TEXAS COMMISSION ON FIRE PROTECTION Commissioner's Meeting Agenda 9:00 a.m., August 15, 2024 4800 N. Lamar Boulevard, Room 140, Austin, Texas

The Texas Commission on Fire Protection (the Commission) may discuss and/or act on any of the following agenda items. The Commission may go into executive session on any agenda item listed below as authorized by the Open Meetings Act, Texas Government Code Chapter 551.

- 1. Call to order with an invocation¹ and pledge of allegiance.
- 2. Roll call for a quorum and excuse Commissioner absences, if any.
- 3. Approve Commission meeting minutes of the May 16, 2024, meeting.
- 4. Report from the Budget and Strategic Plan Ad Hoc Subcommittee.
- 5. Reports from fire service interest groups and agencies on matters relating to their specific organizational purposes, functions, activities, and objectives, including reports from TEEX, the Texas Fire Chiefs Association, the Texas State Association of Fire Fighters, the State Firefighters and Fire Marshals' Association of Texas, the Texas Fire Marshal's Association, the Texas Association of Fire Educators, the Texas A&M Forest Service, the National Fire Protection Association, Texas State Association of Fire and Emergency Districts, the Center for Public Safety Excellence, the State Fire Marshal's Office, and the National Fallen Fire Fighters Foundation. The initial report from the Firefighter Cancer Support Network will be added to the list.
- 6. Report from Commission representative to the Homeland Security Council.
- 7. Subjects for future Commission meeting agendas.
- 8. Discussion on future meeting dates.
- 9. Discussion and possible action on the vacant seat for Assistant Presiding Officer for the Commission.
- 10. Matters referred to the Commission from the Curriculum and Testing Committee:
 - A. Report from the Curriculum and Testing Committee.

¹ Any invocation that may be offered before the official start of the Commission meeting shall be a voluntary offering to and for the benefit of the Commission. The views or beliefs expressed by the invocation speaker have not been previously reviewed or approved by the Commission and do not necessarily represent the religious beliefs or views of the Commission in part or as a whole. No member of the community is required to attend or participate in the invocation. Such a decision will not impact their right to participate- actively in the business of the Commission. Copies of the policy governing invocations and setting forth the procedure to have a volunteer deliver an invocation are available upon written request submitted to the Commission Clerk.

- B. Discussion and possible action concerning updates to the Hazmat curriculum.
- 11. Matters referred to the Commission by the Firefighter Advisory Committee:
 - A. Discussion and possible action regarding the 2023 Injury Report.
 - B. Discussion and possible action on proposed 37 Texas Administrative Code (TAC), Chapter 469, Technical Rescue.
- 12. Discussion and possible action on the proposed edits to the rule review of 37 TAC, Chapter 449, Head of Fire Department.
- 13. Proposed rule review for the following:
 - A. 37 TAC, Chapter 403, Criminal Convictions and Eligibility for Certifications.
 - B. 37 TAC, Chapter 421, Standards for Certification.
- 14. Discussion and possible action on the recommendations from the Committee Member Selection Ad Hoc Committee Regarding vacancies on the Health and Wellness, Curriculum and Testing, and Firefighter Advisory Committees.
- 15. Matters from the Agency Chief:
 - A. Update regarding agency duties and responsibilities.
 - B. Decision of the Agency Chief in contested cases and consent orders.
 - C. Status regarding division functions:
 - i. Training Approval & Testing test administered, training approvals, record reviews, and online training audits.
 - ii. Certification & Professional Development training applications, IFSAC seals issued, certifications issued, training facilities, curriculum development, library resource requests.
 - iii. Compliance biennial inspections, compliance officers training, issues involving regulated entities.
 - iv. Information Technology public website design, FARM and FIDO improvements, CAPPS (Central Accounting Payroll/Personnel System), IT security policy, and service requests.
- 16. Personnel matters regarding the appointment, employment, compensation, evaluation, reassignment, and duties of the Agency Chief.
- 17. Recognition of Commissioner Wilson for his service to the Commission.
- 18. Adjourn meeting.

AGENDA ITEM NUMBER 1

1. Call to order with invocation and pledge of allegiance.

AGENDA ITEM NUMBER 2

2. Roll call for a quorum and excuse Commissioner absences, if any.

AGENDA ITEM NUMBER 3 WITH RELEVANT DOCUMENTS ATTACHED

3. Approve Commission meeting minutes of May 16, 2024 (please see attached).

TEXAS COMMISSION ON FIRE PROTECTION MEETING

Presiding Officer J. P. Steelman called the May 16, 2024 meeting of the Texas Commission on Fire Protection to order at 10:00 a.m. at 4800 N Lamar Blvd, Room 140, Austin, Texas.

Attending:	Chris Cantu Bob Morgan Mike Jones	David Coatney Tim Smith Rusty Wilson	Kelly Vandygriff Amanda Friedeck Michael Johnson	Michael Glynn J. P. Steelman	Paul Hamilton Sue DeVillez
	*Excused absen	<u>ce</u>			
Staff:	Mike Wisko Ashley Barnett	Holden Wenger Cliff Grant	Sami Lepisto Grace Wilson	Joyce Guinn Robert Reese	Frank King
1. Invocation and Pledge of Allegiance.	The invocation was led by Presi	was given by Com ding Officer J. P. S	missioner Kelly Vanc teelman.	lygriff and the Pl	edge of Allegiance
2. Roll call and excusing of Commissioner absences.	The roll was called, and a quorum was present. No Commissioners were absent.				
3. Adoption of Minutes.	A motion was m of the February	ade by Mike Jones 29, 2024 Commis	s and seconded by Da sion meeting. The mo	avid Coatney to a otion carried.	pprove the minutes
4. Report from Budget and Strategic Plan Subcommittee.	A report was giv	ven that included u	updates on the Strate	egic Plan.	
5. Reports from Interest Groups.	Reports were gi Fire Marshals' A Protection Asso State Fire Marsh Firefighter Canc	ven by TEEX, the ssociation of Texa ciation, the Texas al's Office, the Na er Support Netwo	Fexas Fire Chiefs Ass is, Texas A&M Forest State Association of I tional Fallen Fire Fig irk.	ociation, the Sta Service, the Nat Fire and Emerge hters Foundatio	te Fire Fighters and ional Fire ncy Districts, the n, and the

7. Subjects for Commissioner Mike Jones requested an agenda item for replacement of his current future meeting position as Assistant Presiding Officer on the Commission. agendas. 8. Future meeting The Commission announced the next Commission workshop meeting date for August 14, 2024 at 1:30 p.m. and the Commission meeting August 15, 2024 at 9:00 a.m. The dates. November Commission meeting date announced for November 21, 2024 at 10:00 a.m. 9. Report from the No report was given. Curriculum and Testing Committee. 10. Discussion A motion was made by Michael Glynn and seconded by David Coatney to adopt the and possible proposed changes to 37 Texas Administrative Code Chapter 467 - Fire Marshall. The action on motion carried. proposed 37 Texas Administrative Code [TAC] Chapter 467, Fire Marshall. 11. Discussion A motion was made by Mike Jones and seconded by David Coatney to send proposed TAC, and possible Chapter 469, Technical Rescue for publication to the Texas Register and to the Fire action on Fighter Advisory Committee for review. The motion carried. proposed TAC, Chapter 469, Technical Rescue. 12. Discussion Agency Chief Mike Wisko provided a brief report. No action was taken. and possible action regarding reciprocity with SFFMA certifications.

