

SKILLS MANUAL

CHAPTER SIX

HAZARDOUS MATERIALS

NFPA 470, 2022 Edition

Effective August 1, 2024



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**SKILLS LIST
CHOOSE PORTRAIT OR LANDSCAPE**

| DISCIPLINE | OBJECTIVE | # | SKILL NAME | FUNCTIONAL NAME | NFPA # |
|-----------------------------|--|---|--|--|--------------------------------|
| Awareness | All - Comprehensive | 1 | R&ID, Initiate PA, Notification | Recognition and Identification, Initiate Protective Actions; Notification | 5.2.1, 5.3.1, 5.4.1 |
| Operations | Identify Potential Hazards | 1 | Identify PH & Action Options | Identify Potential Hazards and Action Options | 7.2.1, |
| Operations | Action Plan Implementation & Progress Evaluation and Reporting | 2 | Action Plan Implementation & Progress Evaluation and Reporting | Action Plan Implementation | 7.4.1, 7.6.1, |
| Operations | Emergency Decon | 3 | Emergency Decon | Emergency Decontamination | 7.5.1 |
| Mission Specific Operations | PPE & Product Control | 4 | PPE & Product Control | Personal Protective Equipment & Product Control | 9.2.1, 9.6.1 |
| Technician | Analyzing the incident | 1 | Analyzing the incident | Detection, Monitoring, and Sampling and Hazard and Response Information Collection and Interpretation | 11.2.1, 11.2.2 |
| Technician | Analyzing the incident | 2 | Analyzing the Incident | Assessing Container Condition, Predicting Behavior, and Estimating Outcomes | 11.2.3, 11.2.4, 11.2.5 |
| Technician | Planning the Response and Evaluating Progress | 3 | Response Planning & Evaluating Progress | Response Objectives and Outcomes, Decontamination Method Selection, Action Plan Development, and Evaluating and Reporting Progress | 11.3.1, 11.3.3, 11.3.4, 11.5.1 |
| Technician | Implementing the Planned Response | 4 | Response Planning & Implementing the Planned Response | Personal Protective Equipment (PPE) Selection and Use | 11.3.2, 11.4.2 |
| Technician | Implementing Planned Response and Terminating the Incident | 5 | Implementing Planned Response and Terminating the Incident | Performing Assigned IMS/ICS Duties and Terminating the Incident | 11.4.1, 11.6.1 |
| Technician | Implementing the Planned Response | 6 | Performing Control Functions | Product Control and Controlling Container Leaks | 11.4.3.1, 11.4.3.2 |

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|---------------------------|-----------------------------------|----|---|---|--|
| Technician | Implementing the Planned Response | 7 | Performing Control Functions | Overpacking Nonbulk and Radioactive Materials | 11.4.3.3 |
| Technician | Implementing the Planned Response | 8 | Performing Control Functions | Liquid Product Transfer | 11.4.3.4 |
| Technician | Implementing the Planned Response | 9 | Rescue | Rescue Team Member/Victim | 11.4.4.1, 11.4.4.2 |
| Technician | Implementing the Planned Response | 10 | Decontamination | Mass Decontamination /Technical Decontamination | 11.4.5.1, 11.4.5.2 |
| | | | | | |
| HazMat Incident Commander | All - Comprehensive | 1 | Analyze, Plan, Implement, Evaluation, Termination | Analyze the Incident, Plan Response, Implement IAP, Evaluate Progress and Terminate | 13.2.1, 13.3.1, 13.4.1, 13.5.1, 13.6.1 |

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Hazardous Materials Training Equipment & Prop List

The following are minimal recommended supplies necessary for hazardous materials training at the below listed levels of certification. Variations may exist based on the needs of each AHJ and any mission-specific job tasks as assigned by an AHJ.

Hazardous Materials Awareness

Department of Transportation's *Emergency Response Guidebook* (ERG) (current ed.)
Material Safety Data Sheet (MSDS) or Safety Data Sheets (SDS) – Samples
Placards & Labels
Transportation/Shipping document – Sample
NFPA 704 sample
Safety Vests
Binoculars

Hazardous Materials Operations

All awareness equipment plus...

Structural Firefighter Protective Ensemble (bunker gear)

Reference Material:

- NIOSH *Pocket Guide to Chemical Hazards*
- NFPA *Hazardous Materials / Weapons of Mass Destruction Response Handbook* (current edition)
- Pesticide label example

Respiratory Protection to include:

- Air Purifying Respirator (APR-half mask)
- Air Purifying Respirator (APR-full face)
- SCBA

Chemical Protective Clothing to include:

- Vapor Protective CPC (Level A)
- Splash Protective Encapsulated CPC (Level B)
- Splash Protective Non-Encapsulated CPC (Level B, Level C)
- Chemical Boots (Rubber Boots for training only)
- Inner/Outer gloves - assorted types
- Chem Tape (duct tape for training only)

Fire Hose, Foam Nozzles and Eductors, Foam

Pictures/slides of various railcar, intermodal, and highway cargo trailers

Pictures/slides of bulk and non-bulk containers, and fixed facility containment systems

Defensive Spill Equipment:

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- Absorbent/Adsorbent
- Broom/Shovel
- 5-gallon buckets
- Assortment of boom and pads

Decontamination Equipment:

- Poly sheeting or tarp
- Duct tape
- Traffic cone(s)
- Decon Pools
- Sprayer(s)
- Garden hose(s) and sprayer/nozzles
- 5-gallon bucket(s)
- Various Decon solution(s)
- Folding chairs
- Overpack drum

Various monitoring detection equipment as may be required. Examples *may* include:

- Combustible Gas Indicator
- Oxygen Meter
- Radiation Detector

Hazardous Materials Operations – Mission Specific Competencies

Equipment needed for training to Hazardous Materials Operations – Mission Specific Competencies will be based the competencies themselves and the authority having jurisdiction (AHJ). Equipment, at a minimum, will include that which is required to train to the Hazardous Materials Operations Level. Additional equipment or props may include part or all of the equipment listed below for Hazardous Materials Technician.

For example, if training to the Mission Specific Competencies: Air Monitoring and Sampling is to be performed, additional monitoring detection and sampling equipment will be required.

Hazardous Materials Technician

Awareness and Operations equipment plus...

Reference Material:

- CPC Permeation Guides/Tables
- BOE/AAR Field Guide to Railcar Identification
- NFPA Fire Protection Guide to Hazardous Materials Detection
- Other printed or electronic publications/databases as may be required by the AHJ

Various monitoring detection equipment and corresponding samples to include:

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- Combustible Gas Indicator
- Oxygen Meter
- Carbon monoxide meter
- Gas specific meter
- Photoionization detector
- Radiation Detectors (alpha, beta, gamma)
- Colorimetric tubes, pump
- Classifier/detection strips and reagents
- pH paper or pH meter
- additional monitoring and detection equipment as may be required by AHJ
- Calibration kit(s) as required for above

Leak & Spill Equipment:

- Plugging/patching supplies
- Leaking drum(s): metal & poly
- Overpack drum(s)
- Leak pipe simulator
- 150 lbs. Chlorine cylinder leak prop
 - Chlorine emergency kit type “A”
- Chlorine 1-Ton cylinder leak prop
 - Chlorine emergency kit type “B”
- Pressure Railcar dome leak prop
 - Chlorine emergency kit type “C” or Midland kit
- Cargo Tank Leak Simulator (MC-306/DOT-406 Dome)
- Dome Cover Clamp
- Grounding & Bonding Kit
- Product Transfer Equipment
- Misc. Hand Tools (e.g., hand wrenches, bung wrench, spanner wrench, mallet, screwdrivers, etc.)

Command and Control Equipment/Forms (e.g., Incident Action Plan, Site Safety Plan, Medical Plan, Communication Plan - all NIMS/ICS compliant)

Hazardous Materials Incident Commander

Reference Material

- Department of Transportation’s Emergency Response Guidebook (ERG) (current edition)
- Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) - Samples
- Transportation/Shipping document – Sample
- NIOSH Pocket Guide to Chemical Hazards
- NFPA Hazardous Materials / Weapons of Mass Destruction Response Handbook (current edition)
- CPC Permeation Guides/Tables

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- BOE/AAR Field Guide to Railcar Identification
- NFPA Fire Protection Guide to Hazardous Materials Detection
- Other printed or electronic publications/databases as may be required by the AHJ

Command and Control Equipment/Forms

- Department of Homeland Security – National Incident Management System/Incident Command System standardized forms
 - ICS 201 Incident Briefing Form
 - ICS 202 Incident Objectives Worksheet
 - ICS 203 Organization Assignment List
 - ICS 204 Division Assignment List
 - ICS 205 Communications Plan
 - ICS 206 Medical Plan
 - ICS 208HM Site Safety and Control Plan
 - ICS 211 Incident Check-in List
 - ICS 213 General Message
 - ICS 214 Unit Log
 - ICS 215 Incident Planning Worksheet
 - ICS 215A Incident Action Plan Safety Analysis

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Awareness
Performance Standards

General

Recognition and Identification; Initiate Protective Actions; Notification

Skill # 1

PERFORMANCE STANDARD

Section 601

NFPA 470, 2022 Edition, 5.2.1, 5.3.1, 5.4.1

OBJECTIVE

Given examples of hazardous materials/WMD incidents, the emergency response plan, the standard operating procedures, and the current edition of the *Emergency Response Guidebook*, safety data sheets and shipping papers, awareness level personnel shall be able to recognize and identify the materials and protective actions to be taken to protect themselves and others and to control access to the scene and make notifications as required. The following requirements shall be met:

5.2.1

Recognize and identify the hazardous materials/WMD and hazards involved in a hazardous materials/WMD incident, given a hazardous materials/WMD incident and approved reference sources, so that the presence of hazardous materials/WMD is recognized, and the materials, their hazards, and associated harm are identified.

5.3.1

Isolate the hazard area and deny entry at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, policies and procedures, and approved reference sources, so that the hazard area is isolated and secured, personal safety procedures are followed, hazards are avoided or minimized, and additional people are not exposed to further harm.

5.4.1

Initiate required notifications at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, policies and procedures, and approved communications equipment, so that the notification process is initiated and the necessary information is communicated.

INSTRUCTIONS - procedures for achieving the objective

Given the most current edition of the *Emergency Response Guidebook*, product safety data sheets and shipping papers, and a scenario, you shall analyze, identify and describe, as may be required, the actions that are appropriate for the safe implementation of awareness level response measures.

You shall respond verbally or in the written form as may be appropriate. You shall communicate your findings and actions to dispatch (simulated) using approved

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Awareness

Performance Standards

communication devices. You will begin on my instruction to start. The skill will end when you state to me that you have completed all of the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

The candidate will not be allowed to review the performance steps at the time of testing.

Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use the ERG and applicable SDS, shipping papers, and other reference support material provided.

The candidate may provide a written or verbal response, per the direction of the program coordinator. Their response must include:

1. Identification of the problem/hazard
2. Perform steps to isolation and secure the hazard area
3. Initiate the notification process to Local, State, and Federal response partners
4. A size-up report

The verbal size-up report may be provided to the examiner by radio, cell phone, or simulated (face to face).

