine the need to evacuate or shelter in place affected persons.

ALS—1.1.6
N NFPA 473 5.2.1.5

Given examples of the following biological threat agents, the ALS level responder shall define the various types of biological threat agents, including the signs and symptoms of exposure, mechanism of toxicity, incubation periods, possible disease patterns, and likely means of dissemination:

1. Variola virus (smallpox)
2. Botulinum toxin
3. E. coli O157:H7
4. Ricin toxin
5. B. anthracis (anthrax)
6. Venezuelan equine encephalitis virus
7. Rickettsia
8. Yersinia pestis (plague)
9. Tularemia
10. Viral hemorrhagic fever
11. Other CDC Category A–listed organism or threat

ALS—1.1.7
NFPA 473 5.2.1.6*

Given examples of various types of hazardous materials/WMD incidents involving toxic industrial chemicals (TICs), toxic industrial materials (TIMs), blister agents, blood agents, nerve agents, choking agents and irritants, the ALS level responder shall determine the general health risks to patients exposed to those substances and identify those patients who may be candidates for antidotes.

ALS—1.1.8
NFPA 473 5.2.1.7*

Given examples of hazardous materials/WMD found at illicit laboratories, the ALS level responder shall identify general health hazards associated with the chemical substances that are expected to be encountered.

ALS—1.1.9
NFPA 473 5.2.1.8

Given examples of a hazardous materials/WMD incident involving radioactive materials, including radiological dispersion devices, the ALS level responder shall determine the probable health risks and potential patient outcomes.

ALS—1.1.9.1
NFPA 473 5.2.1.8(1)

Determine the types of radiation (alpha, beta, gamma, and neutron) and potential health effects of each.

ALS—1.1.9.2
NFPA 473 5.2.1.8(2)

Determine the most likely exposure pathways for a given radiation exposure, including inhalation, ingestion, and direct skin exposure.

ALS—1.1.9.3
NFPA 473 5.2.1.8(3)

Describe how the potential for cross contamination differs for electromagnetic waves compared to radioactive solids, liquids, or vapors.

ALS—1.1.9.4
NFPA 473 5.2.1.8(4)

Identify priorities for decontamination in scenarios involving radioactive materials.

ALS—1.1.9.5 Describe the manner in which acute medical illness or traumatic injury can influence decisions about decontamination and patient transport.
NFPA 473 5.2.1.8(5)

ALS—1.1.10 Given examples of typical labels found on pesticide containers, the ALS level responder shall define the following terms:
NFPA 473 5.2.1.9

- Pesticide name
- Pesticide classification (e.g., insecticide, rodenticide, organophosphate, carbamate, organochlorine.
- Environmental Protection Agency (EPA) registration number
- Manufacturer name
- Ingredients broken down by percentage
- Cautionary statement (e.g., Danger, Warning, Caution, Keep from Waterways)
- Strength and concentration
- Treatment information

ALS—1.2 Surveying Hazardous Materials/WMD Incidents
NFPA 473 5.2.2(1)-(11)

Collecting and Interpreting Hazard and Response Information. The ALS level responder shall demonstrate the ability to utilize various reference sources at a hazardous materials/WMD incident, including the following:

1. MSDS
2. CHEMTREC/CANUTEC/SETIQ
3. Regional poison control centers
4. DOT Emergency Response Guidebook
5. NFPA 704, Standard System for the Identification of the Hazards of Materials for Emergency Response identification system.
6. Hazardous Materials Information System (HMIS)
7. Local, state, federal, and provincial authorities
8. Shipper/manufacturer contacts
9. Agency for Toxic Substances and Disease Registry (ATSDR) medical management guidelines
10. Medical toxicologists
11. Electronic databases

ALS—1.3 Identifying Secondary Devices
NFPA 473 5.2.2.1

Given scenarios involving hazardous materials/WMD, the ALS level responders shall describe the importance of evaluating the scene for secondary devices prior to rendering patient care.

ALS—1.3.1 Evaluate the scene for likely areas where secondary devices can be placed.
NFPA 473 5.2.2.1(1)

ALS—1.3.2 Visually scan operating areas for a secondary device before providing patient care.
NFPA 473 5.2.2.1(2)

ALS—1.3.3 Avoid touching or moving anything that can conceal an explosive device.
NFPA 473 5.2.2.1(3)

ALS—1.3.4 Designate and enforce scene control zones.
NFPA 473 5.2.2.1(4)

ALS—1.3.5 (NFPA 473 5.2.2.1(5)) Evacuate victims, other responders, and nonessential personnel as quickly and safely as possible.