15. Discussion
and possible
action regarding
Rule Review of 37The Commission proposed edits to 449.3 and 449.203. Staff will make the suggested
changes to present at the next Commission meeting in August. No action was taken.TAC, Chapter 449.

17. Discussion
regarding the
2023 InjuryGrace Wilson presented the report. A motion was made by Mike Jones and seconded by
Rusty Wilson to send this report to the Fire Fighter Advisory committee for review. The
motion carried.Report.Report.

18. Discussion No action was taken.
regarding the
2024 TCFP
Customer Service
Survey.

19. Matters from A. Agency Chief Mike Wisko gave an update on agency duties and responsibilities.the Agency Chief. B. Chief Wisko reported that there were no contested cases.C. Chief Wisko reported the status of division functions.

20. Recognition of
CommissionerCommissioner Mike Jones attended, and recognition of his service was announced. A
plaque was presented to him by Presiding Officer J.P. Steelman and Agency Chief Mike
Wisko.Jones for his
service to the
Commission.Wisko.

21. Personal No matters discussed. matters regarding the appointment, employment, compensation, evaluation, reassignment, and duties of the Agency Chief.

22. AdjournThe motion was made by Mike Jones and seconded by David Coatney to adjourn the
meeting. The motion carried.

J.P. Steelman, Presiding Officer

AGENDA ITEM NUMBER 4 WITH RELEVANT DOCUMENTS ATTACHED

4. Report from the Budget and Strategic Plan Ad Hoc Subcommittee (please see attached).

TCFPFiscal Year 2024BUDGET3rd Quarter endingUPDATEMay 31, 2024

	FY 24 Amount Appropriated	Expen t Da	ditures o ate	Amount Remaining	
	\$3,474,022 ¹ \$3,309,45		9,456 ²	\$164,566	
Appropropriated Receipts Required			F	Receipts Collected	

\$95,000

Total Collected 2023\$4,737,0009 Months Collected 2024\$4,438,481





Notes:

1. This amount includes the \$651,364 Rider appropriation for new vehicles.

2. Third Quarter Total Expenditures includes \$369,571 purchase of the vehicles. Balance encumbered for 4th quarter FY 24.

AGENDA ITEM NUMBER 5

5. Reports from fire service interest groups and agencies on matters relating to their specific organizational purposes, functions, activities, and objectives, including reports from TEEX, the Texas Fire Chiefs Association, the Texas State Association of Fire Fighters, the State Firefighters and Fire Marshals' Association of Texas, the Texas Fire Marshal's Association, the Texas Association of Fire Educators, the Texas A&M Forest Service, the National Fire Protection Association, Texas State Association of Fire and Emergency Districts, the Center for Public Safety Excellence, the State Fire Marshal's Office, and the National Fallen Fire Fighters Foundation. The initial report from the Firefighter Cancer Support Network will be added to the list.

AGENDA NUMBER 6

6. Report from Commission representative to the Homeland Security Council.

AGENDA ITEM NUMBER 7

7. Subjects for future Commission meeting agendas.

8. Discussion on future meeting dates.

9. Discussion and possible action on the vacant seat for the Assistant Presiding Officer for the Commission.

AGENDA ITEM NUMBER 10 WITH RELEVANT ATTACHMENTS

10. Matters referred to the Commission from the Curriculum and Testing Committee:

A. Report from the Curriculum and Testing Committee.

AGENDA ITEM NUMBER 10 WITH RELEVANT ATTACHMENTS CONTINUED

10. Matters referred to the Commission from the Curriculum and Testing Committee:

B. Discussion and possible action concerning updates to the Hazmat curriculum **(please see attached)**.

CERTIFICATION CURRICULUM MANUAL

CHAPTER SIX

HAZARDOUS MATERIALS

NFPA 470, 2022 Edition

Effective January 1, 2025



Texas Commission on Fire Protection P.O. Box 2286 Austin, Texas 78768-2286 (512) 936-3838 **CERTIFICATION CURRICULUM MANUAL – CHAPTER SIX**

HAZARDOUS MATERIALS AWARENESS

REFERENCE LIST FOR THE HAZARDOUS MATERIALS AWARENESS CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

<u>Texts</u>

Certification Curriculum Manual. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

- *Code of Federal Regulations, Title 29 Part 1910.120, Appendix A.* United States. U.S. Department of Labor, Occupational Safety & Health Administration.
- *Emergency Response Guidebook.* United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- Hazardous Materials Awareness and Operations, 3rd edition. Schnepp, R. (2019). Sudbury, MA: Jones & Bartlett.
- Hazardous Materials for First Responders, 5th edition. International Fire Service Training Association. (2017). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- NFPA 470: Hazardous Materials/ Weapons of Mass Destruction (WMD) Standard for Responders.(2022 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.
- Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

<u>Media</u>

- DOT Chart 18: Hazardous Materials Marking, Labeling and Placarding Guide. (or current edition) United States. Washington, DC: U.S. Dept. of Transportation, Pipeline and Hazardous Materials Safety Administration.
- *Emergency Response Guidebook 2012.* [DVD]. United States. (2012). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- Hazmat Awareness. Action Training Systems, Inc. (2008). [2 Disc DVD Set Recognition & Identification]. Poulsbo, WA: Action Training Systems.
- Hazardous Materials Awareness and Operations [DVD]. International Association of Fire Chiefs, & National Fire Protection Association. (2006). Sudbury, MA: Jones and Bartlett.

CHAPTER 6 SECTION 601 HAZARDOUS MATERIALS AWARENESS CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
601-5.1	General - Introduction - Laws, Regulations, and National Consensus Standards	1
601-5.2	Recognition and Identification	5
601-5.3	Initiate Protective Actions	
601-5.4	Notification	2
	TOTAL RECOMMENDED HOURS	8

The recommended hours include time for skills evaluation and are based on 12 students. Hours needed depend on the actual number of students.

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Course Instructor Information Hazardous Materials Awareness

Overview

The Hazardous Materials curricula are designed to provide clear guidance that ensures adequate presentation of the information required to meet the Job Performance Requirements (JPRs) of National Fire Protection Association (NFPA) 470, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*, 2022edition.

The Hazardous Materials curricula are found in Chapter 6 of the TCFP Curriculum Manual.

