NFPA 472 Hazardous Materials / Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications - Chapter 7 Technician		
Module 1 - Analyzing the Incident		
Terminal Objective - Upon the successful completion of this module, participants will be able to analyze a Hazardous Materials (HazMat) incident to determine the magnitude of the incident.		
Enabling Objectives	**JPR**	**Verification**
1. Identify the role of the HazMat technician during HazMat/ WMD incidents.	7.4.1.2	
2. Identify various bulk and non-bulk containers by their name and specification, the contents typically transported, and their hazard class.	7.2.1.1(1-7) JPR 7.2.3.1(1-5)	
3. Identify the approximate capacities, construction, and design features, including closures of various bulk and non-bulk containers.	7.2.3.1	
4. Describe how a liquid petroleum product pipeline can carry different products.	7.2.3.2	
5. Identify container markings for gathering additional response information and data including: Transportation, Fixed Facilities, Pipeline and Radioactive Materials	7.2.1.2, 7.2.1.2.1, 7.2.1.2.2	
6. List instrumentation used for HazMat identification and describe the strengths and weaknesses of each.	7.2.1.3, 7.2.1.4, 7.2.1.5	
7. Identify written, technical, and computer resources to collect and interpret hazard and response data, and describe their strengths and limitations.	7.2.2	
8. Describe various chemical and physical terms and their significance in the analysis process.	7.2.2.2	
9. Describe the heat transfer processes that occur as a result of a cryogenic liquid spill.	7.2.2.3	
10. Describe the condition of containers involved in an incident, and identify the types of damage that may result.	7.2.3.4	
11. Describe methods for determining the pressure in bulk packaging and facility containers.	7.2.2.5	
12. Identify methods for determining the amount of lading remaining in a damaged bulk packaging or facility container.	7.2.2.6	
13. Name three resources used to locate information relating to the effects of mixing HazMat.	7.2.4.1	
14. Identify the impact of various fire and safety features on the behavior of products during incidents at bulk liquid and bulk gas facilities.	7.2.2.2, 7.2.4.3	
15. Describe resources for dispersion pattern prediction and modeling.	7.5.2.1	
16. Describe the steps for determining the extent of the physical, safety, and health hazards within the endangered area of a HazMat incident.	7.2.5.2	
17. Define and describe the significance of toxicological terminology in risk assessment.	7.2.5.2.1, 8.2.2(2)	
18. Describe the significance that radiation types, measurement, and protection factors play in predicting health hazards and environmental impact at a HazMat scene.	7.2.2.2	
19. Identify the signs and symptoms of exposure to given HazMats and the target organ effects of exposure to the materials.	7.2.2.4	
20. Identify methods for predicting the areas of harm within an endangered area of a HazMat/WMD incident.	7.2.5.2.2	
21. Identify the steps for estimating the outcomes within an endangered area of a HazMat/WMD incident.	7.2.5.3	
22. Given a HazMat release and the corresponding monitor readings, determine the applicable public protective response options and the areas to be protected.	7.2.5.4	
23. Given a scenario involving radioactive materials, determine whether the integrity of any container has been breached using available survey and monitoring equipment.	7.2.3.5	
Module 2 - Planning the Response		
Terminal Objective - Upon the successful completion of this module, participants will be able to plan a response within the capabilities of available personnel, Personal Protective Equipment (PPE), and control equipment.		
