

FIRST RESPONDER OPERATIONS LEVEL

Comparison of HazMat Compliance/Essentials Operations CD-ROM Series to Standard for Professional Competence of Responders to Hazardous Materials Incidents (NFPA 472)

Objective	Competency Summary	Obj. Met	Module		Topic	
3-1.3	Goal Understand role of Operations Level responder	Y	1	Overview/General Principles	2	General Principles
3-2	Competencies – Analyzing the Incident	Y	2	Analyzing the Incident	All	
3-2.1	Surveying the Hazardous Materials Incident Survey HM incident to identify containers and materials involved, whether HM has been released, and surrounding conditions	Y	2	Analyzing the Incident	1 2 3 4	Overview and Objectives Bulk and Non-Bulk Containers Facility and Transportation Containers Hazmat Container Markings
3-2.1.1	Identify general shapes of containers for liquids, gases, and solids (3 each)	Y	2	Analyzing the Incident	2 3	Bulk and Non-Bulk Containers Facility and Transportation Containers
3-2.1.1.1	Identify tank cars by type	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.1(a)	Nonpressure tank cars with and without expansion domes	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.1(b)	Pressure tank cars	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.1(c)	Cryogenic liquid tank cars	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.2	Identify intermodal tank containers by type	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.2(a)	Nonpressure intermodal tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.2(b)	Pressure intermodal tank containers	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3	Identify cargo tanks by type	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3(a)	MC-306/DOT-406 cargo tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3(b)	MC-307/DOT-407 cargo tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3(c)	MC-312/DOT-412 cargo tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3(d)	MC-331 cargo tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3(e)	MC-338 cargo tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.3(f)	Dry bulk cargo tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.4	Identify fixed facility tanks by type	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.4(a)	Nonpressure facility tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.4(b)	Pressure facility tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.4(c)	Cryogenic liquid tanks	Y	2	Analyzing the Incident	3	Facility and Transportation Containers
3-2.1.1.5	Identify nonbulk packages by type	Y	2	Analyzing the Incident	2	Bulk and Non-Bulk Containers
3-2.1.1.5(a)	Bags	Y	2	Analyzing the Incident	2	Bulk and Non-Bulk Containers
3-2.1.1.5(b)	Carboys	Y	2	Analyzing the Incident	2	Bulk and Non-Bulk Containers

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3-2.1.1.5(c)	Cylinders	Y	2	Analyzing the Incident	2	Bulk and Non-Bulk Containers
3-2.1.1.5(d)	Drums	Y	2	Analyzing the Incident	2	Bulk and Non-Bulk Containers
3-2.1.2	Identify markings that differentiate transportation containers from facility containers	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.2.1	Identify identification markings for transport vehicles and tanks	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.2.1(a)	Rail tank cars	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.2.1(b)	Intermodal tank containers	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.2.1(c)	Highway cargo tanks	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.2.2	Identify markings for facility containers that indicate container size, product, and site ID numbers	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3	Given examples of facility and transport situations, identify the HM	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.1	Identify 3 types of info from a pipeline marker	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.1(a)	Product	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.1(b)	Owner	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.1(c)	Emergency telephone number	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.2	Identify elements of pesticide labels	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.2(a)	Name of pesticide	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.2(b)	Signal word	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.2(c)	Pest control product number (Canada)	Y	2?	Analyzing the Incident	4?	Hazmat Container Markings
3-2.1.3.2(d)	Precautionary statement	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.2(e)	Hazard statement	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.3.2(f)	Active ingredient	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.4	Identify surrounding conditions to note at HM incident	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.5	Give examples of ways to verify info	Y	2	Analyzing the Incident	4	Hazmat Container Markings
3-2.1.6	Identify at least 3 additional hazards that could be associated with criminal or terrorist activity	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2	Collecting Hazard and Response Information Using MSDS, CHEMTREC, Shipper, and Manufacturer	Y	2	Analyzing the Incident	6 7	Hazmat Classes and Divisions Collecting Hazard and Response Information
3-2.2.1	Match definitions of DOT hazard classes with class or division	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.2.2	Identify 2 ways to obtain MSDS	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3	Identify hazard and response info from MSDS	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(a)	Physical and chemical characteristics	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(b)	Physical hazards	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(c)	Health hazards	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(d)	Signs and symptoms of exposure	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(e)	Routes of entry	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(f)	Permissible exposure limits	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(g)	Responsible party contact	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(h)	Precautions for safe handling	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(i)	Applicable control measures and PPE	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.3(j)	Emergency and first aid procedures	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.4	Identify information about CHEMTREC/CANUTEC/SETIQ	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.4(a)	Type of assistance provided by CHEMTREC/CANUTEC/SETIQ	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information