Certification Level	TCFP Section Number	NFPA 470 Chapter
Awareness	601	4 & 5
Operations	602	6 & 7
Operations-Mission	603	8.2, 8.6, 9.2, 9.6
Specific Competencies		
(MSC)		
*Technician	604	10 & 11
*Incident Commander	605	12 & 13

Layout

The NFPA numbering sequence is mirrored to allow easy correlation between this document and the NFPA Standard. For example, 601-5.1.2 identifies the section in Awareness that corresponds to NFPA section 5.1.2.

When a section references information from "Annex A Explanatory Material" in the NFPA Standard, it is identified by a boxed Instructor Note. For example, the boxed Instructor Note listed in 601-5.2.1 and that immediately follows the Requisite Knowledge section corresponds to the NFPA Annex A information for NFPA 470 section 5.2.1.

* Asterisks by Technician and Incident Commander above indicate that both are voluntary (non-mandatory) certifications. Therefore, **a formal "curriculum outline" is not provided**. Please use chapters 11 and 13, respectively, of NFPA 470 as a guide when creating your own course curricula or selecting a prepared instructional curriculum package from a publisher/vendor for Technician and Incident Commander.

TCFP Standards Manual

It is critical that you review the chapters in the TCFP Standards Manual that apply to this curriculum. Of primary importance are the following two chapters: Chapter 423, which defines the course of study, documentation and medical requirements necessary

for Awareness and Operations certification (required) and Chapter 453, which covers certification requirements for Technician and Incident Commander (voluntary). Additionally, instructors are expected to review the following chapters as they pertain to the instructional, examination, certification processes:

- Chapter 421, Standards for Certification
- Chapter 427, Training Facility Certification
- Chapter 435, Fire Fighter Safety
- Chapter 437, Fees
- Chapter 439, Examinations for Certification
- Chapter 441, Continuing Education

These chapters do not address every issue that could impact this curriculum; therefore, you are encouraged to become familiar with the TCFP Standards Manual.

Instructor Qualifications

Hazardous Materials courses must be taught by an instructor meeting the requirements described in Chapter 427.307 of the TCFP Standards Manual.

Supplemental Information

Instructors are expected to provide supplemental information if the main reference text does not provide adequate information to ensure successful completion of the Job Performance Requirements as listed in the curriculum.

Components of the Curricula

Each section of a curriculum identifies the NFPA Job Performance Requirement (JPR) and subdivides the requisite knowledge requirements into learning components. For example:

	View within the Curriculum	Explanation
601-5.3.1	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.	Section Number and NFPA JPR
	Requisite Knowledge: Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to	Requisite Knowledge Statement

pr pr de fo	otect responders and the public; policies and ocedures for isolating the hazard area and enying entry; and the purpose of and methods r isolating the hazard area and denying entry.	
(1) Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to protect responders and the public	First part of Requisite Knowledge
	Identify precautions to be taken to protect responders/the public using ERG, SDS, shipping papers with emergency response information, other approved reference sources Identify the hazard a. Isolate the hazard area b. Deny entry c. Call for trained personnel d. Secure the scene	Associated learning components
(2) Policies and procedures for isolating the hazard area and denying entry	Second part of Requisite Knowledge
	Policies and procedures, per AHJ/SOP a. Isolating the hazard area b. Denying entry	Associated learning components
(3) And the purpose of and methods for isolating the hazard area and denying entry	Third part of Requisite Knowledge
	 Purpose/methods a. Isolating the hazard area i. Establish perimeter ii. Erect barriers b. Denying entry i. Restrict hazard area access to 	Associated learning components

appropriately trained personnel only ii. Maintain perimeter	
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency response	Requisite Skills Statement
Instructor Note Recommended precautions found on numbered guides in the ERG include public safety issues; recommended protective clothing; evacuation; emergency response to fire, spill, and leak; and first aid sections.	Appendix A: Explanatory Material for 5.3.1

Examples of required knowledge include (1)	
precautions for providing emergency medical	
care to victims; typical ignition sources; ways	
hazardous materials/WMD are harmful to	
people, the environment, and property; general	
routes of entry for human exposure; emergency	
action (fire, spill, or leak; first aid); actions	
recommended not to be performed (e.g., closing	
of pipeline valves); protective actions (isolation	
of area and denial of entry, evacuation, shelter-	
in-place); size and shape of recommended initial	
isolation and protective action distances;	
difference between small and large spills;	
conditions that require the use of the ERG Table	
of Initial Isolation and Protective Action	
Distances and the isolation distances in the ERG	
numbered guide; techniques for isolating the	
hazard area and denying entry to unauthorized	
persons; how to recognize and protect evidence;	
and use of approved tools and equipment; (2)	
basic personal protective actions: staying clear	
of vapors, tumes, smoke, and spills; keeping	
venicle at a sale distance from the scene;	
approaching from upwind, uprill, and upstream,	
and (5) types of protective actions and their	
entry evacuation and shelter in place); basic	
factors involved in the choice of protective	
actions (e.g. hazardous materials/WMD	
involved population threatened and weather	
conditions)	

Unless otherwise specified, all curriculum references are to NFPA 470 Chapter 5. Where applicable NFPA 470 Chapter 4 is used to identify the competencies that must be satisfied to meet the JPR's identified in NFPA 470 Chapter 5.

601-5.2.1	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 and their hazards are identified. Given a hazardous materials/WMD incident, and approved reference sources, awareness level personnel shall recognize those situations where hazardous materials/WMD are present. (470-4.2.1)	Additional reference to NFPA 470

Skills

NFPA Requisite Skill requirements are addressed in the corresponding Skill Sheets in Chapter 6 of the TCFP Curriculum Skills Manual.

Definitions of Certification Levels

Awareness Level Personnel: Personnel who, in the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene. These personnel have met all the performance requirements of Chapter 5 of NFPA 470, Hazardous Materials/ Weapons of Mass Destruction (WMD) Stands for Responders.

Operations Level Personnel: Personnel who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release. These personnel have met all the performance requirements of Chapter 7 of NFPA470, *Hazardous Materials/ Weapons of Mass Destruction (WMD) Standard for Responders*

Operations-Mission Specific Competencies (MSC) Level Personnel: Responders assigned mission-specific responsibilities at hazardous materials/WMD incidents are

those operations level responders designated by the authority having jurisdiction (AHJ) to perform additional tasks to support the AHJ's response mission, expected tasks, equipment, and training in the following areas:

- (1) Personal protection equipment (PPE)
- (2) Mass decontamination
- (3) Technical decontamination
- (4) Evidence preservation and sampling
- (5) Product control
- (6) Detection, monitoring, and public safety sampling
- (7) Victim rescue and recovery
- (8) Illicit laboratories incidents

These personnel have met all the performance requirements of Chapter 5 of NFPA 470, *Hazardous Materials/ Weapons of Mass Destruction (WMD) Standard for Responders* and have also met the performance requirements of the subchapter(s) of Chapter 6 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications,* to which they are trained and credentialed to perform.