PREPARATION & EQUIPMENT

- *Emergency Response Guidebook* (ERG), most current edition book/app
- Safety data sheet(s) (SDS)
- Shipping papers
- Approved communication devices (Radio, cell phone, etc.)
- A written or audio/visual representation of a scene or scenario (i.e. PowerPoint Presentation) or an instructor prepared worksheet.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Awareness
Performance Standards

General

Recognition and Identification; Initiate Protective Actions; Notification

Skill # 1

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Awareness | | | | |
|---|-------------|----------|---------------|----------|
| Skill # 1 | | | | |
| <p>5.2.1 Recognize and identify the hazardous materials/WMD and hazards involved in a hazardous materials/WMD incident, given a hazardous materials/WMD incident and approved reference sources, so that the presence of hazardous materials/WMD is recognized, and the materials, their hazards, and associated harm are identified.</p> <p>5.3.1 Isolate the hazard area and deny entry at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, policies and procedures, and approved reference sources, so that the hazard area is isolated and secured, personal safety procedures are followed, hazards are avoided or minimized, and additional people are not exposed to further harm.</p> <p>5.4.1 Initiate required notifications at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, policies and procedures, and approved communications equipment, so that the notification process is initiated and the necessary information is communicated.</p> | | | | |
| | TEST | | RETEST | |
| The candidate shall: | S | U | S | U |
| a) Recognize indicators to the presence of hazardous materials/WMD, identify hazardous materials/WMD by name, UN/NA identification number, marking/label/placard applied, or container shape identified in the ERG. | | | | |
| b) Use the ERG, applicable SDS, manufacturer/shipper/carrier documents (including shipping papers and emergency response information), | | | | |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Awareness
Performance Standards

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| and other approved reference sources to identify hazardous materials/WMD and primary hazards. | | | | |
| c) Identify, isolate and secure the hazard area. <ul style="list-style-type: none"> • Recognize precautions for protecting responders and public • Identify isolation areas • Deny entry • Avoid hazards | | | | |
| d) Communicate in accordance with policies and procedures <ul style="list-style-type: none"> • Policies and procedures for notification • Reporting • Communications | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Awareness
Performance Standards

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

General

Identify Potential Hazards and Action Options

Skill #1

PERFORMANCE STANDARD
NFPA 470, 2022 Edition, 7.2.1

Section 602

OBJECTIVES

7.2.1

Identify the scope of the problem at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, and approved reference sources, so that container types, materials, location and physical state (form) of release, and surrounding conditions are identified, hazard and response information is collected, the potential behavior of a material and its container is identified, and the potential hazards, harm, and outcomes associated with that behavior are identified.

7.3.1

Identify the tactics for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, approved reference sources, and the scope of the problem, so that response information is collected; strategies, tactics, safety precautions, suitability of approved personal protective equipment (PPE) available, and emergency decontamination needs are identified; and an action plan is developed. Identifying response objectives and action options based on the scope of the problem and available resources; identifying whether approved PPE is suitable incident conditions; and identifying emergency decontamination needs based on the scope of the problem.

INSTRUCTIONS

You will be given a Hazardous Materials incident scenario, the applicable policies and procedures, and approved reference material, you are to Identify the scope of the problem, Identify the container type or types involved in the scenario to include the location of release, and surrounding conditions. You are to also identify the action options and response objectives to include mode(s) of operation, appropriate personal protective equipment, and emergency decontamination requirements.

You will begin on my instruction to start. The skill will end when you state to me that you have completed all the identified steps and all appropriate tasks.

Do you understand these instructions?

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations

Performance Standards

EXAMINER'S NOTE

The candidate will not be allowed to review the performance steps at the time of testing.

Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use the ERG, NIOSH Pocket Guide, and applicable SDS, shipping papers, and other reference support material provided.

PREPARATION & EQUIPMENT

- *Emergency Response Guidebook (ERG)*, most current edition book/ app
- *NIOSH Pocket Guidebook to Chemical Hazards*, most current edition
- Safety data sheets(S) (SDS)
- Shipping papers
- PPE/PCP compatibility charts/guides/manuals, if necessary
- A written or audio/visual representation of a scene or scenario provide product information response objectives applicable to policies and procedures according to the examinees AHJ. (i.e., PowerPoint Presentation) or an instructor prepared worksheet as needed.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

General

Identify Potential Hazards and Action Options

Skill #1

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Operations | | | | |
|--|-------------|----------|---------------|----------|
| Skill #1 | | | | |
| <p>7.2.1 Identify the scope of the problem at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, and approved reference sources, so that container types, materials, location and physical state (form) of release, and surrounding conditions are identified, hazard and response information is collected, the potential behavior of a material and its container is identified, and the potential hazards, harm, and outcomes associated with that behavior are identified.</p> | | | | |
| <p>7.3.1 Identify the tactics for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, approved reference sources, and the scope of the problem, so that response information is collected; strategies, tactics, safety precautions, suitability of approved personal protective equipment (PPE) available, and emergency decontamination needs are identified; and an action plan is developed.</p> | | | | |
| | TEST | | RETEST | |
| The candidate shall: | S | U | S | U |
| a) Identify container types, materials, location and physical state (form) of release, and surrounding conditions at a hazardous materials/WMD incident | | | | |
| b) Collect hazard information | | | | |
| c) Detail the actions of communicating with pipeline operators, carrier representatives and or responsible party. | | | | |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

| | | | | |
|---|--|--|--|--|
| d) Describe likely behavior of the hazardous materials or WMD and its container. | | | | |
| e) Describe likely outcomes associated with the identified behavior and surrounding conditions. | | | | |
| f) Identify strategies and tactics based on the scope of the problem and available resources; | | | | |
| g) Identify whether approved PPE is suitable for the incident conditions; | | | | |
| h) Identify emergency decontamination needs based on the scope of the problem. | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

General
Action Plan Implementation
Skill #2

PERFORMANCE STANDARD
NFPA 470, 2022 Edition, 7.4.1,7.6.1

Section 602
Operations

OBJECTIVE

7.4.1

Perform assigned tasks at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment with limited potential of contact with hazardous materials/WMD, policies and procedures, the scope of the problem, approved tools, equipment, and PPE, so that protective actions and scene control are established and maintained, on-scene incident command is initiated, evidence is preserved, approved PPE is selected and used in the proper manner, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, assignments are completed, and emergency decontamination is conducted in the field.

7.6.1

Evaluate and report the progress of an assigned task for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, status of implemented strategies and tactics, and approved communication tools and equipment, so that the effectiveness of the assigned task is evaluated and communicated to the Incident Commander or designee so that the IAP can be adjusted as needed

INSTRUCTIONS – procedures for achieving the objective

You, as part of a team, will be provided a scenario, reference material, personal protective clothing (including chemical protective clothing), and decontamination equipment. You shall analyze the incident, identify, and select the appropriate PPE.

Your team shall establish and maintain scene control, determine incident status, recognize, and preserve evidence, select and set up decontamination in a safe area, implement, prevent spread of contamination, avoid hazards and isolate contaminated tools, equipment, and PPE during decontamination.

You and your team will determine the response objectives are being accomplished, select approved communications and equipment, and communicate the status of assigned tasks.

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations

Performance Standards

After successfully completing the response objectives, communicating the status of assigned tasks and completion of decontamination you and your team shall clean, disinfect, and inspect approved tools, equipment, and PPE.

With regard to selecting and utilizing the appropriate PPE/CPC; once selected, it must be properly inspected and maintained as recommended. It must also be properly donned, used/work in, and doffed. All PPE/CPC reporting and documentation requirements per the AHJ must be completed.

You shall respond verbally or in the written form as may be appropriate. You will begin on my instruction to start. The skill will end when you state to me that you have completed all the identified steps.

Do you understand these instructions?

EXAMINER'S NOTE

The candidate will not be allowed to review the performance steps at the time of testing.

Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use the ERG, NIOSH Pocket Guide, and applicable SDS, shipping papers, and other reference support material provided. The use of WISER on their personal electronic device (cell phone or tablet) is also acceptable.

The candidate will perform as a member of a team. Each member of the team will be randomly selected to perform a different/separate function on the team.

Their response must include:

1. Establish and maintain scene control.
2. Determine incident status.
3. Recognize and preserve evidence.
4. Select and set up decontamination in a safe area.
5. Use approved PPE, inspect, don, work in, go through decontamination while wearing, and doff approved PPE.
6. Determine whether the response objectives are being accomplished.
7. Use approved communications and equipment.
8. Communicate the status of assigned tasks.
9. Implement and avoid hazards during decontamination
10. Isolate contaminated tools, equipment, and PPE.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

11. DOFF PPE, conduct decontamination of contaminated personnel, and gross decontamination of tools, equipment, and PPE in the field.
12. Clean, disinfect, and inspect approved tools, equipment, and PPE.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

General
 Action Plan Implementation
Skill #2

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Operations | | | | | |
|---|--|-------------|----------|---------------|----------|
| Skill #2 | | | | | |
| <p>7.4.1 Perform assigned tasks at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment with limited potential of contact with hazardous materials/WMD, policies and procedures, the scope of the problem, approved tools, equipment, and PPE, so that protective actions and scene control are established and maintained, on-scene incident command is initiated, evidence is preserved, approved PPE is selected and used in the proper manner, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, assignments are completed, and emergency decontamination is conducted in the field.</p> <p>7.6.1 Evaluate and report the progress of an assigned task for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, status of implemented strategies and tactics, and approved communication tools and equipment, so that the effectiveness of the assigned task is evaluated and communicated to the Incident Commander or designee so that the IAP can be adjusted as needed</p> | | | | | |
| | | TEST | | RETEST | |
| The candidate shall: | | S | U | S | U |
| a) Establish and maintain scene control | | | | | |
| b) Determine incident status | | | | | |
| c) Recognize and preserve evidence | | | | | |
| d) Set up decontamination in a safe area | | | | | |
| e) Use approved PPE in the proper manner | | | | | |
| f) Inspect, don, work in, and go through decontamination while wearing approved PPE | | | | | |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

| | | | | |
|--|--|--|--|--|
| g) Determine whether the response objectives are being accomplished | | | | |
| h) Use approved communications and equipment | | | | |
| i) Communicate the status of assigned tasks | | | | |
| j) Prevent spread of contamination | | | | |
| k) Avoid hazards during decontamination | | | | |
| l) Isolate contaminated tools, equipment, and PPE | | | | |
| m) Conduct decontamination of contaminated personnel, and gross decontamination of tools, equipment and PPE in the field, and doff PPE | | | | |
| n) Clean, disinfect, and inspect approved tools, equipment, and PPE | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

General
Emergency Decontamination
Skill #3

PERFORMANCE STANDARD
NFPA 470, 2022 edition, 7.5.1

Section 602
Operations

OBJECTIVE

7.5.1

Perform emergency decontamination at a hazardous materials/WMD incident, given a hazardous materials/WMD incident that requires emergency decontamination; an assignment; scope of the problem; policies and procedures; and approved tools, equipment, and PPE for emergency decontamination, so that emergency decontamination needs are identified, approved PPE is selected and used, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, emergency decontamination is set up and implemented, and victims and responders are decontaminated.