ALS 2—Planning the Response

ALS—2.1 (NFPA 473 5.3.1.1) Identifying High-Risk Areas for Potential Exposures

The ALS level responder, given an events calendar and pre-incident plans, which can include the local emergency planning committee plan as well as the agency's emergency response plan and SOPs, shall identify the venues for mass gatherings, industrial facilities, potential targets for terrorism, or any other locations where an accidental or intentional release of a harmful substance can pose an unreasonable health risk to any person within the local geographical area as determined by the AHJ.

ALS—2.1.1 (NFPA 473 5.3.1.1(1)) Identify locations where hazardous materials/WMD are used, stored, or transported.

ALS—2.1.2 (NFPA 473 5.3.1.1(2)) Identify areas and locations presenting a potential for a high loss of life or rate of injury in the event of an accidental/intentional release of a hazardous materials/WMD substance.

ALS—2.1.3 (*NFPA 473 5.3.1.1(3)*) Evaluate the geographic and environmental factors that can complicate a hazardous materials/WMD incident, including prevailing winds, water supply, vehicle and pedestrian traffic flow, ventilation systems, and other natural or man-made influences, including air and rail corridors.

ALS—2.2 (NFPA 473 5.3.2.1) Determining the Capabilities of the Local Hospital Network

The ALS level responder shall identify the methods and vehicles available to transport hazardous materials patients and shall determine the location and potential routes of travel to the following appropriate local and regional hospitals, based on patient need:

1. Adult trauma centers
2. Pediatric trauma centers
3. Adult burn centers
4. Pediatric burn centers
5. Hyperbaric chambers
6. Established field hospitals
7. Other specialty hospitals or medical centers

ALS—2.2.1 (NFPA 473 5.3.2.2) Given a list of local receiving hospitals in the AHJ's geographic area, the ALS level responder shall describe the location and availability of hospital-based decontamination facilities.

ALS—2.2.2 (NFPA 473 5.3.2.3) The ALS level responder shall describe the ALS protocols and SOPs developed by the AHJ and the prescribed role of medical control and poison control centers during mass casualty incidents, at hazardous materials/WMD incidents where exposures have occurred, and in the event of disrupted radio communications.

ALS—2.2.3
NFPA 473 5.3.2.4(1)-(5)

The ALS level responder shall identify the following mutual aid resources (hospital and non-hospital based) identified by the AHJ for the field management of multi-casualty incidents:

1. Mass-casualty trailers with medical supplies
2. Mass-decedent capability
3. Regional decontamination units
4. Replenishment of medical supplies during long-term incidents
5. Locations and availability of mass-casualty antidotes for selected exposures, including but not limited to the following:
6. Nerve agents and organophosphate pesticides
7. Biological agents and other toxins
8. Blood agents
9. Opiate exposures
10. Selected radiological exposures
11. Rehabilitation units for the EMS responders
12. Replacement transport units for those vehicles lost to mechanical trouble, collision, theft, and contamination

ALS—2.2.4
NFPA 473 5.3.2.5

The ALS level responder shall identify the special hazards associated with inbound and outbound air transportation of patients exposed to hazardous materials/WMD.

ALS—2.2.5
NFPA 473 5.3.2.6

The ALS level responder shall describe the available medical information resources concerning hazardous materials toxicology and response.

ALS—2.3
NFPA 473 5.3.3.1

Identifying Incident Communications

The ALS level responder shall identify the components of the communication plan within the AHJ geographic area and determine that the EMS providers have the ability to communicate with other responders on the scene, with transport units, and with local hospitals

ALS—2.3.1
NFPA 473 5.3.3.2(1)-(13)

Given examples of various patient exposure scenarios, the ALS level responder shall describe the following information to be transmitted to the medical control or poison control center or the receiving hospital prior to arrival:

- The exact name of the substance(s) involved
- The physical and chemical properties of the substance(s) involved
- Number of victims being transported
- Age and sex of transported patients
- Patient condition and chief complaint
- Medical history
- Circumstances and history of the exposure, such as duration of exposure and primary route of exposure
- Vital signs, initial and current
- Symptoms described by the patient, initial and current
- Presence of associated injuries, such as burns and trauma
- Decontamination status
- Treatment rendered or in progress, including the effectiveness of antidotes administered
- Estimated time of arrival

ALS—2.4 Identifying the Role of the ALS Level Responder
NFPA 473 5.3.4

Given scenarios involving hazardous materials/WMD, the ALS level responder shall identify his or her role during hazardous materials/WMD incidents as specified in the emergency response plan and SOPs developed by the AHJ.