Note: Basic TCFP Structural Fire Fighter certification requires that Structure Fire Fighter personnel meet all performance requirements for:

- Hazardous Materials Awareness
- Hazardous Materials Operations
- Hazardous Materials Operations MSC 6.2 Personal Protective Equipment
- Hazardous Materials Operations MSC 6.6 Product Control

Technician Level Personnel: Persons who respond to hazardous materials/weapons of mass destruction (WMD) incidents using a risk-based response process by which they analyze a problem involving hazardous materials/WMD, plan a response to the problem, evaluate progress of the planned response, and assist in terminating the incident. These personnel have met all the performance requirements of Chapter 7 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction *Emergency Response Personnel Professional Qualifications.*

Incident Commander Level Personnel: That person, designated by the AHJ, responsible for all incident activities/operations, including the development of strategies and tactics and the ordering and release of resources. These personnel have met all the performance requirements of Chapter 8 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.*

SECTION 601

HAZARDOUS MATERIALS AWARENESS

Awareness Level Personnel are those who, in the course of their normal duties, may encounter an emergency incident involving hazardous materials/weapons of mass destruction (WMD) and who are expected to:

- Recognize the presence of the hazardous materials/weapons of mass destruction (WMD),
- Protect themselves,
- Call for trained personnel, and
- Secure the scene

Response options for awareness level personnel are generally limited to nonintervention actions only.

<u>601-5.1 General</u>

- 601-5.1.1 Introduction
- **601-5.1.1** Awareness personnel are those persons who, in the course of theirnormal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the area.
- **601-5.1.2** Awareness personnel shall meet the job performance requirements defined in Sections 601-5.2 through 601-5.4.

Instructor Note

Awareness personnel may include law enforcement, EMS, public works employees, maintenance workers, and others who might see or encounter an incident involving hazardous materials/WMD occur while performing their regular assignment.

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601-5.1.3 General Knowledge Requirements

Role of awareness personnel at a hazardous materials/WMD incident, location, and contents of the AHJ emergency response plan, and standard operating procedures for Awareness Level Personnel.

- 1. Role of awareness personnel at a hazardous materials/WMD incident
- 2. AHJ emergency response plan
 - a. Location
 - b. Contents
- 3. Standard operating procedures for awareness personnel

601-5.1.4 General Skills Requirements (Reserved)

601-5.2 Recognition and Identification

Instructor Note

While the purpose of the JPR is to require the Emergency Response Guidebook (ERG) as the minimum reference at the awareness level, other reference sources can be provided as necessary, including an equivalent guide to the ERG; safety data sheets (SDS); manufacturer, shipper, and carrier (highway, rail, water, air, and pipeline) documents (shipping papers) and contacts; and the U.S. DOT Hazardous Materials Marking, Labeling and Placarding Guide. If provided, responders should be able to use these sources to accomplish the goals of the JPR.

In transportation, the name, placard applied, or identification number of the material provides access to information in the ERG or an equivalent document.

601-5.2.1 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 and their hazards are identified.

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- (A) Requisite Knowledge. What hazardous materials (dangerous goods internationally) and WMD are: the differences between hazardous materials/WMD incidents and other emergencies; definitions of hazard classes and divisions of hazardous materials/WMD; ways in which hazard classes and divisions are harmful to people, the environment, animals, and property; general routes of entry for human exposure to hazardous materials/WMD; sights, sounds, and odors that might indicate the presence of hazardous materials; limitations of using senses to determine presence of hazardous materials/WMD; indicators to the presence of hazardous materials including container shapes included in the ERG, NFPA 704 markings, globally harmonized system (GHS) markings, placards, labels, pipeline markings, other transportation markings [including UN/NA identification number marks, marine pollutant mark, elevated temperature (HOT) mark, commodity marking and inhalation markl, shipping papers and emergency response information and the person responsible for the shipping papers in each mode of transportation (air, highway, rail, and water), where shipping papers are found during emergencies and nonemergency situations in each mode of transportation, and other indicators (including military hazardous materials/WMD markings, special hazard communication markings, and special container markings); difficulties encountered in determining the specific names of hazardous materials/WMD at facilities and in transportation; accessing response information from the Emergency Response Guidebook (ERG) (current edition) using the alphabetical index of chemical names, numerical index of identification numbers, table of markings, labels, and placards, or container identification charts; and types of hazard information available from the ERG, safety data sheets (SDS), shipping papers and emergency response information, and sources for obtaining the names of hazardous materials/WMD at a facility.
- 1. Define hazardous materials and WMD
 - a Hazardous materials matter (solid, liquid, or gas) or energy that when released is capable of creating harm to people, the environment, and property, including weapons of mass destruction (WMD).
 - b. Dangerous goods -term used for hazardous materials in Canada United Nations model code and regulations
 - c Weapons of Mass Destruction (WMD) is defined as any weapon or material that is designed to cause death or serious injury or damage to buildings, structures, or the environment, such as an explosive or incendiary bomb,

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- i. CBRNE
 - 1. chemical
 - 2. biological
 - 3. radiological
 - 4. nuclear
 - 5. explosives (i.e., IED improvised explosive device)
- ii. Radiological weapons of mass destruction
 - 1. Improvised nuclear device (IND)
 - 2. Radiation dispersal device (RDD) (i.e., dirty bomb)
 - 3. Radiation exposure device (RED) (i.e., radiation emitting device)
- 2. Identify the hazard classes and divisions of hazardous materials/WMD and identify common examples of materials in each hazard class or division.
 - a Class 1 Explosives
 - i. Division 1.1 Explosives which have a mass explosion hazard (ie. Dynamite, Nitroglycerin, Black powder)
 - Division 1.2 Explosives which have a projection hazard but not a mass explosion hazard (ie. Detonation Cord, Fire Works)
 - iii. Division 1.3 Explosives which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard (ie. Smokeless Powder, Arial Flares)
 - iv. Division 1.4 Explosives which present no significant blast hazard (ie. Single Cartridges, Cap Type Primers, Ignition Fuses)
 - v. Division 1.5 Very insensitive explosives with a mass explosion hazard (ie. Ammonium Nitrate Fertilizer & Fuel Oil (ANFO), Blasting Agents)
 - vi. Division 1.6 Extremely insensitive articles which do not have a mass explosion hazard
 - b. Class 2 Gases
 - i. Division 2.1 Flammable gases (ie. Hydrogen, Methane, and Propane)
 - ii. Division 2.2 Non-flammable, non-toxic gases (ie. Anhydrous Ammonia, Carbon Dioxide)
 - iii. Division 2.3 Toxic gases (ie. Phosgene, Chlorine, Arsine)