INSTRUCTIONS – procedures for achieving the objective

Given a scenario and the personal protective equipment, emergency response and hazardous materials response equipment including decontamination equipment provided by the AHJ, you shall demonstrate local procedures for responders undergoing the emergency decontamination process. You will begin on my instruction to start. The skill will end when you state to me that you have completed all of the identified steps.

Do you understand these instructions?

EXAMINER'S NOTE

The candidate will not be allowed to review the performance steps at the time of testing. Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use the ERG, NIOSH Pocket Guide, an applicable SDS, shipping papers, and other reference support material provided. The use of WISER on their personal electronic device (cell phone or tablet) is also acceptable.

PREPARATION & EQUIPMENT

- Hazardous materials incident scenario

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

- Reference material
- Personal protective equipment provided by the AHJ
- Emergency response and hazardous materials response equipment
- Decontamination equipment

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

General
Emergency Decontamination
Skill #3

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Operations | | | | |
|---|-------------|----------|---------------|----------|
| Skill #3 | | | | |
| 7.5.1 Perform emergency decontamination at a hazardous materials/WMD incident, given a hazardous materials/WMD incident that requires emergency decontamination; an assignment; scope of the problem; policies and procedures; and approved tools, equipment, and PPE for emergency decontamination, so that emergency decontamination needs are identified, approved PPE is selected and used, exposures and personnel are protected, safety procedures are followed, hazards are avoided or minimized, emergency decontamination is set up and implemented, and victims and responders are decontaminated. | | | | |
| | TEST | | RETEST | |
| The candidate shall: | S | U | S | U |
| a) Select an emergency contamination method | | | | |
| b) Set up emergency decontamination in a safe area | | | | |
| c) Use PPE in the proper manner | | | | |
| d) Implement emergency decontamination | | | | |
| e) Prevent spread of contamination | | | | |
| f) Avoid hazards during emergency decontamination | | | | |

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All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations
Performance Standards

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations – Mission Specific Competencies
Performance Standards

General
Personal Protective Equipment & Product Control
Skill #4

PERFORMANCE STANDARD
NFPA 470, 2022 Edition, 9.2.1, 9.6.1

Section 603
Operations-MS (PPE & PC)

OBJECTIVES

9.2.1

Select, don, work in, and doff approved PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; a mission-specific assignment in an IAP that requires use of PPE; the scope of the problem; strategies and tactics for the incident; access to a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures; approved PPE; and policies and procedures, so that under the guidance of a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected, inspected, donned, worked in, decontaminated, and doffed; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; PPE is maintained and stored consistent with AHJ policies and procedures and NFPA 1891; and all reports and documentation pertaining to PPE use are completed.

9.6.1

Perform product control techniques with a limited risk of personal exposure at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, control agents, and PPE; and access to a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, so that under the guidance of a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; a product control technique is selected and implemented; the product is controlled; victims, personnel, tools, and equipment are decontaminated; and product control operations are reported and documented.

INSTRUCTIONS - procedures for achieving the objective

You, as part of team, will be provided a scenario, reference material, personal protective clothing, and equipment (including chemical protective clothing), product control equipment, and decontamination equipment. You shall analyze the incident, identify, and select the appropriate PPE and product control options.

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations – Mission Specific Competencies

Performance Standards

Your team shall establish an incident response plan that includes identifying the products and hazards involved, selecting the appropriate PPE/CPC, select and perform product control techniques to confine/contain the release with limited risk of personal exposure while identifying which approved control agents and/or equipment are appropriate to use on a release involving the identified hazardous materials/WMD.

You and your team will demonstrate competence in using remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities as relevant to the scenario provided and perform product control techniques appropriate to situation.

After successfully completing product control actions, you and your team will perform appropriate decontamination procedures (emergency and/or technical).

With regard to selecting and utilizing the appropriate PPE/CPC; once selected, it must be properly inspected and maintained as recommended. It must also be properly donned, used/work in, and doffed. All PPE/CPC reporting and documentation requirements per the AHJ must be completed.

You shall respond verbally or in the written form as may be appropriate. You will begin on my instruction to start. The skill will end when you state to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

The candidate will not be allowed to review the performance steps at the time of testing. Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use the ERG, NIOSH Pocket Guide, and applicable SDS, shipping papers, and other reference support material provided.

The candidate will perform as a member of a team. Each member of the team will be randomly selected to perform a different/separate function on the team.

Their response must include:

1. Identifying the products and hazards involved
2. Selecting the appropriate PPE/CPC.
3. Selecting and performing product control techniques to confine/contain

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations – Mission Specific Competencies

Performance Standards

the release with limited risk of personal exposure.

4. Identification of approved control agents and/or equipment appropriate for use on the identified hazardous materials/WMD.
5. Demonstration of competence in using remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities as may be relevant to the scenario provided.
6. Perform product control techniques appropriate to situation.
7. Performance of appropriate decontamination procedures (emergency and/or technical).

PREPARATION & EQUIPMENT

- *Emergency Response Guidebook (ERG), most current edition book/app*
- *NIOSH Pocket Guide to Chemical Hazards, most current edition*
- *Safety data sheet(s) (SDS)*
- *Shipping papers*
- *Monitoring and Detection equipment (Simulators/training aids are acceptable)*
- *PPE/CPC compatibility charts/guides/manuals*
- *PPE/CPC including:*
 - *Vapor Protective Clothing (Level A)*
 - *Splash Protective Clothing (Level B)*
 - *Support Protective Garments (Level C)*
 - *Primary Protective Work Garments (Level D)*
 - *Structural Firefighting Protective Ensembles (Bunker Gear)*
 - *Positive Pressure Self-Contained Breathing Apparatus (SCBA)*
 - *Air Purifying Respirators (APR or PAPR)*
- *Approved communication devices (Radio, cell phone, etc.)*
- *Product Control Equipment (Absorbent boom/pad material, adsorbent material, foam concentrate (or simulated) and foam production devices, diking, damming, confinement and containment equipment and material).*
- *Decontamination supplies/equipment*
- *A written or audio/visual representation of a scene or scenario (i.e. PowerPoint Presentation) or an instructor prepared worksheet as needed.*

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations – Mission Specific Competencies
Performance Standards

General
Personal Protective Equipment & Product Control
Skill #4

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Operations |
|--|
| Skill #4 |
| <p>9.2.1 Select, don, work in, and doff approved PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; a mission-specific assignment in an IAP that requires use of PPE; the scope of the problem; strategies and tactics for the incident; access to a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures; approved PPE; and policies and procedures, so that under the guidance of a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected, inspected, donned, worked in, decontaminated, and doffed; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; PPE is maintained and stored consistent with AHJ policies and procedures and NFPA 1891; and all reports and documentation pertaining to PPE use are completed.</p> <p>9.6.1 Perform product control techniques with a limited risk of personal exposure at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, control agents, and PPE; and access to a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, so that under the guidance of a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; a product control technique is selected and implemented; the product is controlled; victims, personnel, tools, and equipment are decontaminated; and product control operations are reported and documented.</p> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations – Mission Specific Competencies
Performance Standards

| Mission Specific PPE | <u>TEST</u> | | <u>RETEST</u> | |
|--|-------------|---|---------------|---|
| The candidate shall: | S | U | S | U |
| a) Select and use the appropriate PPE for the assignment <ul style="list-style-type: none"> • Inspection • Donning • Working in • Doffing PPE • Maintenance • Storing | | | | |
| b) go through decontamination (emergency and technical) while wearing the PPE; and reporting and documenting the use of PPE. | | | | |
| Mission Specific Product Control | <u>TEST</u> | | <u>RETEST</u> | |
| The candidate shall: | S | U | S | U |
| a) Select and perform product control techniques to confine/contain the release with limited risk of personal exposure | | | | |
| b) Use approved control agents and equipment on a release involving hazardous materials/WMD; using remote control valves and emergency shutoff devices on: <ul style="list-style-type: none"> • cargo tanks • intermodal tanks in transportation • containers at fixed facilities | | | | |
| c) Perform product control techniques | | | | |

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U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Operations – Mission Specific Competencies
Performance Standards

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Analyzing the Incident

Detection, Monitoring and Sampling and Hazard and Response Information Collection
and Interpretation

Skill #1

PERFORMANCE STANDARD

Section 604

NFPA 470, 2022 Edition, 11.2.1, 11.2.1(B), 11.2.2, 11.2.2(B)

OBJECTIVES

11.2.1

Collect and interpret hazard and response information at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, including an incident with no release, incidents with a release of visible vapor cloud, liquid pooling, or solid dispersion with and without victims, and an incident with victims displaying signs and symptoms without an apparent chemical release; an assignment, policies and procedures; approved reference sources; and approved tools and equipment, so that hazard and response information is collected, interpreted, and communicated.

11.2.1(B)

Collecting and interpreting hazard and response information; identifying signs and symptoms of exposure to hazardous materials/WMD, including target organ effects of exposure to hazardous materials/WMD; and determining radiation exposure rates from labels attached to radioactive materials containers.

11.2.2

Classify hazardous materials/WMD and verify the presence and concentrations of hazardous materials through detection, monitoring, and sampling at a hazardous materials/WMD incident, given hazardous materials/WMD incidents, including one involving criminal intent, with released identified and unidentified hazardous materials; an assignment in an incident action plan (IAP); policies and procedures; approved resources; detection and monitoring equipment; and personal protective equipment (PPE), so that PPE is selected and used; hazardous materials/WMD are classified by their basic hazard categories; the presence of hazardous materials is verified; the concentrations of hazardous materials in the atmosphere are determined; signs of exposure in victims and responders are recognized and identified; samples of solids, liquids, and gases are collected; results of detection and monitoring equipment are read, interpreted, recorded, and communicated; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; law enforcement agencies are notified as needed; samples to be sent to laboratories are field screened and appropriately packaged; personnel using the detection, monitoring, and sampling equipment, as well as the equipment, are decontaminated; detection,

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

monitoring, and sampling equipment is maintained according to manufacturers' recommendations; and detection, monitoring, and sampling operations are reported and documented.

11.2.2(B)

Selecting and using PPE; determining radiation dose rates from radioactive material labels; using each of the following types of detection, monitoring, and sampling equipment [colorimetrics (e.g., tubes, chips, papers, strips, reagents); electrochemical cells (e.g., toxic gas sensors), flammable gas/LEL, noncontact thermal detection device, oxygen concentration, photoionization detector (PID), and radiation detection and monitoring devices] to either classify hazardous materials by basic hazard categories, verify the presence of hazardous materials or determine the concentration of hazardous materials when possible; collect samples of gases, liquids, and solids; monitoring, reading, interpreting, recording, and communicating readings from detection, monitoring, and sampling equipment according to the manufacturers' specifications and recommendations; and completing required reports and supporting documentation for detection, monitoring, and sampling operations.

INSTRUCTIONS

Given a solid, a liquid, and a gas, you will demonstrate the appropriate method for collecting a sample for evaluation. You will select the appropriate type of monitoring equipment to classify or identify the material by using the instruments, reagents and test strips as provided by the AHJ. (Example: if a sample is a liquid and has a pH of 2, it would be an acid. If it also had a LEL of 12%, it would also be a flammable liquid).