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3-2.2.4(b)	Procedure for contacting CHEMTREC/CANUTEC/SETIQ	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.4(c)	Information to be provided to CHEMTREC/CANUTEC/SETIQ	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.5	Identify 2 ways to contact manufacturer or shipper	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.6	Identify type of assistance provided by federal defense authorities with respect to criminal or terrorist activities involving HM	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.2.6.1	Identify procedure for contacting federal defense authorities as specified in LERP or SOPs	Y	2	Analyzing the Incident	7	Collecting Hazard and Response Information
3-2.3	Predicting the Behavior of a Material and Its Container	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1	Interpret hazard and response info from ERG, MSDS, CHEMTREC/CANUTEC/SETIQ, shipper, and manufacturer	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1	Match specific chemical and physical properties with their significance and impact on the container or contents	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(a)	Boiling point	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(b)	Chemical reactivity	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(c)	Corrosivity (pH)	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(d)	Flammable (explosive) range	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(e)	Flash point	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(f)	Ignition (autoignition) temperature	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(g)	Physical state (solid, liquid, gas)	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(h)	Specific gravity	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(i)	Toxic products of combustion	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(j)	Vapor density	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(k)	Vapor pressure	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.1(l)	Water solubility	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.2	Identify differences among terms	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.2(a)	Exposure and hazard	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.2(b)	Exposure and contamination	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.1.2(c)	Contamination and secondary contamination	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.2	Identify 3 types of stress that could cause a container system to release its contents	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.3	Identify 5 ways containers can breach	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.4	Identify 4 ways containers can release their contents	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.5	Identify at least 4 dispersion patterns that can be created on release of HM	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.6	Identify 3 general time frames for predicting the length of time that exposures may be in contact with HM	Y	2	Analyzing the Incident	8	Predicting the Behavior of a Material and Its Container
3-2.3.7	Identify health and physical hazards that could cause harm	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials

Objective	Competency Summary	Obj. Met	Module		Topic	
3-2.3.8	Identify health hazards associated with 5 terms	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.3.8(a)	Asphyxiant	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.3.8(b)	Chronic health hazard, including carcinogen, mutagen, and teratogen	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.3.8(c)	Convulsant	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.3.8(d)	Irritant/corrosive	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.3.8(e)	Sensitizer/allergen	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.3.9	Given specific types of warfare agents, identify DOT hazard class and division	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.3.9(a)	Nerve agents	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.3.9(b)	Vesicants (blister agents)	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.3.9(c)	Blood agents	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.3.9(d)	Choking agents	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.3.9(e)	Irritants (riot control agents)	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.3.9(f)	Biological agents and toxins	Y	2	Analyzing the Incident	6	Hazmat Classes and Divisions
3-2.4	Estimating the Potential Harm	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.4.1	Identify a resource for determining the size of an endangered area – use the NA-ERG, CHEMTREC	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.4.2	Given the dimensions of an endangered area, estimate the number and type of exposures	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.4.3	Identify resources for determining the concentrations of a released HM	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-2.4.4	Identify factors for determining the extent of physical, health, and safety hazards within the endangered area of a HM incident given the concentration of the released material	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-3	Competencies – Planning the Response	Y	3	Planning the Response	All	
3-3.1	Describing Response Objectives for Hazardous Materials Incidents Identify the First Responder's response objectives in at least 2 HM scenarios	Y	3	Planning the Response	2	Response Objectives
3-3.1.1	Identify steps for determining number of exposures with resources provided, operating in a defensive fashion, given an analysis of the incident	Y	3	Planning the Response	2	Response Objectives
3-3.1.2	Describe steps for determining defensive response objectives	Y	3	Planning the Response	2	Response Objectives
3-3.2	Identifying Defensive Options	Y	3	Planning the Response	3	Defensive Options
3-3.2.1	Identify defensive options to accomplish a given response objective	Y	3	Planning the Response	3	Defensive Options
3-3.2.2	Identify purpose for, procedures, equipment, and safety precautions for 5 control techniques	Y	3	Planning the Response	3	Defensive Options
3-3.2.2(a)	Absorption	Y	3	Planning the Response	3	Defensive Options
3-3.2.2(b)	Dike, dam, diversion, retention	Y	3	Planning the Response	3	Defensive Options
3-3.2.2(c)	Dilution	Y	3	Planning the Response	3	Defensive Options
3-3.2.2(d)	Remote valve shutoff	Y	3	Planning the Response	3	Defensive Options
3-3.2.2(e)	Vapor dispersion	Y	3	Planning the Response	3	Defensive Options
3-3.2.2(f)	Vapor suppression	Y	3	Planning the Response	3	Defensive Options
3-3.3	Determining Appropriateness of PPE Given name of HM, determine whether PPE is appropriate for implementing defensive option	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.1	Identify respiratory protection for a given defensive option	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.1.1	Identify 3 types of respiratory protection and advantages and limitations	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.1.2	Identify physical capabilities and	Y	3	Planning the Response	4	Appropriate PPE