ALS—2.4.1 (NFPA 473 5.3.4.1(1)) Describe the purpose, benefits, and elements of the incident command system as it relates to the ALS level responder.

ALS—2.4.2 (NFPA 473 5.3.4.1(2)) Describe the typical incident command structure for the emergency medical component of a hazardous materials/WMD incident as specified in the emergency response plan and SOPs developed by the AHJ.

ALS—2.4.3 (NFPA 473 5.3.4.1(3)) Demonstrate the ability of the ALS level responder to function within the incident command system.

ALS—2.4.4 (NFPA 473 5.3.4.1(4)) Demonstrate the ability to implement an incident command system for a hazardous materials/WMD incident where an ICS does not currently exist.

ALS—2.4.5 (NFPA 473 5.3.4.1(5)) Identify the procedures for requesting additional resources at a hazardous materials/WMD incident

ALS—2.4.6 (NFPA 473 5.3.4.2) Describe the hazardous materials/WMD ALS responder's role in the hazardous materials/WMD response plan developed by the AHJ or identified in the local emergency response plan as follows:

ALS—2.4.6.1 (NFPA 473 5.3.4.2(1)) Determine the toxic effect of hazardous materials/WMD.

ALS—2.4.6.2 (NFPA 473 5.3.4.2(2)) Estimate the number of patients.

ALS—2.4.6.3 (NFPA 473 5.3.4.2(3)) Recognize and assess the presence and severity of symptoms.

ALS—2.4.6.4 (NFPA 473 5.3.4.2(4)) Assess the impact on the health care system.

ALS—2.4.6.5 (NFPA 473 5.3.4.2(5)) Perform appropriate patient monitoring as follows:

1. Pulse oximetry
2. Cardiac monitor
3. End tidal CO2

ALS—2.4.6.6 (NFPA 473 5.3.4.2(6)) Communicate pertinent information.

ALS—2.4.6.7 (NFPA 473 5.3.4.2(7)) Estimate pharmacological need.

ALS—2.4.6.8 (NFPA 473 5.3.4.2(8)) Address threat potential for clinical latency.

ALS—2.4.6.9 Estimate dosage – exposure.
NFPA 473 5.3.4.2(9)

ALS—2.4.6.10 Estimate dosage – treatment.
NFPA 473 5.3.4.2(10)

ALS—2.4.6.11 Train in appropriate monitoring.
NFPA 473 5.3.4.2(11)

ALS—2.5 Supplemental Medical Resources
NFPA 473 5.3.5

Given scenarios of various hazardous materials/WMD mass casualty incidents, the ALS level responder shall identify the supplemental medical resources available to the AHJ, including the following:

ALS—2.5.1 Describe the strategic national stockpile (SNS) program, including the following components:
NFPA 473 5.3.5(1)

1. Intent and goals of the SNS program
2. Procedures and requirements for deploying the SNS to a local jurisdiction
3. Typical supplies contained in 12-hour push package
4. Role of the technical advisory response unit (TARU)

ALS—2.5.2 Describe the metropolitan medical response system(MMRS) including the following components:

1. Scope, intent, and goals of the MMRS
2. Capabilities and resources of the MMRS
3. Eight capability focus areas of the MMRS

ALS 3—Implementing the Planned Response

ALS—3.1 Determining the Nature of the Incident and Providing Medical Care
NFPA 473 5.4.1

The ALS level responder shall demonstrate the ability to provide emergency medical care to those patients exposed to hazardous materials/WMD by completing the following tasks:

ALS—3.1.1 The ALS level responder shall determine the physical state of the released substance and the environmental influences surrounding the release, as follows:
NFPA 473 5.4.1(1)

1. Solid
2. Liquid
3. Gas, vapor, dust, mist, aerosol

ALS—3.1.2 The ALS level responder shall identify potential routes of exposure, and correlate those routes of exposure to the physical state of the released substance, to determine the origin of the illness or injury, as follows:
NFPA 473 5.4.1(2)*