Given radiation monitoring, surveying and detection instruments/equipment, and a suspect package, you will demonstrate the procedure for surveying the package to determine if it has been breached. You will also provide an analysis of your surveying and monitoring actions.

Given a simulated hazardous materials incident, involving either a pipeline, a mode of transportation or a fixed facility incident, the technician trainee shall:

1. Describe the response objectives for each incident,
2. Describe the steps for determining response objectives when given an analysis of an incident,
3. Identify the possible response options by response objective for each problem (defensive, offensive and nonintervention), including safety considerations.
4. Identify possible response options to accomplish a given response objective

The technician, operating as a member of a team at a simulated hazardous materials incident, shall demonstrate how to collect and interpret hazard and response

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

information at a hazardous materials/WMD incident.

You will be graded as a team. You will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

If this skill is selected as a designated testing skill by TCFP, one of the following four options will be assigned:

- Scenario A: Pipeline Release
- Scenario B: Transportation Container Incident (Highway Cargo, Railcar, Maritime, or Aviation)
- Scenario C: Fixed Facilities Incident
- Scenario D: Radiological Incident

PREPARATION & EQUIPMENT

Firefighter Ensemble including Self Contained Breathing Apparatus (SCBA)
Chemical Protective Clothing (CPC) and appropriate respiratory protection equipment
Grab sample kit
Pre-determined sampling material
Haz-Mat WMD Chemical detection and monitoring equipment, per AHJ

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Analyzing the Incident

Detection, Monitoring and Sampling and Hazard and Response Information Collection
and Interpretation

Skill #1

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician |
|--|
| Skill #1 |
| <p>11.2.1 Collect and interpret hazard and response information at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, including an incident with no release, incidents with a release of visible vapor cloud, liquid pooling, or solid dispersion with and without victims, and an incident with victims displaying signs and symptoms without an apparent chemical release; an assignment, policies and procedures; approved reference sources; and approved tools and equipment, so that hazard and response information is collected, interpreted, and communicated.</p> <p>11.2.2 Classify hazardous materials/WMD and verify the presence and concentrations of hazardous materials through detection, monitoring, and sampling at a hazardous materials/WMD incident, given hazardous materials/WMD incidents, including one involving criminal intent, with released identified and unidentified hazardous materials; an assignment in an incident action plan (IAP); policies and procedures; approved resources; detection and monitoring equipment; and personal protective equipment (PPE), so that PPE is selected and used; hazardous materials/WMD are classified by their basic hazard categories; the presence of hazardous materials is verified; the concentrations of hazardous materials in the atmosphere are determined; signs of exposure in victims and responders are recognized and identified; samples of solids, liquids, and gases are collected; results of detection and monitoring equipment are read, interpreted, recorded, and communicated; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; law enforcement agencies are notified as needed; samples to be sent to laboratories are field screened and appropriately packaged; personnel using the detection, monitoring, and sampling</p> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

| | | | | |
|--|-------------|----------|---------------|----------|
| equipment, as well as the equipment, are decontaminated; detection, monitoring, and sampling equipment is maintained according to manufacturers' recommendations; and detection, monitoring, and sampling operations are reported and documented. | | | | |
| | TEST | | RETEST | |
| The candidate shall: | S | U | S | U |
| a) Select and use approved PPE | | | | |
| b) Use each of the following types of detection, monitoring and sampling equipment: <ul style="list-style-type: none"> • Colorimetric (e.g., tubes, chips, papers, strips, reagents) • Electrochemical cells (e.g., toxic gas sensors) • Flammable gas/LEL • Noncontact thermal detection device • Oxygen concentration • Photoionization detector (PID) • Radiation detection and monitoring devices | | | | |
| c) Use each of the following types of detection, monitoring, and sampling equipment colorimetrics (e.g., tubes, chips, papers, strips, reagents); <ul style="list-style-type: none"> • flammable gas/LEL • noncontact thermal detection device • oxygen concentration • photoionization detector (PID) • radiation detection and monitoring devices | | | | |
| d) Classify hazardous materials by basic hazard categories or verify the presence of hazardous materials or determine the concentration of hazardous materials | | | | |
| e) Collect samples of gases, liquids, and solids | | | | |
| f) Monitor, read, interpret, report, and communicate readings from detection, monitoring, and sampling equipment according to the manufacturers' specifications and recommendations | | | | |
| g) Determine radiation exposure rates from labels attached to radioactive materials containers | | | | |
| h) Identify signs and symptoms of exposure to hazardous materials/WMD, including target organ effects of exposure to hazardous materials/WMD | | | | |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

| | | | | |
|--|--|--|--|--|
| i) Collect and interpret hazard and response information | | | | |
| j) Complete required reports and supporting documentation for detection, monitoring, and sampling operations | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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Chemical Data Worksheet

| | | | | |
|--|-----------|-------------------|-----------|------------|
| Chemical Name: | | | Date | |
| Synonym/Trade Names: | | | DOT UN # | |
| Physical Description: | | | CAS # | |
| Molecular Formula: | | Molecular Weight: | | Structure: |
| Physical, Chemical and Toxicological Properties | | | | |
| | Source #1 | Source #2 | Source #3 | Source #4 |
| Reference Source | | | | |
| Page # | | | | |
| Physical Properties | | | | |
| Physical State/Form | | | | |
| Molecular Weight | | | | |
| Boiling Point | | | | |
| Melting Point | | | | |
| Freezing Point | | | | |
| Specific Gravity | | | | |
| Solubility | | | | |
| Flash Point | | | | |
| Ignition Temp. | | | | |
| Flammable Limits (UEL/LEL) | | | | |
| Ionization Potential | | | | |
| Vapor Density | | | | |
| Vapor Pressure | | | | |
| Other | | | | |
| Chemical Properties | | | | |
| Reactivities/Incompatibilities | | | | |
| Corrosively (pH) | | | | |
| Fire/Spill/Release Rec. | | | | |
| Other | | | | |
| Toxicological Properties | | | | |
| TLV-TWA, -C, -STEL | | | | |
| PEL or REL | | | | |
| IDLH | | | | |
| LD50, LC50 | | | | |
| Radioactivity | | | | |
| Carcinogen/Mutagen/Teratogen | | | | |
| Routes of Entry | | | | |
| Target Organs/ Signs & Symptoms | | | | |
| First Aid | | | | |
| Toxic Products of Combustion | | | | |
| PPE/CPC Recommendations | | | | |
| Respiratory Protection | | | | |

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Analyzing the Incident

Assessing Container Condition, Predicting Behavior, and Estimating Outcomes
Skill #2

PERFORMANCE STANDARD
NFPA 470, 2022 edition, 11.2.3, 11.2.4, 11.2.5

Section 604

OBJECTIVE

11.2.3

Assess the condition of a container and its closures at a hazardous materials/WMD incident, given an incident involving hazardous materials/WMD; an assignment; policies and procedures; the scope of the incident; identity of material(s) involved and their hazards, including results of detection, monitoring, and sampling; a container with required markings; and approved resources and PPE, so that PPE is selected and used; the container and its closures are inspected; the type of damage to the container and closures is identified; the type of stress on the container is identified; the level of risk associated with container and closure damage and stress is identified; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and a description of the condition of the container and its closures is communicated.

11.2.4

Predict the behavior of the hazardous materials/WMD involved in a hazardous materials/WMD incident, given an incident involving multiple hazardous materials/WMD; an assignment; policies and procedures; physical and chemical properties of the materials involved; results of detection, monitoring, and sampling; condition of the container (damage and stress); surrounding conditions; and approved reference sources, so that the behavior of each hazardous materials/WMD container and its contents is identified, the reactivity issues and hazards of the combined materials are identified, and a description of the likely behavior of the hazards is communicated.

11.2.5

Estimate the potential outcomes at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, the likely behavior of the container and its contents, and approved resources and equipment, so that the concentrations of materials within the endangered area are measured or predicted; physical, health, and safety hazards within the endangered area are identified; areas of potential harm in the endangered area are identified; potential outcomes within the endangered area are identified; and potential outcomes are communicated.

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Technician

Performance Standards

INSTRUCTIONS

Given a simulated Hazardous Materials/WMD incident and approved reference sources (hard copy and electronic databases – i.e., ERG, SDS, NIOSH Pocket Guide, CAMEO, etc.), product safety data sheets and shipping papers, you shall analyze, identify and describe, as may be required, the actions that are appropriate for the safe implementation of appropriate response measures.

You shall respond verbally or in the written form as may be appropriate. You shall communicate your findings and actions to the field examiner. You will begin on my instruction to start. The skill will end when you state to me that you have completed all the identified steps.

Do you understand these instructions?

EXAMINER'S NOTE

The candidate will not be allowed to review the performance steps at the time of testing.

Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use any applicable reference support material provided. CAMEO on their personal electronic device (cell phone or tablet) or provided electronic equipment is also acceptable.

The candidate may provide a written or verbal response, per the direction of the program coordinator.

PREPARATION & EQUIPMENT

- A written or audio/visual representation of a Hazardous Materials/WMD incident scenario(s) - i.e., PowerPoint Presentation or an instructor prepared worksheet.
- An Incident Action Plan (IAP)
- AHJ Policies and Procedures
- Monitoring and Detection Equipment – Examples:
 - Radiation detection and survey equipment/devices
 - Chemical detection and survey equipment/devices/kits/strips
 - Thermal Imaging Camera(s) (TIC)
- Approved Reference Sources – Examples:
 - Emergency Response Guidebook (ERG), most current edition

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

- NIOSH Pocket Guide to Chemical Hazards, most current edition
- Computer Aided Management of Emergency Operations (CAMEO), etc.
- Safety data sheet(s) (SDS)
- Shipping papers