Objective	Competency Summary	Obj. Met	Module		Topic	
	limitations of wearers of positive pressure SCBA					
3-3.3.2	Identify personal protective clothing for a given defensive option	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.2.1	Identify skin contact hazards	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.2.2	Identify purpose, advantages, and limitations of 3 types of protective clothing	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.2.2(a)	Structural fire-fighting protective clothing	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.2.2(b)	High-temperature protective clothing	Y	3	Planning the Response	4	Appropriate PPE
3-3.3.2.2(c)	Chemical protective clothing (liquid splash protective and vapor protective)	Y	3	Planning the Response	4	Appropriate PPE
3-3.4	Identifying Emergency Decontamination Procedures	Y	3	Planning the Response	5	Emergency Decontamination Procedures
3-3.4.1	Identify ways that personnel, PPE, equipment, apparatus, tools, and equipment become contaminated	Y	3	Planning the Response	5	Emergency Decontamination Procedures
3-3.4.2	Describe how potential for secondary contamination determines need for emergency decon procedures	Y	3	Planning the Response	5	Emergency Decontamination Procedures
3-3.4.3	Identify purpose of emergency decon procedures at HM incidents	Y	3	Planning the Response	5	Emergency Decontamination Procedures
3-3.4.4	Identify advantages and limitations of emergency decon procedures	Y	3	Planning the Response	5	Emergency Decontamination Procedures
3-3.4.5	Describe procedure in LERP or SOPs for decon of a large number of people exposed to HM	Y	3?	Planning the Response	5?	Emergency Decontamination Procedures
3-4	Competencies – Implementing the Planned Response	Y	4	Implementing the Planned Response	All	
3-4.1	Establishing and Enforcing Scene Control Procedures	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.1	Identify procedures for establishing scene control through control zones	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.2	Identify criteria for determining locations of control zones	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.3	Identify basic techniques for protective actions at HM incidents	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.3(a)	Evacuation	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.3(b)	Sheltering in place	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.4	Identify considerations for locating emergency decon areas	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.5	Demonstrate ability to perform emergency decontamination	Y	4	Implementing the Planned Response	4	Emergency Decontamination Steps
3-4.1.6	Identify items to be covered in a safety briefing prior to allowing personnel to work at incidents	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.6(a)	HM incident	Y	4	Implementing the Planned Response	2	Scene Control
3-4.1.6(b)	HM incident involving criminal or terrorist activities	Y	4	Implementing the Planned Response	2	Scene Control
3-4.2	Initiating the Incident Management System (IMS) Given a simulated incident, initiate the IMS according to LERP and SOPs	Y	4	Implementing the Planned Response	3	Incident Management System
3-4.2.1	Identify role of Operations Level responder as specified in LERP and SOPs	Y	4	Implementing the Planned Response	3	Incident Management System
3-4.2.2	Identify levels of HM incidents	Y	4	Implementing the Planned Response	3	Incident Management System
3-4.2.3	Identify purpose, need, benefits, and elements of IMS at HM incidents	Y	4	Implementing the Planned Response	3	Incident Management System
3-4.2.4	Identify considerations for determining location of the command post	Y	4	Implementing the Planned Response	3	Incident Management System
3-4.2.5	Identify procedures for requesting	Y	4	Implementing the Planned	3	Incident Management System