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- c Class 3 Flammable liquids (and Combustible liquids [US])
 - i. Flammable Liquids (ie. Gasoline, metho alcohol)
 - ii. Combustible Liquids (ie. Diesel, Fuel Oil)
- d Class 4 Flammable solids; Substances liable to spontaneous combustion; Substances which, on contact with water emit flammable gases
 - Division 4.1 Flammable solids, self-reactive substances and solid desensitized explosives (ie. Magnesium, Matches, Road Flares)
 - ii. Division 4.2 Substances liable to spontaneous combustion (ie. Phosphorus, Aluminum Alkyls)
 - iii. Division 4.3 Substances which in contact with water emit flammable gases (ie. Lithium, Calcium Carbide, Potassium, Aluminum Alkyls)
- e. Class 5 Oxidizing substances and Organic peroxides
 - i. Division 5.1 Oxidizing substances (ie. Ammonium Nitrate Fertilizer)
 - ii. Division 5.2 Organic peroxides (ie. Hydrogen Peroxide, Organic Peroxides)
- f Class 6 Toxic substances and Infectious substances
 - i. Division 6.1 Toxic substances (ie. Hydrogen Cyanide, Aniline, Mustard Gas)
 - ii. Division 6.2 Infectious substances (ie. Botulism ,Anthrax, Tetanus)
- g Class 7 Radioactive materials (ie. Cobalt, Uranium, Nuclear Fuel Rods)
- h Class 8 Corrosive substances (ie. Soda Lime, Sulfuric Acid, Hydrochloric Acid, Sodium Hydroxide)
- i Class 9 Miscellaneous dangerous goods/hazardous materials and articles (ie. Dry Ice, Molten Sulfur, Make-Up)
- 3. Identify the primary hazards and associated harm with each hazard class and division.
 - a Class 1 Explosives
 - i. Division 1.1 -
 - ii. Division 1.2 –
 - iii. Division 1.3 –
 - iv. Division 1.4 –
 - v. Division 1.5 –

 - vi. Division 1.6 -
 - b. Class 2 Gases
 - i. Division 2.1 –
 - ii. Division 2.2 –

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- iii. Division 2.3 –
- c Class 3 Flammable liquids (and Combustible liquids [US]) i. –
 - ii.

-

- d Class 4 Flammable solids; Substances liable to spontaneous combustion; Substances which, on contact with water emit flammable gases
 - i. Division 4.1 –
 - ii. Division 4.2 –
 - iii. Division 4.3
- e. Class 5 Oxidizing substances and Organic peroxides
 - i. Division 5.1 -
 - ii. Division 5.2 -
- f Class 6 Toxic substances and Infectious substances
 - i. Division 6.1 -
 - ii. Division 6.2 -
- g Class 7 Radioactive materials
- h Class 8 Corrosive substances
- i Class 9 Miscellaneous dangerous goods/hazardous materials and articles
- 4. Identify the difference(s) between hazardous materials/WMD incidents and other emergencies.
- 5. Identify typical occupancies and locations in the community where hazardous materials/WMD are manufactured, transported, stored, used, or disposed of.
- 6. Identify typical container shapes included in the ERG that can indicate the presence of hazardous materials/WMD.
- 7. Identify facility and transportation markings and colors that indicate hazardous materials/WMD, including the following:
 - a. Transportation markings, including UN/NA identification number marks, marine pollutant mark, elevated temperature (HOT) mark, commodity marking, and inhalation hazard mark
 - b. NFPA 704 markings
 - c. Military hazardous materials/WMD markings
 - d. Special hazard communication markings for each hazard class
 - e. Pipeline markings
 - f. Container markings
 - g. Globally harmonized system (GHS) markings
 - h. Placards
 - i. Labels
 - j. Pipeline markings
 - k. Other transportation markings

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- 8. Given an NFPA 704 marking, describe the significance of the colors, numbers, and special symbols.
 - a. Red Fire Hazard
 - b. Blue Health Hazard
 - c. Yellow Reactivity Hazard
 - d. White Special Hazard
 - e. Numbers 1-4 Higher the number the greater the hazard, no number means no hazard present
 - f. Special Hazard Symbols Identifies what hazards are present (ie. Radiation, Oxidizer, Water reactive)
- 9. Identify placards and labels that indicate hazardous materials/WMD.
- 10. Identify the following basic information about Safety Data Sheets (SDS):
 - a. Where to find SDS
 - b. Major sections of an SDS
- 11. Match the name of the shipping papers found in transportation (air, highway, rail, and water) with the mode of transportation.
 - a Bill of Lading or Freight Bill highway
 - b. Dangerous Cargo Manifest maritime
 - c Waybill and/or Consist/Train List railroad
 - d Air Bill aircraft
- 12. Identify the following basic information on shipping papers for hazardous materials:
 - a. Entries on shipping papers that indicate the presence of hazardous materials
 - b. Person responsible for having the shipping papers in each mode of transportation
 - c. Where the shipping papers are found in each mode of transportation
 - d. Where the papers can be found in an emergency in each mode of transportation
 - i. Highway Bill of Lading or Freight Bill in the possession of the driver or placed on the driver seat or driver's door pouch.
 - ii. Maritime Dangerous Cargo Manifest in the wheelhouse or bridge of the vessel or pipe like container on the port side of a barge near the gangway (or in the wheelhouse of the tugboat)
 - iii. Railroad Waybill and/or Consist/Train List in the possession of the conductor or engineer.
 - iv. Aircraft Air Bill in the cockpit in possession of the pilot
- 13. Identify examples of other clues, including senses (sight, sound, and odor), that indicate the presence of hazardous materials/WMD.

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Instructor Note

Instructors should include indicators of terrorist attacks and other potentials, emphasizing that "if you can smell it, taste it, or feel it, you are now (or might be) part of the problem."

While this is a minimum requirement, the AHJ has the option to select additional information from the operations chapter (Chapter 5) regarding container and hazard information as necessary, based on local conditions and circumstances. Awareness level personnel should be able to match the hazard classes and divisions with the primary hazards and examples.

Indicators of the presence of hazardous materials include occupancy and locations, including facilities and transportation; container shape (general shape of the container); container owner/operator signage; placards and labels; markings, including NFPA 704 markings, military markings, transportation markings such as identification number marks, marine pollutant marks, elevated temperature marks, commodity markings, inhalation hazard marks, and pipe and pipeline markings and colors; GHS markings; shipping papers and emergency response information and SDS; and sensory clues (dead birds or fish, color of vapors, unusual odors, sheen, hissing noise, dead vegetation, etc.). Other items, such as fume hood exhaust stacks and vents on the exterior of a building, could indicate hazardous materials and can be identified in advance through pre-incident survey activities.