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Analyzing the Incident

Assessing Container Condition, Predicting Behavior, and Estimating Outcomes
Skill #2

| | |
|---------------------------|--------------|
| Candidate: _____ | Notes: _____ |
| Dept: _____ | _____ |
| School: _____ | _____ |
| Examiner(s) _____ / _____ | _____ |

| Hazardous Materials Technician |
|---|
| Skill #2 |
| <p>11.2.3 Assess the condition of a container and its closures at a hazardous materials/WMD incident, given an incident involving hazardous materials/WMD; an assignment; policies and procedures; the scope of the incident; identity of material(s) involved and their hazards, including results of detection, monitoring, and sampling; a container with required markings; and approved resources and PPE, so that PPE is selected and used; the container and its closures are inspected; the type of damage to the container and closures is identified; the type of stress on the container is identified; the level of risk associated with container and closure damage and stress is identified; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and a description of the condition of the container and its closures is communicated.</p> <p>11.2.4 Predict the behavior of the hazardous materials/WMD involved in a hazardous materials/WMD incident, given an incident involving multiple hazardous materials/WMD; an assignment; policies and procedures; physical and chemical properties of the materials involved; results of detection, monitoring, and sampling; condition of the container (damage and stress); surrounding conditions; and approved reference sources, so that the behavior of each hazardous materials/WMD container and its contents is identified, the reactivity issues and hazards of the combined materials are identified, and a description of the likely behavior of the hazards is communicated.</p> <p>11.2.5 Estimate the potential outcomes at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, the likely behavior of the container and its contents, and approved resources and equipment, so that the concentrations of materials within the endangered area are measured or predicted; physical, health, and safety hazards within the endangered area are identified; areas of potential harm in the endangered area are identified; potential outcomes within the endangered area are identified; and potential outcomes are communicated.</p> |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

| | TEST | | RETEST | |
|---|-------------|----------|---------------|----------|
| | S | U | S | U |
| The candidate shall: | | | | |
| a) Assess the condition of the container and its closures | | | | |
| b) Identify the type of damage and level of risk associated with the damage | | | | |
| c) Identifying stress(es) on the container, and communicating the condition of the container and its closures and the level of risk associated with that condition. | | | | |
| d) Apply the general hazardous materials behavior model to predict likely behavior of materials and their containers when multiple materials are involved, | | | | |
| e) Identify reactivity issues associated with mixing various hazardous materials | | | | |
| f) Communicate the predicted behavior | | | | |
| g) Use approved resources and equipment | | | | |
| h) Determine concentrations of materials within the endangered area | | | | |
| i) Identify the physical, health and safety hazards within the endangered area | | | | |
| j) Identify the areas of potential harm in the endangered area | | | | |
| k) Estimate the potential outcomes in the endangered area | | | | |
| l) Communicate the potential outcomes | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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Container Identification Worksheet

| RAILCAR TANK | | | | |
|---|----------------------|--------------------|------------------|-----------------------|
| | Container Name | Container Capacity | Common Materials | Common Hazard Classes |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| INTERMODAL TANK | | | | |
| | Container Name/Spec. | Container Capacity | Common Materials | Common Hazard Classes |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| HIGHWAY CARGO TANK | | | | |
| | Container Name/Spec. | Container Capacity | Common Materials | Common Hazard Classes |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| 6 | | | | |
| 7 | | | | |
| NON-BULK CONTAINER PACKAGING | | | | |
| | Container Name | Container Capacity | Common Materials | Common Hazard Classes |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |
| Intermediate Bulk Containers & Ton Containers | | | | |
| | Container Name | Typical Contents | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| FIXED FACILITY STORAGE TANK | | | | |
| | Container Name | Typical Contents | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| RADIOACTIVE MATERIAL PACKAGING | | | | |
| | Container Name | Typical Contents | | |
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | |
| 5 | | | | |

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Response Planning

Response Objectives and Outcomes, Decontamination Method Selection, Action Plan
Development, and Evaluating and Reporting Progress

Skill #3

PERFORMANCE STANDARD

Section 604

NFPA 470, 2022 edition, 11.3.1, 11.3.3, 11.3.4, 11.5.1

OBJECTIVE

11.3.1

Develop and recommend to the Incident Commander or Hazardous Materials Officer strategies and tactics at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis, including incident-related information, life safety risks, environmental risks, and property risks; available resources; and policies and procedures, so that strategies are identified for the incident and tactics are identified for each strategy.

11.3.3

Select the decontamination method for a given tactic at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, strategies and tactics for the incident, available resources, and policies and procedures, so that a decontamination method to minimize the hazards for each tactic is identified and the equipment required to implement the decontamination method is identified.

11.3.4

Develop a plan of action for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, results of the incident analysis, strategies and tactics for the given incident, available resources, and policies and procedures, so that the tasks and resources required to meet the strategies are identified, specified strategies and tactics are addressed, plan is consistent with the emergency response plan and policies and procedures, and plan is within the capability of available personnel, PPE, and control equipment.

11.5.1

Evaluate and report the progress of assigned tasks at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, an assignment, current incident conditions, tactics taken, and approved communication equipment, so that the actual behavior of material and container is compared to that predicted, the effectiveness of the tactics taken in accomplishing the strategy is determined, modifications to the strategies and tactics are made, and the results are communicated.

INSTRUCTIONS

The technician, operating as a member of a team at a simulated hazardous materials incident, shall identify and develop response objectives, action options, and decontamination methods for the approval of the Incident Commander. Upon the approval of the Incident Commander, develop a plan of action to meet the response objectives identified in the Incident Action Plan

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Technician

Performance Standards

(IAP) ensuring that all site safety components of the plan are met. The Technician will then continue to evaluate and report the progress of assigned tasks to Command and evaluate, compare, and predict the effectiveness of response options/actions and modify as need to meet the response objectives.

You will be graded as a team. You will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTES

If this skill is selected as a designated testing skill by TCFP, one of the following three options will be assigned:

- Scenario A: A transportation emergency involving a chemical or flammable material release.
- Scenario B: A fixed facility emergency involving a chemical or flammable material release.
- Scenario C: A radiological emergency.

The hazardous materials technician trainee will not be allowed to review the performance steps at the time of testing.

Provide the candidates with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidates to analyze the scenario, they may use any applicable reference support material provided. The use of CAMEO on their personal electronic device (cell phone or tablet) or provided electronic equipment is also acceptable.

The candidates may provide a written or verbal response, per the direction of the field examiner.

PREPARATION & EQUIPMENT

- A written or audio/visual representation of a Hazardous Materials/WMD incident scenario(s) - i.e. PowerPoint Presentation or an instructor prepared worksheet.
- An Incident Action Plan (IAP)
- AHJ Policies and Procedures
- Approved Reference Sources – Examples:
- Emergency Response Guidebook (ERG), most current edition
- NIOSH Pocket Guide to Chemical Hazards, most current edition
- Computer Aided Management of Emergency Operations (CAMEO), etc.
- Safety data sheet(s) (SDS)

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

- Shipping papers
- ICS forms or ICS worksheets**
- Applicable AHJ reports and documentation

**Note: Standard ICS forms may include:

- ICS 201 Incident Briefing Form
- ICS 202 Incident Objectives Worksheet
- ICS 203 Organization Assignment List
- ICS 204 Division Assignment List
- ICS 205 Communications Plan
- ICS 206 Medical Plan
- ICS 208 HM Site Safety and Control Plan

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Response Planning

Response Objectives and Outcomes, Decontamination Method Selection, Action Plan Development, and Evaluating and Reporting Progress

Skill #3

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician |
|--|
| Skill #3 |
| <p>11.3.1 Develop and recommend to the Incident Commander or Hazardous Materials Officer strategies and tactics at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis, including incident-related information, life safety risks, environmental risks, and property risks; available resources; and policies and procedures, so that strategies are identified for the incident and tactics are identified for each strategy.</p> <p>11.3.3 Select the decontamination method for a given tactic at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, strategies and tactics for the incident, available resources, and policies and procedures, so that a decontamination method to minimize the hazards for each tactic is identified and the equipment required to implement the decontamination method is identified.</p> <p>11.3.4 Develop a plan of action for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, results of the incident analysis, strategies and tactics for the given incident, available resources, and policies and procedures, so that the tasks and resources required to meet the strategies are identified, specified strategies and tactics are addressed, plan is consistent with the emergency response plan and policies and procedures, and plan is within the capability of available personnel, PPE, and control equipment.</p> <p>11.5.1 Evaluate and report the progress of assigned tasks at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, an assignment, current incident conditions, tactics taken, and approved communication equipment, so that the actual behavior of material and container is compared to that predicted, the effectiveness of the tactics taken in accomplishing the strategy is determined, modifications to the strategies and tactics are made, and the results are communicated.</p> |

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

| The candidate shall: | TEST | | RETEST | |
|--|-------------|----------|---------------|----------|
| | S | U | S | U |
| a) Develop strategies for a hazardous materials incident and identify tactics for each strategy. | | | | |
| b) Select decontamination procedures (operations and methods) | | | | |
| c) Identify the equipment required to implement decontamination procedure (operations and methods) | | | | |
| d) Prepare an action plan | | | | |
| e) Identify site safety and control components | | | | |
| f) Identify points for a safety briefing | | | | |
| g) Identify pre-entry tasks | | | | |
| h) Identify atmospheric and physical safety hazards when incident involves a confined space | | | | |
| i) Preserve and collect legal evidence | | | | |
| j) Compare predicted behavior of the material and its container to the actual behavior | | | | |
| k) Determine effectiveness of tactics | | | | |
| l) Communicate the status of tactics | | | | |
| m) Modify the tactics based on the incident status review | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Examiner/Candidate Comments:

Certifying Examiner

Date

Overall Skill Sheet Score

Pass

Fail

Re-Test Certifying Examiner

Date

Overall Skill Sheet Re-Test Score

Pass

Fail

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

HazMat Technician Skill #3
Response Objective Analysis Form (Examinee Worksheet)

This worksheet is provided to the **EXAMINEE** to assist in identifying the stage of the incident and appropriate response objectives. Record the possible action options to accomplish each identified response objective.

TYPE OF INCIDENT: FACILITY TRANSPORTATION

CONTAINMENT SYSTEM ID: _____ MATERIAL: _____

INCIDENT STAGE (EVENT SEQUENCE)

| | | | | | |
|--------|--------|---------|--------|---------|------|
| STRESS | BREACH | RELEASE | ENGULF | CONTACT | HARM |
|--------|--------|---------|--------|---------|------|

RESPONSE OBJECTIVES

| | | | | | |
|-------------------------|--------------------|-------------------------|-------------------------|----------------------------|-------------------------|
| CHANGE APPLIED STRESSES | CHANGE BREACH SIZE | CHANGE QUANTITY RELEASE | CHANGE DANGER ZONE SIZE | CHANGE EXPOSURES CONTACTED | CHANGE SEVERITY OF HARM |
|-------------------------|--------------------|-------------------------|-------------------------|----------------------------|-------------------------|

RESPONSE OPTIONS AND SAFETY CONSIDERATIONS

| | | | | | |
|--|--|--|--|--|--|
| | | | | | |
|--|--|--|--|--|--|

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Response Planning
Personal Protective Equipment (PPE) Selection and Use
Skill #4

PERFORMANCE STANDARD
NFPA 1470, 2022 edition, 11.3.2, 11.4.2

Section 604
TECHNICIAN

OBJECTIVE

11.3.2

Select the PPE ensemble required for a given tactic at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, strategies and tactics for the incident, approved references, and policies and procedures, so that required PPE is identified for each tactic.

11.4.2

Test, don, work in, and doff PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, results of the incident analysis, strategies and tactics for the incident, and PPE ensembles as identified in the IAP, so that PPE is inspected, donned, worked in, decontaminated, and doffed; safety procedures are followed; hazards are avoided or minimized; equipment is maintained and stored properly; and the use of PPE is reported and documented.