Objective	Competency Summary	Obj. Met	Module		Topic	
	additional resources			Response		
3-4.2.6	Identify authority and responsibilities of the safety officer	Y	4	Implementing the Planned Response	3	Incident Management System
3-4.3	Using Personal Protective Equipment	Y	4	Implementing the Planned Response	5	Working in PPE
3-4.3.1	Identify importance of buddy system	Y	4	Implementing the Planned Response	5	Working in PPE
3-4.3.2	Identify importance of back-up personnel	Y	4	Implementing the Planned Response	5	Working in PPE
3-4.3.3	Identify safety precautions to be observed when approaching and working at HM incidents	Y	4	Implementing the Planned Response	5	Working in PPE
3-4.3.4	Identify symptoms of heat and cold stress	Y	4	Implementing the Planned Response	5	Working in PPE
3-4.3.5	Identify physical capabilities and limitations of personnel working in PPE	Y	4	Implementing the Planned Response	5	Working in PPE
3-4.3.6	Match function of components of positive pressure SCBA with the name of each component	Y	4	Implementing the Planned Response	6	Using an SCBA
3-4.3.7	Identify procedures for cleaning, disinfecting, and inspecting respiratory protective equipment	Y	4	Implementing the Planned Response	6	Using an SCBA
3-4.3.8	Identify procedures for donning, working in, and doffing positive pressure SCBA	Y	4	Implementing the Planned Response	7	Donning and Doffing PPE
3-4.3.9	Demonstrate donning, working in, and doffing positive pressure SCBA	Y	4	Implementing the Planned Response	7	Donning and Doffing PPE
3-4.4	Performing Defensive Control Actions	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.1	Demonstrate proper application of FF foam or vapor suppressing agents	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.2	Identify characteristics and applicability of foams	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.2(a)	Protein foam	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.2(b)	Fluoroprotein foam	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.2(c)	Special purpose foam including polar solvent alcohol-resistant concentrates and HM concentrates	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.2(d)	AFFF	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.2(e)	High expansion foam	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.3	Demonstrate how to perform 8 defensive control activities	Y	4	Implementing the Planned Response	8 9 10	Application of Vapor Suppressing Agents Emergency Valves and Vapor Dispersion Defensive Control Scenarios
3-4.4.3(a)	Absorption	Y	4	Implementing the Planned Response	10	Defensive Control Scenarios
3-4.4.3(b)	Damming	Y	4	Implementing the Planned Response	10	Defensive Control Scenarios
3-4.4.3(c)	Diking	Y	4	Implementing the Planned Response	10	Defensive Control Scenarios
3-4.4.3(d)	Dilution	Y	4	Implementing the Planned Response	10	Defensive Control Scenarios
3-4.4.3(e)	Diversion	Y	4	Implementing the Planned Response	10	Defensive Control Scenarios
3-4.4.3(f)	Retention	Y	4	Implementing the Planned Response	10	Defensive Control Scenarios
3-4.4.3(g)	Vapor dispersion	Y	4	Implementing the Planned Response	9	Emergency Valves and Vapor Dispersion
3-4.4.3(h)	Vapor suppression	Y	4	Implementing the Planned Response	8	Application of Vapor Suppressing Agents
3-4.4.4	Identify location and describe use of mechanical, hydraulic, and air emergency remote shutoff devices found on cargo tanks	Y	4	Implementing the Planned Response	9	Emergency Valves and Vapor Dispersion

Objective	Competency Summary	Obj. Met	Module		Topic	
3-4.4.5	Describe objectives and dangers of search and rescue at HM incidents	Y	2	Analyzing the Incident	9	Potential Harm of Hazardous Materials
3-4.4.6	Describe procedures to preserve evidence at HM incidents involving suspected criminal or terrorist acts	Y	2?	Analyzing the Incident	9?	Potential Harm of Hazardous Materials
3-5	Competencies – Evaluating Progress	Y	5	Evaluating Progress	All	
3-5.1	Evaluating the Status of Defensive Actions	Y	5	Evaluating Progress	2	Status of Defensive Actions and Communication Methods
3-5.1.1	Identify considerations for evaluating whether defensive actions are accomplishing objectives	Y	5	Evaluating Progress	2	Status of Defensive Actions and Communication Methods
3-5.1.2	Describe when it would be prudent to withdraw from HM incident	Y	5	Evaluating Progress	2	Status of Defensive Actions and Communication Methods
3-5.2	Communicating the Status of the Planned Response	Y	5	Evaluating Progress	2	Status of Defensive Actions and Communication Methods
3-5.2.1	Identify methods for communicating status of planned response to the IC through normal chain of command	Y	5	Evaluating Progress	2	Status of Defensive Actions and Communication Methods
3-5.2.2	Identify methods for immediate notification of the IC and other response personnel about critical emergency conditions at the incident	Y	5	Evaluating Progress	2	Status of Defensive Actions and Communication Methods