Enabling Objectives	**JPR**	**Verification**
1. Identify considerations for determining the appropriate response objectives when given scenarios involving Hazardous Materials/Weapons of Mass Destruction (HazMat/WMD) incidents.	7.3.1.1, 7.3.1.2, 7.3.2.1	
2. Identify potential action options available for given response objectives.	7.3.2.2	
3. Identify and describe the four levels of PPE.	7.3.3.1	
4. Identify and describe PPE options for given hazards.	7.3.3.2	
5. Describe the advantages and limitations of the different types of respiratory protection and describe the process for selecting respiratory protection.	7.3.3.3	
6. Identify the operational components and their functions for Self-Contained Breathing Apparatus (SCBA), Supplied Air Respirators (SAR), and Air-Purifying Respirators (APR).	7.3.3.3	

7. Identify the process and factors to be considered when selecting Chemical-Protective Clothing (CPC) and the impact that degradation, permeation, and penetration have on the selection process.	7.3.3.4, 7.3.3.4.1, 7.3.3.4.2, 7.3.3.4.5	
8. Describe the different design types of vapor-protective and liquid splash-protective clothing and describe the advantages and disadvantages of each type.	7.3.3.4.3	
9. Determine the proper protective clothing materials for a given action option using chemical compatibility charts.	7.3.3.4.6	
10. Describe the advantages and disadvantages of heat exchange units used for cooling personnel wearing CPC.	7.3.3.4.4	
11. Identify the physical and psychological stresses that affect those using specialized protective clothing.	7.3.3.4.7	
12. Describe the advantages and limitations of given decontamination procedures and include three sources for obtaining technical information related to proper decontamination selection.	7.3.4	
13. Describe the purpose, procedures for, equipment required, and safety precautions used for given control techniques.	7.3.5.1	
14. Develop a plan of action for a HazMat incident.	7.3.5, 7.5.5.2.1, 7.3.5.2.2, 7.3.5.3, 7.3.5.4, 7.3.5.5	
Module 3 - Implementing the Planned Response		
Terminal Objective - Upon the successful completion of this module, participants will be able to prepare a planned response consistent with the organization's Standard Operating Procedures (SOP) and safety considerations.		
Enabling Objectives	**JPR**	**Verification**
1. Identify and describe the duties and responsibilities of Hazardous Materials (HazMat) branch functions within the Incident Command System (ICS).	7.4.1.1	
2. Describe safety considerations for working in Chemical-Protective Clothing (CPC).	7.4.2	
3. Identify emergency procedures for personnel working in CPC.	7.4.2(2)	
4. Describe the maintenance, testing, inspection, and storage procedures for Personal Protective Equipment (PPE).	7.3.3.4.8	
5. Identify and describe the most common control functions performed by HazMat technicians.	7.4.3(1-11)	
6. Describe the components and procedures for setting up a decontamination corridor.	7.4.5	
Module 4 - Evaluating Progress and Incident Termination		
Terminal Objective - Upon the successful completion of this module, participants will be able to evaluate the effectiveness of control functions listed in the response plan and carry out the various tasks necessary to terminate a HazMat/WMD incident.		
Enabling Objectives	**JPR**	**Verification**
1. Describe the factors for evaluating the effectiveness of the control functions.	7.5.1	
2. Describe the components of an effective debriefing.	7.6.1	
3. Differentiate between a debriefing and an incident critique.	7.6.2	
4. Describe the components of an incident critique.	7.6.2	
5. Describe the types of documentation required at a HazMat incident.	7.6.3	
6. Given an incident scenario, evaluate the effectiveness of the control functions and prepare an incident debrief.	7.5.2	
Module 5 - Practical Skills		
Terminal Objective - Upon the successful completion of this module, participants will be able to perform technician-level tasks identified in the implementation plan, including identifying or categorizing unknown materials, working in Chemical-Protective Clothing (CPC), containing leaks on various containers, installing a dome clamp, and performing decontamination procedure.		
Enabling Objectives	**JPR**	**Verification**
1. Collect samples of solids, liquids, and gases, and select the appropriate equipment for identifying unknown Hazardous Materials (HazMat).	7.2.1.5	
2. Demonstrate testing procedures on unknown HazMats to identify or classify them and to verify the presence and concentrations of HazMats.	7.2.1.3.5, 7.2.1.3.6	
3. Demonstrate donning, working in, and doffing CPC.	7.4.2(3)	
4. Demonstrate the methods to contain a given set of leaks found on a pressurized cylinder.	7.4.3(1)	
5. Demonstrate the ability to contain bung leaks, chime leaks, forklift punctures, and nail punctures to a 55-gallon (208-liter) drum.	7.4.3(3)	
6. Demonstrate the ability to place a 55-gallon (208-liter) drum into an overpack drum using rolling slide-in, slide-in, and slip-over methods.	7.4.3(4)	
7. Demonstrate the ability to perform site decontamination procedures at a HazMat incident.	7.4.5	
8. Demonstrate the ability to properly install the clamp on the dome of a Motor Carrier (MC)-306/Department of Transportation (DOT)-406 cargo tank.	7.4.3(8)	
9. Demonstrate the ability to set up and implement technical decontamination for HazMat responders.	7.4.5(1)	

10. Demonstrate the ability to set up and implement technical decontamination for ambulatory and nonambulatory victims.	7.4.5(2)	
11. Demonstrate the ability to set up a mass decontamination for use with ambulatory and nonambulatory victims.	7.4.5(3)	