INSTRUCTIONS

You will be provided a scenario involving a hazardous material. You will then select the appropriate Chemical Protective Clothing (CPC) using chemical compatibility charts and/or CPC Selection Guides, hazardous materials reference texts, and a CPC worksheet. Using the materials provided, determine the CPC compatibility with the hazardous materials, and identify the breakthrough time (in minutes). You will then inspect, don, work in, and go through technical decontamination while wearing PPE; and complete any AHJ required reports and supporting documents for the use of PPE. You will begin on my instructions to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER NOTES

The hazardous materials technician trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- A list of Hazardous Materials/WMD Agents
- A list of CPC Material

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

- CPC Chemical compatibility charts
- CPC Selection Guide(s)
- Hazardous Materials reference texts
- CPC Worksheets

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Response Planning
Personal Protective Equipment (PPE) Selection and Use
Skill #4

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician | | | | |
|--|-------------|----------|---------------|----------|
| Skill #4 | | | | |
| <p>11.3.2 Select the PPE ensemble required for a given tactic at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, strategies and tactics for the incident, approved references, and policies and procedures, so that required PPE is identified for each tactic.</p> | | | | |
| <p>11.4.2 Test, don, work in, and doff PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, results of the incident analysis, strategies and tactics for the incident, and PPE ensembles as identified in the IAP, so that PPE is inspected, donned, worked in, decontaminated, and doffed; safety procedures are followed; hazards are avoided or minimized; equipment is maintained and stored properly; and the use of PPE is reported and documented.</p> | | | | |
| | TEST | | RETEST | |
| The candidate: | S | U | S | U |
| a) Selected PPE ensemble for a specified tactic based on all hazards identified | | | | |
| b) Determined the effectiveness of protective clothing based in its uses and limitations | | | | |
| c) Tested, inspected, donned, worked in, going through technical decontamination while wearing PPE | | | | |
| d) Completed required reports and supporting documents for the use of PPE | | | | |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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Chemical Protective Clothing Selection Worksheet

Candidate: _____ Date: _____

| Hazardous Material/WMD | CPC Materials/Garment | CPC Breakthrough Time in Min. | CPC Selected for Use (Yes or No) |
|------------------------|-----------------------|-------------------------------|----------------------------------|
| #1: _____ | 1. | Min. | |
| | 2. | Min. | |
| | 3. | Min. | |
| #2: _____ | 1. | Min. | |
| | 2. | Min. | |
| | 3. | Min. | |
| #3: _____ | 1. | Min. | |
| | 2. | Min. | |
| | 3. | Min. | |

TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Action Plan Implementation

Performing Assigned IMS/ICS Duties and Terminating the Incident

Skill #5

PERFORMANCE STANDARD
NFPA 470, 2022 edition, 11.4.1, 11.6.1

Section 604

OBJECTIVE

11.4.1

Perform assigned hazardous materials branch or group functions within ICS at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis; policies and procedures, including an emergency response plan and standard operating procedures; the IAP; and approved resources, so that the assigned functions within the hazardous materials branch or group are completed.

11.6.1

Terminate a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, operational observations of response operations (incident information), and approved forms for documentation and reporting, so that assistance in scheduled incident debriefings and critiques is provided, and incident operations are reported and documented.

INSTRUCTIONS

Based on the Hazardous Materials Branch function you are assigned to, you will be evaluated while performing those duties

EXAMINER'S NOTES

The hazardous materials technician trainee will not be allowed to review the performance steps at the time of testing.

Assign students to a HazMat Branch function and the examiner will be the incident commander

PREPARATION & EQUIPMENT

- HazMat reference materials
- Completed HazMat IAP including a Site Safety Plan
- Simulated hazardous materials/WMD incident or scenario involving a facility or transportation setting

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Action Plan Implementation

Performing Assigned IMS/ICS Duties and Terminating the Incident

Skill #5

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician | | | | |
|---|-------------|----------|---------------|----------|
| Skill #5 | | | | |
| <p>11.4.1 Perform assigned hazardous materials branch or group functions within ICS at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis; policies and procedures, including an emergency response plan and standard operating procedures; the IAP; and approved resources, so that the assigned functions within the hazardous materials branch or group are completed.</p> <p>11.6.1 Terminate a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, operational observations of response operations (incident information), and approved forms for documentation and reporting, so that assistance in scheduled incident debriefings and critiques is provided, and incident operations are reported and documented.</p> | | | | |
| | TEST | | RETEST | |
| The candidate: | S | U | S | U |
| a) Performed the duties and responsibilities of an assigned function in the hazardous materials branch or a group organization | | | | |
| b) Communicated observations to the hazardous materials branch director/group supervisor, ICS operations section chief, or IC | | | | |
| c) Communicated operational observations (incident information) at debriefings and critiques | | | | |
| d) Completed, forward, and filing required reports, records, and supporting documentation | | | | |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| | |
|-----------------------------------|-------------------------------|
| Overall Skill Sheet Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

NEED TO INSERT SKILL 5 – ICS WORKSHEETS HERE

(create new Word/pdf docs for future updating/easy insertion)

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Performing Control Functions
Product Control and Controlling Container Leaks
Skill #6

PERFORMANCE STANDARD

Section 604

NFPA 470, 2022 edition, 11.4.3.1, 11.4.3.2

OBJECTIVE

11.4.3.1

Perform product control techniques at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product, an assignment, results of the incident analysis, policies and procedures for product control, strategies and tactics for the incident, and approved tools, equipment, control agents, and PPE, so that an approved product control technique is selected and implemented; the product is controlled; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, victims, tools, and equipment used are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.

11.4.3.2

Control leaks from containers and their closures at a hazardous materials/WMD incident, given three scenarios, including (1) a leak from a bulk or nonbulk pressure container or its closures, (2) a leak from a nonbulk liquid container or its closures, and (3) a leak from a bulk liquid container or its closures; an assignment; results of the incident analysis; policies and procedures for controlling leaks from containers and/or their closures; and approved tools, equipment, and PPE, so that an approved product control technique is selected and used; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; hazard monitoring is completed; leaks are controlled (confined or contained); emergency responders, tools, and equipment used are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.

INSTRUCTIONS

Working as a team, you will perform product control techniques at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product; given three scenarios, including:

- Scenario A - a leak from a bulk or non-bulk pressure container or its closures
- Scenario B - a leak from a non-bulk liquid container or its closures

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Technician

Performance Standards

- Scenario C - a leak from a bulk liquid container or its closures

You will select and use the appropriate PPE, select, and use approved control agents and equipment, protect exposures and personnel, use container control valves and remote emergency shutoff devices, select the appropriate tools and equipment from the equipment available, inspect its serviceability, perform product control, contain the leak, and complete report and supporting documentation for product control operations.

After donning approved PPE including appropriate respiratory equipment, you will begin on my instruction to start.

You will be graded as a team. You will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

The hazardous materials technician trainee will not be allowed to review the performance steps at the time of testing.

Provide the candidate with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the candidate to analyze the scenario, they may use any applicable reference support material provided. The use of CAMEO on their personal electronic device (cell phone or tablet) or provided electronic equipment is also acceptable.

The candidate may provide a written or verbal response, per the direction of the field examiner.

PREPARATION & EQUIPMENT

- A written or audio/visual representation of a Hazardous Materials/WMD incident scenario(s) – i.e., PowerPoint Presentation or a multimedia presentation/video, or photograph(s) with narratives.
- Bulk or Non-bulk pressure container, bulk liquid container, non-bulk liquid container
- Bung wrench

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

- Dome clamps
- Plugging and patching kit
- Over pack drum
- Approved PPE including appropriate respiratory protection
- Chlorine A Kit
- Chlorine B Kit (Ammonia B Kit or SO₂ Kit is also acceptable)
- Chlorine C Kit, Midland Emergency Kit, or Kelso Kit
- Other containment devices, per AHJ

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Performing Control Functions
Product Control and Controlling Container Leaks
Skill #6

| | |
|---------------------------|--------------|
| Candidate: _____ | Notes: _____ |
| Dept: _____ | _____ |
| School: _____ | _____ |
| Examiner(s) _____ / _____ | _____ |

| Hazardous Materials Technician |
|--|
| Skill #6 |
| <p>11.4.3.1 Perform product control techniques at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product, an assignment, results of the incident analysis, policies and procedures for product control, strategies and tactics for the incident, and approved tools, equipment, control agents, and PPE, so that an approved product control technique is selected and implemented; the product is controlled; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, victims, tools, and equipment used are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.</p> <p>11.4.3.2 Control leaks from containers and their closures at a hazardous materials/WMD incident, given three scenarios, including (1) a leak from a bulk or nonbulk pressure container or its closures, (2) a leak from a nonbulk liquid container or its closures, and (3) a leak from a bulk liquid container or its closures; an assignment; results of the incident analysis; policies and procedures for controlling leaks from containers and/or their closures; and approved tools, equipment, and PPE, so that an approved product control technique is selected and used; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; hazard monitoring is completed; leaks are controlled (confined or contained); emergency responders, tools, and equipment used are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.</p> |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

| The candidate: | TEST | | RETEST | |
|---|------|---|--------|---|
| | S | U | S | U |
| a) Selected and used approved PPE, selected and used approved control agents and equipment on a release involving hazardous materials/WMD | | | | |
| b) Inspected and maintained tools and equipment | | | | |
| c) Used container control valves and remote emergency shutoff devices | | | | |
| d) Performed product and control techniques | | | | |
| e) Controlled leaks on containers and their closures, using the following techniques: <ul style="list-style-type: none"> • Patching • Plugging • Sealing closures • Remote valve shutoff • Closing valves • Repositioning container • Replacing missing plugs • Tightening loose fittings | | | | |
| f) Decontaminated tools and equipment | | | | |
| g) Inspected and maintained tools and equipment | | | | |
| h) Completed required, reporting, and supporting documentation for product control operations | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Performing Control Functions
Overpacking Nonbulk and Radioactive Materials
Skill #7

PERFORMANCE STANDARD
NFPA 470, 2022 edition, 11.4.3.3

Section 604

OBJECTIVE

11.4.3.3

Overpack damaged or leaking nonbulk and radioactive materials containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis; a loaded damaged or leaking container; a suitable overpack container; policies and procedures; and approved tools, equipment, and PPE, so that an approved overpack technique is selected; the damaged or leaking container is placed into a suitable overpack and the overpack is closed, marked, and labeled; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; emergency responders, tools, and equipment are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.

INSTRUCTIONS

Presented with a leaking container:

- Scenario A – A damaged or leaking 55-gallon drum
- Scenario B – A damaged or leaking radioactive materials container

You will choose the appropriate tools and equipment from the equipment available, inspect its serviceability, and contain the leak. Additionally, you will over pack the drum utilizing a randomly selected method (selected by the examiner). After donning CPC, you will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

The hazardous materials technician trainee will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- A container with either bung leak, chime leak, forklift puncture, or ail puncture.
- Over pack drum
- CPC with respiratory protection
- 55-gallon drum

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

- Radiological detection equipment

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Performing Control Functions
Overpacking Nonbulk and Radioactive Materials
Skill #7

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician | | | | |
|---|-------------|----------|---------------|----------|
| Skill #7 | | | | |
| 11.4.3.3 Overpack damaged or leaking nonbulk and radioactive materials containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis; a loaded damaged or leaking container; a suitable overpack container; policies and procedures; and approved tools, equipment, and PPE, so that an approved overpack technique is selected; the damaged or leaking container is placed into a suitable overpack and the overpack is closed, marked, and labeled; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; emergency responders, tools, and equipment are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented. | | | | |
| | TEST | | RETEST | |
| Given a scenario, the candidate shall: | S | U | S | U |
| Scenario A - Place a damaged or leaking nonbulk materials container into the overpack container | | | | |
| Scenario B - Place a damaged or leaking radioactive materials container into an overpack container | | | | |
| a) Select and use approved PPE | | | | |
| b) Follow safety procedures and minimizing and avoiding hazards | | | | |
| c) Decontaminate tools and equipment and inspecting and maintaining tools and equipment | | | | |
| d) Complete requirements for reporting and documenting product control operations | | | | |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Performing Control Functions
Liquid Product Transfer
Skill #8

PERFORMANCE STANDARD
NFPA 470, 2022 edition, 11.4.3.4

Section 604

OBJECTIVE

7.4.3.4

Transfer liquids from leaking nonpressure containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis; a leaking nonpressure container and a recovery container; policies and procedures for transferring liquids from leaking nonpressure containers; and approved tools, equipment, and PPE, so that an approved product transfer method is selected and used; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; hazard monitoring is completed; the containers are bonded and grounded; product is transferred to the recovery container; emergency responders, tools, and equipment used are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.