1. Inhalation
2. Absorption
3. Ingestion
4. Injection

ALS—3.1.3
NFPA 473 5.4.1(3)

The ALS level responder shall describe the potential routes of entry into the body, the common signs and symptoms of exposure, and the ALS treatment options approved by the AHJ (e.g., advanced airway management, drug therapy), including antidote administration where appropriate for exposure(s) to the following classification of substances:

1. Corrosives
2. Pesticides
3. Chemical asphyxiants
4. Simple asphyxiants
5. Organic solvents
6. Nerve agents
7. Vesicants
8. Blood agents
9. Choking agents
10. Irritants (riot control agents)
11. Biological agents and toxins
12. Incapacitating agents
13. Radiological materials
14. Nitrogen compounds
15. Opiate compounds
16. Fluorine compounds
17. Phenolic compounds

ALS—3.1.4
NFPA 473 5.4.1(4)

The ALS level responder shall describe the basic toxicological principles relative to assessment and treatment of persons exposed to hazardous materials, including the following:

1. Acute and delayed toxicological effects
2. Local and systemic effects
3. Dose-response relationship

ALS—3.1.5
NFPA 473 5.4.1(5)

Given examples of various hazardous substances, the ALS level responder shall define the basic toxicological terms as they relate to the treatment of an exposed patient, as follows:

1. Threshold limit value – time weighted average (TLVTWA)
2. Lethal doses and concentrations, as follows:
    - 2.1. LDlo
    - 2.2. LD50
    - 2.3. LDhi
    - 2.4. LClo
    - 2.5. LC50
    - 2.6. LChi
3. Parts per million/parts per billion/parts per trillioin (ppm/ppb/ppt)
4. Immediately dangerous to life and health (IDLH)
5. Permissible exposure limit (PEL)
6. Threshold limit value – short-term exposure limit (TLV-STEL)
7. Threshold limit value – ceiling (TLV-C)
8. Solubility
9. Poison – a substance that causes injury, illness, or death
10. Toxic – harmful nature related to amount and concentration

ALS—3.2
NFPA 473 5.4.1(6)

Evaluating the Progress and Effectiveness of Medical Care

Given examples of hazardous materials/WMD incidents with exposed patients, the ALS level responder shall evaluate the progress and effectiveness of the medical care provided at a hazardous materials/WMD incident, to ensure that the overall incident response objectives, along with patient care goals, are being met.

ALS—3.2.1
NFPA 473 5.4.1(6)a

Locate and track all exposed patients at a hazardous materials/WMD incident, from triage and treatment to transport to the appropriate hospital.

ALS—3.2.2
NFPA 473 5.4.1(6)b

Review the incident objectives at periodic intervals to ensure that patient care is being carried out within the overall incident response plan.

ALS—3.2.3
NFPA 473 5.4.1(6)c
Ensure that the incident command system forms are completed, along with the patient care forms required by the AHJ, during the course of the incident.

ALS—3.2.4
NFPA 473 5.4.1(6)d
Evaluate the need for trained and qualified EMS personnel, medical equipment, transport units, and other supplies, including antidotes based on the scope and duration of the incident.

ALS—3.3
NFPA 473 5.4.2*
Decontaminating Exposed Patients
Given the emergency response plan and SOPs developed by the AHJ and given examples of hazardous materials/WMD incidents with exposed patients, the ALS level responder shall do as follows:

ALS—3.3.1
NFPA 473 5.4.2(1)
Given the emergency response plan and SOPs developed by the AHJ, identify and evaluate the patient decontamination activities performed prior to accepting responsibility for and transferring care of exposed patients.

ALS—3.3.2
NFPA 473 5.4.2
Determine the need and location for patient decontamination, including mass-casualty decontamination, in the event none has been performed prior to arrival of EMS personnel.

ALS—3.3.2.1
NFPA 473 5.4.2(2)a
Given the emergency response plan and SOPs developed by the AHJ, identify and evaluate the patient decontamination activities performed prior to accepting responsibility for and transferring care of exposed patients; identify sources of information for determining the appropriate decontamination procedure and how to access those resources in a hazardous materials/WMD incident.

ALS—3.3.2.2
NFPA 473 5.4.2(2)b
Given the emergency response plan and SOPs developed by the AHJ, identify and evaluate the patient decontamination activities performed prior to accepting responsibility for and transferring care of exposed patients.