SDS is a component of the Globally Harmonized System of Classification and Labeling of Chemicals (GHS) and replaces the term material safety data sheet (MSDS). GHS is an internationally agreed-upon system, created by the United Nations in 1992. It replaces the various classification and labeling standards used in different countries by using consistent criteria on a global level. It supersedes the relevant European Union (EU) system, which has implemented the GHS into EU law as the Classification, Labelling and Packaging (CLP) Regulation and United States Occupational Safety and Health Administration (OSHA) standards.

The SDS requires more information than MSDS regulations and provides a standardized structure for presenting the required information.

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(B) Requisite Skills.

Recognizing indicators to the presence of hazardous materials/WMD; identifying hazardous materials/WMD by name, UN/NA identification number, marking/label/placard applied, or container shapes identified in the ERG; and using the ERG, SDS, manufacturer/shipper/carrier documents (including shipping papers and emergency response information) and other approved reference sources to identify hazardous materials/WMD and their primary hazards.

- 1. Recognize hazardous materials/WMD indicators, which may include, but not be limited to:
 - a. Odors
 - b. Gas leak
 - c. Fire
 - d. Vapor cloud or smoke
 - e. Corrosive actions
 - f. Visible chemical reactions
 - g. Pooled liquids
 - h. Sound of a pressure release
 - i. Condensation or ice on a pressure tank
 - j. Injured persons/casualties, dead animals, dead/dying vegetation
- 2. Identify hazardous materials/WMD (by):
 - a. Name
 - b. UN/NA identification number
 - c. Placard applied
 - d. Container identification charts

- 3. Use ERG, SDS, shipping papers with emergency response information and other approved sources to identify:
 - a. Hazardous materials/WMD
 - i. Potential fire hazards
 - ii. Potential explosion hazards
 - iii. Potential health hazards

601-5.3 Initiate Protective Action

Instructor Note

People not directly involved in emergency response operations should be kept away from the hazard area, and control should be established over the area of operations. Unprotected emergency responders should not be allowed to enter the isolation zone.

At the awareness level, approved reference sources include the current edition of the Emergency Response Guidebook (ERG), safety data sheets (SDS), shipping papers with emergency response information, and other approved reference sources.

601-5.3.1 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.

(A) Requisite Knowledge. Use of the ERG, SDS, shipping papers and emergency response information, or other approved reference sources to identify initial isolation and protective action distances, identify initial emergency actions (fire, spill, or leak and first aid), identify initial PPE, and identify recommended protective actions; the difference between the isolation distances on the orange-bordered guidebook pages and the protective action distances on the green-bordered ERG pages; the difference(s) between small and large spills as found in the Table of Initial Isolation and Protective Action Distances in the ERG or equivalent document; policies and procedures for isolating the hazard area and denying entry; and the purpose of and methods

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for isolating the hazard area and denying entry.

- 1. Identify precautions to be taken to protect responders/the publicusing ERG, SDS, shipping papers with emergency response information, other approved reference sources
 - a. Identify the hazard
 - b. Isolate the hazard area
 - c. Deny entry
 - d. Call for trained personnel
 - e. Secure the scene
- 2. Policies and procedures, per AHJ/SOP
 - a. Isolating the hazard area
 - b. Denying entry
- 3. Purpose/methods
 - a. Isolating the hazard area
 - i. Establish perimeter
 - ii. Erect barriers
 - b. Denying entry
 - i. Restrict hazard area access to appropriately trained personnel only
 - ii. Maintain perimeter

Instructor Note

Recommended precautions found on numbered guides in the ERG include public safety issues; recommended protective clothing; evacuation; emergency response to fire, spill, and leak; and first aid sections.

Examples of required knowledge include (1) precautions for providing emergency medical care to victims; typical ignition sources; ways hazardous materials/WMD are harmful to people, the environment, and property; general routes of entry for human exposure; emergency action (fire, spill, or leak; first aid); actions recommended not to be performed

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(B) Requisite Skills. Recognizing precautions for protecting responders and the public; identifying isolation areas, denying entry, and avoiding minimizing hazards.

601-5.4 <u>Notification</u>

601-4.4.1 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.

(A) Requisite Knowledge. Policies and procedures for notification, reporting, and communications; types of approved communications equipment; and the operation of that equipment.

- 1. Policies and procedures (NFPA 472, 4.4.2)
 - a. Notification, per AHJ
 - b. Reporting, per AHJ
 - c. Communications, per AHJ
- 2. Types of approved communications equipment (NFPA 472, 4.4.2)
 - a. Radios
 - b. Phone/cell phone
 - i. 9-1-1

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- ii. Reverse 9-1-1
- iii. Notification/outreach software systems (i.e., Blackboard Connect, Swift Reach, Everbridge, etc.)
- c. Sirens, airhorns and public announcement (PA) systems
- 3. The operation of communications equipment, per AHJ

(B) Requisite Skills. Operating approved communications equipment and communicating in accordance with policies and procedures.

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CERTIFICATION CURRICULUM MANUAL – CHAPTER SIX

HAZARDOUS MATERIALS OPERATIONS

REFERENCE LIST FOR THE HAZARDOUS MATERIALS OPERATIONS CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

<u>Texts</u>

- *Certification Curriculum Manual.* Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.
- *Code of Federal Regulations, Title 29 Part 1910.120, Appendix A.* United States. U.S. Department of Labor, Occupational Safety & Health Administration.
- *Emergency Response Guidebook.* United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- *Essentials of Fire Fighting,* 7th *edition.* International Fire Service Training Association. (2018). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response,* 4th edition. International Association of Fire Chiefs, & National Fire Protection Association. (2019). Burlington, MA: Jones and Bartlett.
- Hazardous Materials Awareness and Operations, 3rd Edition. Schnepp (2019). Sudbury, MA: Jones & Bartlett.
- Hazardous Materials for First Responders, 5th edition. International Fire Service Training Association. (2017). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- Hazardous Materials/Weapons of Mass Destruction Response Handbook/2018 edition. McGowan, T. (2018). Quincy, MA: National Fire Protection Association.
- NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. (2018 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.
- NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications. (2017 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.
- NIOSH Pocket Guide to Chemical Hazards. Cincinnati National Institute for Occupational Safety and Health. (most current edition). OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. http://www.cdc.gov/niosh/npg/

Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

<u>Media</u>

- DOT Chart 18: Hazardous Materials Marking, Labeling and Placarding Guide. United States. (Or current edition). Washington, DC: U.S. Dept. of Transportation, Pipeline and Hazardous Materials Safety Administration.
- *Emergency Response Guidebook 2012.* United States. (2012). [DVD]. Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- Hazardous Materials Awareness and Operations. International Association of Fire Chiefs, & National Fire Protection Association. (2006). [DVD Set]. Sudbury, MA: Jones and Bartlett.
- *Hazmat Decontamination.* Action Training Systems, Inc. (2008). [4 Disc DVD Set]. Poulsbo, WA: Action Training Systems.
- Hazmat Operations. Detrick Lawrence Corporation, Pye, S., & Lamont, J. B. (2006). [8 Disk DVD Set]. Edgartown, MA: Emergency Film Group.