INSTRUCTIONS

The technician, operating as a member of a team, will transfer liquids from leaking nonpressure containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; results of the incident analysis; a leaking nonpressure container and a recovery container; policies and procedures for transferring liquids from leaking nonpressure containers; and approved tools, equipment, and PPE.

You will select and use appropriate PPE, identify a compatible recovery container and transfer equipment, monitor for hazards, transfer liquid product from a leaking container to a recovery container, suppress vapors, inspect and maintain tools and equipment, decontaminate responders, tools, and equipment, and complete report and supporting documentation for liquid product transfer operations.

You will be graded as a team. You will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

The hazardous materials technician trainee will not be allowed to review the performance steps at the time of testing.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Provide the team with an incident scenario. This may be in the form of an actual staged scenario on the training field, a PowerPoint or multimedia presentation/video, or a photograph(s) with narratives.

Allow the team to analyze the scenario, they may use any applicable reference support material provided. The use of WISER or CAMEO on their personal electronic device (cell phone or tablet) or provided electronic equipment is also acceptable.

The team may provide a written or verbal response, per the direction of the field examiner.

PREPARATION & EQUIPMENT

- A written or audio/visual representation of a Hazardous Materials/WMD incident scenario(s) – i.e., PowerPoint Presentation or a multimedia presentation/video, or photograph(s) with narratives.
- Nonpressure containers
- Grounding and bonding equipment
- Air Monitoring equipment
- Vapor Suppressing/firefighting equipment (hose, nozzle, foam, etc.)
- Product transfer equipment

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Performing Control Functions
Liquid Product Transfer
Skill #8

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician | | | | |
|---|-------------|----------|---------------|----------|
| Skill #8 | | | | |
| <p>11.4.3.4 Transfer liquids from leaking nonpressure containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment; results of the incident analysis; a leaking nonpressure container and a recovery container; policies and procedures for transferring liquids from leaking nonpressure containers; and approved tools, equipment, and PPE, so that an approved product transfer method is selected and used; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; hazard monitoring is completed; the containers are bonded and grounded; product is transferred to the recovery container; emergency responders, tools, and equipment used are decontaminated; tools and equipment are inspected and maintained; and product control operations are reported and documented.</p> | | | | |
| | TEST | | RETEST | |
| The candidate shall: | S | U | S | U |
| a) Selected and using PPE | | | | |
| b) Identified a compatible recovery container and transfer equipment | | | | |
| c) Monitored for hazards | | | | |
| d) Grounded and bonded containers | | | | |
| e) Transferred liquid product from a leaking container to a recovery container | | | | |
| f) Suppressed vapors | | | | |
| g) Decontaminated tools and equipment and inspecting and maintaining tools and equipment | | | | |
| h) Completed reports and supporting documentation for product control operations | | | | |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards**

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Rescue
Rescue Team Member/Victim
Skill #9

PERFORMANCE STANDARD
NFPA 470, 2022 edition, 11.4.4.1, 11.4.4.2

Section 604

OBJECTIVE

11.4.4.1

Rescue an incapacitated entry team member from the hot zone, given a hazardous materials/WMD incident; an assignment within a backup team; communication of an entry team emergency; and approved tools, equipment, including special rescue equipment, and PPE; so that safety procedures are followed and the entry team member is removed from the hot zone, decontaminated, PPE doffed, and delivered into the care of EMS.

11.4.4.2

Perform rescue and recovery operations at a hazardous materials/WMD incident, given a hazardous materials/WMD incident involving exposed and/or contaminated victims; an assignment; scope of the problem; policies and procedures; approved tools, equipment, including special rescue equipment, and PPE; and access to an emergency response plan, or standard operating procedures so that the feasibility of conducting a rescue or a recovery operation is determined; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; rescue or recovery tactics are selected within the capabilities of available personnel, approved tools, equipment, special rescue equipment, and PPE; victims are rescued or recovered; victims are prioritized and patients are triaged and transferred to the decontamination group, casualty collection point, area of safe refuge, or medical care in accordance with the IAP; personnel, victims, and equipment used are decontaminated; and victim rescue and recovery operations are reported and documented.

INSTRUCTIONS

The technician, operating as a member of a team at a simulated hazardous materials incident, shall demonstrate how to perform technical rescues of both a member of the team and a separate victim (dummy/manikin). The candidate will be assigned one of the following scenarios and must successfully accomplish the individual skills objectives associated with the given scenario.

Scenario A – An entry team member has been involved in an incapacitating event and must be rescued, the candidate must recover the victim and demonstrate the ability to execute all objectives.

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Technician

Performance Standards

Skills Objectives:

- Identifying rescue situations,
- prioritizing rescues,
- selecting proper rescue options,
- using rescue tools and equipment,
- moving personnel in PPE,
- conducting rescues,
- doffing rescued personnel's PPE,
- and conducting emergency decontamination.

Scenario B – A victim has succumb to an exposer that is of unknown origin or type, the candidate must recover the victim and demonstrate the ability to execute all objectives.

Skills Objectives:

- Identifying both rescue and recovery situations;
- victim prioritizing and patient triaging;
- selecting proper rescue or recovery tactics;
- using available specialized rescue equipment;
- selecting and using PPE for the victim and the rescuer;
- searching for rescuing, and recovering victims;
- following the AHJ's procedures for decontamination of rescue/recovery personnel and their equipment;
- and completing required reports and supporting documentation for victim rescue and recovery operations

EXAMINER'S NOTE

The examiner will evaluate the appropriateness and effectiveness of the decontamination methods employed by the team. The hazardous materials technician trainees will not be allowed to review the performance steps at the time of testing.

PREPARATION & EQUIPMENT

- Emergency Response and Hazardous Materials Response Equipment
- Mass Decontamination Equipment
- Complete Level B CPC ensembles w/SCBAs
- "Contaminated people" that have been "contaminated"
- A dummy/manikin or a non-responder/non-ambulatory victim to be decontaminated

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Rescue
 Rescue Team Member/Victim
Skill #9

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician |
|---|
| Skill #9 |
| <p>11.4.4.1 Perform mass decontamination for ambulatory and nonambulatory victims at a hazardous materials/WMD incident, given a hazardous materials/WMD incident requiring mass decontamination; an assignment in an IAP; results of the incident analysis; policies and procedures; and approved PPE, tools, and equipment, so that PPE is selected and used; a mass decontamination procedure is selected, set up, implemented, evaluated, and terminated; victims are decontaminated; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and mass decontamination operations are reported and documented.</p> <p>11.4.4.2 Perform rescue and recovery operations at a hazardous materials/WMD incident, given a hazardous materials/WMD incident involving exposed and/or contaminated victims; an assignment; scope of the problem; policies and procedures; approved tools, equipment, including special rescue equipment, and PPE; and access to an emergency response plan, or standard operating procedures so that the feasibility of conducting a rescue or a recovery operation is determined; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; rescue or recovery tactics are selected within the capabilities of available personnel, approved tools, equipment, special rescue equipment, and PPE; victims are rescued or recovered; victims are prioritized and patients are triaged and transferred to the decontamination group, casualty collection point, area of safe refuge, or medical care in accordance with the IAP; personnel, victims, and equipment used are decontaminated; and victim rescue and recovery operations are reported and documented.</p> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

| | <u>TEST</u> | | <u>RETEST</u> | |
|--|-------------|----------|---------------|----------|
| | S | U | S | U |
| The candidate shall: | | | | |
| <u>Scenario A</u> – Rescuing an incapacitated entry team member | | | | |
| a) Identifying rescue situations, | | | | |
| b) prioritizing rescues, | | | | |
| c) selecting proper rescue options, | | | | |
| d) using rescue tools and equipment, | | | | |
| e) moving personnel in PPE, | | | | |
| f) conducting rescues, | | | | |
| g) doffing rescued personnel’s PPE, | | | | |
| h) and conducting emergency decontamination. | | | | |
| <u>Scenario B</u> – Rescuing an incapacitated victim | | | | |
| a) Identifying both rescue and recovery situations; | | | | |
| b) victim prioritizing and patient triaging; | | | | |
| c) selecting proper rescue or recovery tactics; | | | | |
| d) using available specialized rescue equipment; | | | | |
| e) selecting and using PPE for the victim and the rescuer; | | | | |
| f) searching for, | | | | |
| g) rescuing, | | | | |
| h) and recovering victims; | | | | |
| i) following the AHJ’s procedures for decontamination of rescue/recovery personnel and their equipment; | | | | |
| j) and completing required reports and supporting documentation for victim rescue and recovery operations. | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Decontamination

Mass Decontamination / Technical Decontamination

Skill #10

PERFORMANCE STANDARD

Section 604

NFPA 470, 2022 edition, 11.4.5.1, 11.4.5.2

OBJECTIVE

11.4.5.1

Perform mass decontamination for ambulatory and nonambulatory victims at a hazardous materials/WMD incident, given a hazardous materials/WMD incident requiring mass decontamination; an assignment; results of the incident analysis; policies and procedures; and approved PPE, tools, and equipment, so that PPE is selected and used; a mass decontamination procedure is selected, set up, implemented, evaluated, and terminated; victims are decontaminated; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and mass decontamination operations are terminated, reported, and documented.

11.4.5.2

Establish and implement technical decontamination in support of entry operations and for ambulatory and nonambulatory victims at a hazardous materials/WMD incident, given a hazardous materials/WMD incident requiring technical decontamination; an assignment; results of the incident analysis; policies and procedures for technical decontamination; and approved PPE, tools, and equipment, so that approved PPE is selected and used; a technical decontamination procedure is selected, set up, implemented, evaluated, and terminated; victims are decontaminated; safety procedures are followed; hazards are avoided or minimized; if contaminated, personnel, tools, and equipment are decontaminated; technical decontamination operations are terminated; and all reports and documentation of technical decontamination operations are completed.

INSTRUCTIONS

Scenario A - The technician, operating as a member of a team at a simulated hazardous materials incident, shall demonstrate how to perform technical and mass decontamination (decon) operations. You will be provided with the necessary equipment and water supply to set up and establish a mass decon corridor. After establishing a mass decon corridor, while wearing Level B chemical protective clothing (CPC) and a self-contained breathing apparatus (SCBA), you shall demonstrate the procedures to decontaminate responders and both ambulatory and non-ambulatory victims during a simulated hazardous materials incident. Working as part of a team you will establish a mass decontamination corridor and explain how the decontamination of both

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Technician

Performance Standards

ambulatory and non-ambulatory victims will be conducted during a simulated mass casualty hazardous materials incident.