ALS—3.3.2.3
NFPA 473 5.4.2(2)c
Given the emergency response plan and SOPs provided by the AHJ, identify the supplies and equipment required to set up and implement technical or mass-casualty decontamination operations for ambulatory and non-ambulatory patients.

ALS—3.3.2.4
NFPA 473 5.4.2(2)d
Given the emergency response plan and SOPs developed by the AHJ, identify the procedures, equipment, and safety precautions for securing evidence during decontamination operations at hazardous materials/WMD incidents.

ALS—3.3.2.5
NFPA 473 5.4.2(2)e
Identify procedures, equipment, and safety precautions for handling tools, equipment, weapons, and law enforcement and K-9 search dogs brought to the decontamination corridor at hazardous materials/WMD incidents.

ALS—3.3.2.6
NFPA 473 5.4.2(2)f
Identify procedures, equipment, and safety precautions for communicating with critically, urgently, and potentially exposed patients, and population prioritization and management techniques.

ALS—3.3.2.7
NFPA 473 5.4.2(2)g

Determine the threat of cross contamination to all responders and patients by completing the following tasks:

1. Identify hazardous materials/WMD with a high risk of cross contamination.
2. Identify hazardous materials/WMD agents with a low risk of cross contamination.
3. Describe how the physical state of the hazardous materials/WMD provides clues to its potential for secondary contamination, when the exact identity of the hazardous materials/WMD is not known.

ALS—3.4
NFPA 473 5.4.3

Evaluating the Need for Medical Supplies

Given examples of single-patient and multi-casualty hazardous materials/WMD incidents, the ALS level responder shall determine if the available medical equipment, transport units, and other supplies, including antidotes, will meet or exceed expected patient care needs throughout the duration of the incident.

ALS—3.5
NFPA 473 5.4.4

Evidence Preservation

Given examples of hazardous materials/WMD incidents where criminal acts are suspected, the ALS level responder shall make every attempt to preserve evidence during the course of delivering patient care.

ALS—3.5.1
NFPA 473 5.4.4(1)

Determine if the incident is potentially criminal in nature and cooperate with the law enforcement agency having investigative jurisdiction.

ALS—3.5.2
NFPA 473 5.4.4(2)

Identify the unique aspects of criminal hazardous materials/WMD incidents, including crime scene preservation, evidence preservation, and destruction of potential evidence found on medical patients, and/or the destruction of evidence during the decontamination process.

ALS—3.5.3
NFPA 473 5.4.4(3)

Ensure that any information regarding suspects, sequence of events during a potential criminal act, or observations made based on patient presentation or during patient assessment are documented and communicated and passed on to the law enforcement agency having investigative jurisdiction.

ALS—3.6
NFPA 473 5.4.5

Medical Support at Hazardous Materials/WMD Incidents

Given the emergency response plan and SOPs developed by the AHJ and examples of various hazardous materials/WMD incidents, the ALS level responder shall describe the procedures for performing medical support of hazardous materials/WMD incident response personnel.

ALS—3.6.1
NFPA 473 5.4.5(1)

The ALS level responder responsible for pre-entry medical monitoring shall obtain hazard and toxicity information on the released substance from the designated hazardous materials technical reference resource or other reliable sources of information at the scene. The following information shall be conveyed to the entry team, incident safety officer, hazardous materials officer, other EMS personnel at the scene, and any other responders responsible for the health and well-being of those personnel operating at the scene:

1. Chemical name
2. Hazard class
3. Hazard and toxicity information
4. Applicable decontamination methods and procedures
5. Potential for secondary contamination
6. Procedure for transfer of patients from the constraints of the incident to the emergency medical system
7. Prehospital management of medical emergencies and exposures, including antidote administration

ALS—3.6.2
NFPA 473 5.4.5(2)

The ALS level responder shall evaluate the pre-entry health status of hazardous materials/WMD responders prior to donning PPE by performing the following tasks:

1. Record a full set of vital signs
2. Record body weight measurements
3. Record general health observations

ALS—3.6.3
NFPA 473 5.4.5(3)

The ALS level responder shall determine the medical fitness of those personnel charged with donning chemical protective clothing, using the criteria set forth in the emergency action plan (EAP) and the SOP developed by the AHJ. Consideration shall be given to excluding responders if they do not meet the following criteria prior to working in chemical protective clothing:

1. Core body temperature: hypothermia/hyperthermia
2. Blood pressure: hypotension/hypertension
3. Heart rate: bradycardia/tachycardia
4. Respiratory rate: bradypnea/tachypnea

ALS—3.6.4
NFPA 473 5.4.5(4)

The ALS level responder shall determine how the following factors influence heat stress on hazardous materials/WMD response personnel:

1. Baseline level of hydration
2. Underlying physical fitness
3. Environmental factors
4. Activity levels during the entry
5. Level of PPE worn
6. Duration of entry
7. Cold stress

ALS—3.6.5
NFPA 473 5.4.5(5)

Given examples of various hazardous materials/WMD incidents requiring the use of chemical protective ensembles, the ALS level responder shall complete the following tasks:

1. Demonstrate the ability to set up and operate a medical monitoring station.
2. Demonstrate the ability to recognize the signs and symptoms of heat stress, heat exhaustion, and heat stroke.
3. Determine the ALS needs for responders exhibiting the effects of heat stress, cold stress, and heat exhaustion.
4. Describe the medical significance of heat stroke and the importance of rapid transport to an appropriate medical receiving facility.

ALS—3.6.6
NFPA 473 5.4.5(6)

Given a simulated hazardous materials/WMD incident, the ALS level responder shall demonstrate documentation of medical monitoring activities.

ALS—3.6.7
NFPA 473 5.4.5(7)

The ALS level responder shall evaluate all team members after decontamination and PPE removal, using the following criteria:

1. Pulse rate — done within the first minute
2. Pulse rate — 3 minutes after initial evaluation
3. Temperature
4. Body weight
5. Blood pressure
6. Respiratory rate

ALS—3.6.8
NFPA 473 5.4.5(8)

The ALS level responder shall recommend that any hazardous materials team member exhibiting any of the following signs be prohibited from redonning chemical protective clothing:

1. Heat stress or heat exhaustion
2. Pulse rate: tachycardia/bradycardia
3. Core body temperature: hyperthermia/hypothermia
4. Recovery heart rate with a trend toward normal rate and rhythm
5. Blood pressure: hypertension/hypotension
6. Weight loss of >5 percent
7. Signs or symptoms of extreme heat exhaustion or heat stroke, which requires transport by ALS ambulance to the appropriate hospital

ALS—3.6.9
NFPA 473 5.4.5(9)

The ALS level responder shall notify immediately the appropriate persons designated by the emergency response plan if a team member requires significant medical treatment or transport (arranged through the appropriate designee identified by the emergency response plan).

ALS 4—Terminating the Incident

ALS—4.1
NFPA 473 5.5

Reporting and Documenting the Incident

Upon termination of the hazardous materials/WMD incident, the ALS level responder shall complete the reporting, documentation, and EMS termination activities as required by the local emergency response plan or the organization's SOPs.

ALS—4.1.1
NFPA 473 5.5(1)
Identify the reports and supporting documentation required by the emergency response plan or SOPs.

ALS—4.1.2
NFPA 473 5.5(2)
Demonstrate completion of the reports required by the emergency response plan or SOPs.

ALS—4.1.3
NFPA 473 5.5(3)
Describe the importance of personnel exposure records.

ALS—4.1.4
NFPA 473 5.5(4)
Describe the importance of debriefing records.

ALS—4.1.5
NFPA 473 5.5(5)
Describe the importance of critique records.

ALS—4.1.6
NFPA 473 5.5(6)
Identify the steps in keeping an activity log and exposure records.

ALS—4.1.7
NFPA 473 5.5(7)
Identify the steps to be taken in compiling incident reports that meet federal, state, local, and organizational requirements.

ALS—4.1.8
NFPA 473 5.5(8)
Identify the requirements for compiling personal protective equipment logs.

ALS—4.1.9
NFPA 473 5.5(9)
Identify the requirements for filing documents and maintaining records, as follows:

ALS—4.1.9.1
NFPA 473 5.5(9)a
List the information to be gathered regarding the exposure of all patient(s) and describe the reporting procedures, including the following:

1. Detailed information on the substances released
2. Pertinent information on each patient treated or transported
3. Routes, extent, and duration of exposures
4. Actions taken to limit exposure
5. Decontamination activities

ALS—4.1.9.2
NFPA 473 5.5(9)b
Identify the methods used by the AHJ to evaluate transport units for potential contamination and the process and locations available to decontaminate those units.