CHAPTER 6 SECTION 602 HAZARDOUS MATERIALS OPERATIONS CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
602-5.1	General - Introduction - Laws, Regulations, and National Consensus Standards	1
602-5.2	Identify Potential Hazards	14
602-5.3	Identify Action Options	9
602-5.4	Action Plan Implementation	6
602-5.5	Emergency Decontamination	2
602-5.6	Progress Evaluating and Reporting – Reserved – None required at this level	
	TOTAL RECOMMENDED HOURS	32

The recommended hours include time for skills evaluation and are based on 12 students. Hours needed depend on the actual number of students.

Note: In order to successfully complete the Texas Commission on Fire Protection's Basic Structure Firefighter curriculum, all the job performance requirements and knowledge skills and abilities must be mastered pertaining to:

- Awareness Level Personnel (Section 601),
- Operations Level Responder (Section 602),
- Operations Level Responder: Mission Specific Competencies of:
 - Using Personal Protective Equipment (Section 603-6.2),
 - Performing Product Control (Section 603-6.6)

This is in accordance with the competency requirements of *NFPA 1001: Standard for Fire Fighter Professional Qualifications* 2019 ed., the *TCFP Standards Manual*, and the *TCFP Certification Curriculum Manual*.

Course Instructor Information Hazardous Materials Operations

Overview

The Hazardous Materials curricula are designed to provide clear guidance that ensures adequate presentation of the information required to meet the Job Performance Requirements (JPRs) of National Fire Protection Association (NFPA) 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*, 2017 edition.

The Hazardous Materials curricula is found in Chapter 6 of the TCFP Curriculum Manual.

Certification Level	TCFP Section Number	NFPA 1072 Chapter
Awareness	601	4
Operations	602	5
Operations-Mission Specific Competencies (MSC)	603	6
*Technician	604	7
*Incident Commander	605	8

Layout

The NFPA numbering sequence is mirrored to allow easy correlation between this document and the NFPA Standard. For example, 601-4.1.2 identifies the section in Awareness that corresponds to NFPA section 4.1.2.

When a section references information from "Annex A Explanatory Material" in the NFPA Standard, it is identified by a boxed Instructor Note. For example, the boxed Instructor Note listed in 601-4.2.1 and that immediately follows the RequisiteKnowledge section corresponds to the NFPA Annex A information for NFPA 1072 section4.2.1.

* Asterisks by Technician and Incident Commander above indicate that both are voluntary (non-mandatory) certifications. Therefore, **a formal "curriculum outline" is not provided**. Please use chapters 7 and 8, respectively, of NFPA 1072 as a guide when creating your own course curricula or selecting a prepared instructional curriculum package from a publisher/vendor for Technician and Incident Commander.

TCFP Standards Manual

It is critical that you review the chapters in the TCFP Standards Manual that apply to this curriculum. Of primary importance are the following two chapters: Chapter 423, which defines the course of study, documentation, and medical requirements necessary

for Awareness and Operations certification (required) and Chapter 453, which covers certification requirements for Technician and Incident Commander (voluntary). Additionally, instructors are expected to review the following chapters as they pertain to the instructional, examination, certification processes:

- Chapter 421, Standards for Certification
- Chapter 427, Training Facility Certification
- Chapter 435, Fire Fighter Safety
- Chapter 437, Fees
- Chapter 439, Examinations for Certification
- Chapter 441, Continuing Education

These chapters do not address every issue that could impact this curriculum; therefore, you are encouraged to become familiar with the TCFP Standards Manual.

Instructor Qualifications

Hazardous Materials courses must be taught by an instructor meeting the requirements described in Chapter 427.307 of the TCFP Standards Manual.

Supplemental Information

Instructors are expected to provide supplemental information if the main reference text does not provide adequate information to ensure successful completion of the Job Performance Requirements as listed in the curriculum.

Components of the Curricula

Each section of a curriculum identifies the NFPA Job Performance Requirement (JPR) and subdivides the requisite knowledge requirements into learning components. For example:

	View within the Curriculum	Explanation
601-4.3.1	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.	Section Number and NFPA JPR
	Requisite Knowledge: Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to	Requisite Knowledge Statement

pr pr de fo	otect responders and the public; policies and ocedures for isolating the hazard area and enying entry; and the purpose of and methods r isolating the hazard area and denying entry.	
(1) Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to protect responders and the public	First part of Requisite Knowledge
	Identify precautions to be taken to protect responders/the public using ERG, SDS, shipping papers with emergency response information, other approved reference sources Identify the hazard a. Isolate the hazard area b. Deny entry c. Call for trained personnel d. Secure the scene	Associated learning components
(2) Policies and procedures for isolating the hazard area and denying entry	Second part of Requisite Knowledge
	Policies and procedures, per AHJ/SOP a. Isolating the hazard area b. Denying entry	Associated learning components
(3) And the purpose of and methods for isolating the hazard area and denying entry	Third part of Requisite Knowledge
	 Purpose/methods a. Isolating the hazard area i. Establish perimeter ii. Erect barriers b. Denying entry i. Restrict hazard area access to 	Associated learning components

appropriately trained personnel only ii. Maintain perimeter	
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency response	Requisite Skills Statement
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency response Instructor Note Recommended precautions found on numbered guides in the ERG include public safety issues; recommended protective clothing; evacuation; emergency response to fire, spill, and leak; and first aid sections. Examples of required knowledge include (1) precautions for providing emergency medical care to victims; typical ignition sources; ways hazardous materials/WMD are harmful to people, the environment, and property; general routes of entry for human exposure; emergency action (fire, spill, or leak; first aid); actions recommended not to be performed (e.g., closing of pipeline valves); protective actions (isolation of area and denial of entry, evacuation, shelter-in-place); size and shape of recommended initial isolation and protective action distances; and the isolation distances in the ERG Table of Initial Isolation and Protective Action Distances and the isolation distances in the ERG numbered guide; techniques for isolating the hazard area and denying entry to unauthorized persons; how to recognize and protect evidence; and use of approved tools and equipment; (2) basic personal protective actions: staying clear of vapors, fumes, smoke, and spills; keeping vehicle at a safe distance from the scene; approaching from upwind, uphill, and upstream; and (3) types of protective actions and their purpose (e.g., isolate hazard area and deny entry, evacuation, and shelter-in-	Requisite Skills Statement
protective actions (e.g., hazardous materials/WMD involved. population threatened.	

and weather conditions).	

Unless otherwise specified, all curriculum references are to NFPA 1072. In some cases, (see, for example, 601-4.2.1), reference is also made under the section number and JPR to similar material in NFPA 472.