You will be graded as a team. You will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

Scenario B - The technician, operating as a member of a team at a simulated hazardous materials incident, shall demonstrate how to perform technical decontamination operations. You will be provided with the necessary equipment and water supply to set up and establish a technical contamination reduction corridor and emergency decon area. After establishing a technical contamination reduction corridor, while wearing Level B chemical protective clothing (CPC) and a self-contained breathing apparatus (SCBA), you shall demonstrate the procedures to decontaminate responders and both ambulatory and non-ambulatory victims during a simulated hazardous materials incident.

You will be graded as a team. You will begin on my instruction to start. The skill will end when you state or indicate to me that you have completed all the identified steps. Do you understand these instructions?

EXAMINER'S NOTE

The hazardous materials technician trainees will not be allowed to review the performance steps at the time of testing.

The examiner will evaluate the appropriateness and effectiveness of the decontamination methods employed by the team.

PREPARATION & EQUIPMENT

- Emergency Response and Hazardous Materials Response Equipment
- Technical Decontamination Equipment
- Complete Level B CPC ensembles w/SCBAs
- One technician in Level A CPC that has been "contaminated"
- A dummy/manikin or a non-responder/non-ambulatory victim to be decontaminated

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Decontamination
 Mass Decontamination / Technical Decontamination
Skill #10

Candidate: _____ Notes: _____

Dept: _____

School: _____

Examiner(s) _____ / _____

| Hazardous Materials Technician | | | | |
|--|--|-------------|----------|---------------|
| Skill #10 | | | | |
| <p>11.4.5.1 Perform mass decontamination for ambulatory and nonambulatory victims at a hazardous materials/WMD incident, given a hazardous materials/WMD incident requiring mass decontamination; an assignment; results of the incident analysis; policies and procedures; and approved PPE, tools, and equipment, so that PPE is selected and used; a mass decontamination procedure is selected, set up, implemented, evaluated, and terminated; victims are decontaminated; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and mass decontamination operations are terminated, reported, and documented.</p> | | | | |
| <p>11.4.5.2 Establish and implement technical decontamination in support of entry operations and for ambulatory and nonambulatory victims at a hazardous materials/WMD incident, given a hazardous materials/WMD incident requiring technical decontamination; an assignment; results of the incident analysis; policies and procedures for technical decontamination; and approved PPE, tools, and equipment, so that approved PPE is selected and used; a technical decontamination procedure is selected, set up, implemented, evaluated, and terminated; victims are decontaminated; safety procedures are followed; hazards are avoided or minimized; if contaminated, personnel, tools, and equipment are decontaminated; technical decontamination operations are terminated; and all reports and documentation of technical decontamination operations are completed.</p> | | | | |
| | | TEST | | RETEST |
| The candidate: | | S | U | S |
| Scenario A – Technical and Mass Decontamination | | | | |
| a) Selected and used suitable PPE | | | | |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

| | | | | |
|---|--|--|--|--|
| b) Selected a mass decontamination procedure to minimize the hazard | | | | |
| c) Set up and implemented mass decontamination operations for ambulatory and nonambulatory victims | | | | |
| d) Evaluated the effectiveness of the mass decontamination process | | | | |
| e) Terminated mass decontamination operations | | | | |
| f) Completed reporting and documentation requirements | | | | |
| Scenario B – Technical Decontamination | | | | |
| a) Selected and used PPE | | | | |
| b) Selected a technical decontamination procedure to minimize the hazard | | | | |
| c) Set up and implemented technical decontamination operations | | | | |
| d) Evaluated the effectiveness of the technical decontamination procedure | | | | |
| e) Terminated technical decontamination operations | | | | |
| f) Completed required reports and supporting documentation for technical decontamination operations | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Technician
Performance Standards

Examiner/Candidate Comments:

Certifying Examiner

Date

Re-Test Certifying Examiner

Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Incident Commander
Performance Standards

HAZARDOUS MATERIALS INCIDENT COMMANDER

Analyze the Incident, Plan Response, Implement the Incident Action Plan (IAP),
Evaluate Progress and Adjust IAP, and Termination of Incident

Skill #1

PERFORMANCE STANDARD

Section 605

NFPA 470, 2022 edition, 13.2.1, 13.3.1, 13.4.1, 13.5.1, 13.6.1

OBJECTIVE

13.2.1

Analyze a hazardous materials/weapons of mass destruction (WMD) incident, given a hazardous material/WMD incident; incident information; policies and procedures; available resources; approved references; and access to a Hazardous Materials Technician, an allied professional, an emergency plan, or standard operating procedures, so that the hazards are assessed and risks are evaluated.

13.3.1

Plan the response to a hazardous materials/WMD incident, given a hazardous materials/WMD incident, the results of the incident analysis, available resources, and access to a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, so that the incident objectives, operational modes, strategies, and potential tactics are identified, level of personal protective equipment (PPE) is approved, decontamination process is approved, strategies and tactics are selected based on available resources, and an IAP, including the site safety and control plan, is developed.

13.4.1

Implement the planned response in a hazardous materials/WMD incident, given a hazardous materials/WMD incident and resources and equipment available, so that ICS is implemented, resources are directed, a focal point for information transfer is established, and actions are taken to meet the strategies of the IAP.

13.5.1

Evaluate the progress and adjust the IAP as needed at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, an incident action plan, actions taken, and changing incident conditions, so that actual behavior of material and container is compared to that predicted, effectiveness of strategies and tactics is determined, and modifications to the IAP are made as needed until the scene is determined to be stabilized and hazards are controlled.

13.6.1

Terminate response operations at a hazardous materials/WMD incident, given a

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Incident Commander

Performance Standards

hazardous materials/WMD incident that has been determined to be stabilized with hazards controlled, operational observations, and approved forms for documentation and reporting, so that command is transferred, debriefings are held, post-incident analysis is completed, a critique is conducted, and overall incident response operations are reported and documented.

INSTRUCTIONS

Given a simulated hazardous materials/WMD incident or scenario involving a facility or transportation setting, the incident commander shall:

- Analyze the Incident
- Plan Response
- Implement an Incident Action Plan
 - assign resources to meet the strategic goals of the incident action plan (IAP).
 - specify procedures for the notification and utilization of nonlocal resources (e.g., private, state, and/or federal government personnel)
- Evaluate Progress and Adjust IAP
 - redirect resources and transfer command as necessary to support the completion of tactical objectives as identified in the incident action plan.
 - establish priorities for the assignment and redistribution of all resources dedicated to the incident.
- Termination of the Plan
 - Immediately upon completion of a simulated hazardous materials/WMD incident or scenario involving a facility or transportation setting, the incident commander shall conduct a debriefing of the incident.
 - After returning all equipment to service, the incident commander shall conduct a critique of the incident/scenario in a classroom environment.
 - The incident commander will ensure that all incident documentation is thoroughly completed in accordance with local, state and federal requirements.

All actions shall be consistent with the local emergency response plan and the organization's standard operating procedures.

You will begin on my instruction to start. Do you understand these instructions?

EXAMINER'S NOTE

The hazardous materials incident commander trainee will not be allowed to review the

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TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Incident Commander

Performance Standards

performance steps at the time of testing.

PREPARATION & EQUIPMENT

- ICS forms or ICS worksheet.
- Simulated hazardous materials/WMD incident or scenario involving a facility or transportation setting.
- Site safety plan
- Other incident documents

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Incident Commander
Performance Standards

HAZARDOUS MATERIALS INCIDENT COMMANDER

Analyze the Incident, Plan Response, Implement the Incident Action Plan (IAP),
 Evaluate Progress and Adjust IAP, and Termination of Incident

Skill #1

| | |
|---------------------------|--------------|
| Candidate: _____ | Notes: _____ |
| Dept: _____ | _____ |
| School: _____ | _____ |
| Examiner(s) _____ / _____ | _____ |

| Hazardous Materials Incident Commander |
|--|
| Skill #1 |
| <p>13.2.1 Analyze a hazardous materials/weapons of mass destruction (WMD) incident, given a hazardous material/WMD incident; incident information; policies and procedures; available resources; approved references; and access to a Hazardous Materials Technician, an allied professional, an emergency plan, or standard operating procedures, so that the hazards are assessed and risks are evaluated.</p> |
| <p>13.3.1 Plan the response to a hazardous materials/WMD incident, given a hazardous materials/WMD incident, the results of the incident analysis, available resources, and access to a Hazardous Materials Technician, an allied professional, an emergency response plan, or standard operating procedures, so that the incident objectives, operational modes, strategies, and potential tactics are identified, level of personal protective equipment (PPE) is approved, decontamination process is approved, strategies and tactics are selected based on available resources, and an IAP, including the site safety and control plan, is developed.</p> |
| <p>13.4.1 Implement the planned response in a hazardous materials/WMD incident, given a hazardous materials/WMD incident and resources and equipment available, so that ICS is implemented, resources are directed, a focal point for information transfer is established, and actions are taken to meet the strategies of the IAP.</p> |
| <p>13.5.1 Evaluate the progress and adjust the IAP as needed at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, an</p> |

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**TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Incident Commander
Performance Standards**

incident action plan, actions taken, and changing incident conditions, so that actual behavior of material and container is compared to that predicted, effectiveness of strategies and tactics is determined, and modifications to the IAP are made as needed until the scene is determined to be stabilized and hazards are controlled.

13.6.1

Terminate response operations at a hazardous materials/WMD incident, given a hazardous materials/WMD incident that has been determined to be stabilized with hazards controlled, operational observations, and approved forms for documentation and reporting, so that command is transferred, debriefings are held, post-incident analysis is completed, a critique is conducted, and overall incident response operations are reported and documented.

| | <u>TEST</u> | | <u>RETEST</u> | |
|--|-------------|----------|---------------|----------|
| | S | U | S | U |
| The candidate: | | | | |
| a) Assessed the hazards and evaluated risks; able to use written and verbal communication. | | | | |
| b) Approved the PPE and decontamination process for tactics, | | | | |
| c) Developed an IAP, including the site safety and control plan, | | | | |
| d) Implemented ICS, including unified command as necessary, | | | | |
| e) Assigned and directed resources, and established information transfer focal point. | | | | |
| f) Compared predicted behavior of the material and its container to the actual behavior, | | | | |
| g) determined effectiveness of tactics and actions, and modified the IAP when needed. | | | | |
| h) Transferred command: <ul style="list-style-type: none"> • participated in a debriefing • post-incident analysis, • critiques | | | | |
| i) Completed required reports and supporting documentation for overall incident response operations. | | | | |

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet objective or grading step

All steps of the skill objective are mandatory and must be scored as “Satisfactory” to pass the skill.

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TEXAS COMMISSION ON FIRE PROTECTION
Hazardous Materials Incident Commander
Performance Standards

Examiner/Candidate Comments:

 Certifying Examiner

 Date

 Re-Test Certifying Examiner

 Date

| Overall Skill Sheet Score | |
|-----------------------------------|-------------------------------|
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |
| Overall Skill Sheet Re-Test Score | |
| Pass <input type="checkbox"/> | Fail <input type="checkbox"/> |

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