601-4.2.1	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 and their hazards are identified. Given a hazardous materials/WMD incident, and approved reference sources, awareness level personnel shall recognize those situations where hazardous materials/WMD are present. (472-4.2.1)	Additional reference to NFPA 472

Skills

NFPA Requisite Skill requirements are addressed in the corresponding Skill Sheets in Chapter 6 of the TCFP Curriculum Skills Manual.

Definitions of Certification Levels

Awareness Level Personnel: Personnel who, in the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene. These personnel have met all the performance requirements of Chapter 4 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications

Operations Level Personnel: Personnel who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release. These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*

Operations-Mission Specific Competencies (MSC) Level Personnel: Responders assigned mission-specific responsibilities at hazardous materials/WMD incidents are

those operations level responders designated by the authority having jurisdiction (AHJ) to perform additional tasks to support the AHJ's response mission, expected tasks, equipment, and training in the following areas:

- (1) Personal protection equipment (PPE)
- (2) Mass decontamination
- (3) Technical decontamination
- (4) Evidence preservation and sampling
- (5) Product control
- (6) Detection, monitoring, and public safety sampling
- (7) Victim rescue and recovery
- (8) Illicit laboratories incidents

These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications and have also met the performance requirements of the subchapter(s) of Chapter 6 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, to which they are trained and credentialed to perform.

Note: Basic TCFP Structural Fire Fighter certification requires that Structure Fire Fighter personnel meet all performance requirements for:

- Hazardous Materials Awareness
- Hazardous Materials Operations
- Hazardous Materials Operations MSC 6.2 Personal Protective Equipment
- Hazardous Materials Operations MSC 6.6 Product Control

Technician Level Personnel: Persons who respond to hazardous materials/weapons of mass destruction (WMD) incidents using a risk-based response process by which they analyze a problem involving hazardous materials/WMD, plan a response to the problem, evaluate progress of the planned response, and assist in terminating the incident. These personnel have met all the performance requirements of Chapter 7 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.

Incident Commander Level Personnel: That person, designated by the AHJ, responsible for all incident activities/operations, including the development of strategies and tactics and the ordering and release of resources. These personnel have met all the performance requirements of Chapter 8 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.*

SECTION 602

HAZARDOUS MATERIALS OPERATIONS

Hazardous Materials Operations Level Personnel are those who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release.

Response options for operations level responders are generally limited to nonintervention or defensive actions.

The Hazardous Materials Operations Level Responder must first master all the job performance requirements and knowledge, skills and abilities pertaining to:

- Awareness Level Personnel, and
- The competencies of this chapter

Note: In order to successfully complete the Texas Commission on Fire Protection's Basic Structure Firefighter curriculum, all the job performance requirements and knowledge, skills and abilities must be mastered pertaining to:

- Awareness Level Personnel,
- Operations Level Responders, and
- Hazardous Materials Operations Level Mission Specific Competencies of:
 - Using Personal Protective Equipment, and
 - Performing Product Control.

This is in accordance with the competency requirements of *NFPA 1001: Standard for Fire Fighter Professional Qualifications* 2019 Ed., the *TCFP Standards Manual* and the *TCFP Curriculum Manual*.

<u>602-5.1 General</u>

- 602-5.1.1 Operations level responders are those persons who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release.
- 602-5.1.2 Operations level responders shall meet the job performance requirements defined in Sections 601-4.2 through 601-4.4 Hazardous Materials Awareness-level competencies.

- 602-5.1.3 Operations level responders shall meet the job performance requirements defined in Sections 602-5.2 through 602-5.6 Hazardous Materials Operations-level competencies.
- 602-5.1.4 Operations level responders shall have additional competencies that are specific to the response mission and expected tasks as determined by the AHJ.

Instructor Note

TCFP Basic Structural Firefighter certification requires the following Hazardous Materials Operations Mission-Specific competencies:

1. 603-6.2 Hazardous Materials Operations: Mission Specific Competencies – Personal Protective Equipment

2. 603-6.6 Hazardous Materials Operations: Mission Specific Competencies – Product Control

602-5.1.5 General Knowledge Requirements

Role of operations level responders at a hazardous materials/WMD incident; location and contents of AHJ emergency response plan and standard operating procedures for operations level responders, including those response operations for hazardous materials/WMD incidents.

- 1. Role of operations level responders at a hazardous materials/WMD incident
- 2. AHJ emergency response plan
 - a. Location
 - b. Contents
- 3. Standard operating procedures
 - a. Response operations for hazardous materials/WMD incidents

602-5.1.6 General Skills Requirements (Reserved)

602-5.2 Identify Potential Hazards

Instructor Note

At the operations level, approved information sources should include a minimum of Emergency Response Guidebook (ERG), safety data sheets (SDS), shipping papers, including emergency response information, and other approved reference sources such as CHEMTREC, CANUTEC, and SETIQ; governmental authorities; and manufacturers, shippers, carriers (highway, rail, water, air, and pipeline), and contacts.

602-5.2.1 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 of any release, and surrounding conditions are identified, hazard 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.

(A) Requisite Knowledge. Definitions of hazard classes and divisions; types of containers; container identification markings, including piping and pipeline markings and contacting information; types of information to be collected during the hazardous materials/WMD incident survey; availability of shipping papers in transportation and of safety data sheets (SDS) at facilities; types of hazard information available from and how to contact CHEMTREC, CANUTEC, and SETIQ, governmental authorities, and manufacturers, shippers, and carriers; how to communicate with carrier representatives to reduce impact of a release; basic physical and chemical properties, including boiling point, chemical reactivity, corrosivity (pH), flammable (explosive) range [LFL (LEL) and UFL (UEL)], flash point, ignition (autoignition) temperature, particle size, persistence, physical state (solid, liquid, gas), radiation (ionizing and nonionizing), specific gravity, toxic products of combustion, vapor density, vapor pressure, and water solubility; how to identify the behavior of a material and its container based on the material's physical and chemical properties and the hazards associated with the identified behavior; examples of potential criminal and terrorist targets; indicators of possible criminal or terrorist activity for each of the following: chemical agents, biological agents, radiological agents, illicit laboratories (i.e., clandestine laboratories, weapons labs, ricin labs), and explosives; additional hazards associated with terrorist or criminal activities, such as secondary devices; and how to determine the likely

harm and outcomes associated with the identified behavior and the surrounding conditions.

- 1. Definitions of hazard classes and divisions
 - a. Class 1 Explosives
 - i. Division 1.1 Explosives which have a mass explosion hazard
 - ii. Division 1.2 Explosives which have a projection hazard but not a mass explosion hazard
 - iii. Division 1.3 Explosives which have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard
 - iv. Division 1.4 Explosives which present no significant blast hazard
 - v. Division 1.5 Very insensitive explosives with a mass explosion hazard
 - vi. Division 1.6 Extremely insensitive articles which do not have a mass explosion hazard
 - b. Class 2 Gases
 - i. Division 2.1 Flammable gases
 - ii. Division 2.2 Non-flammable, non-toxic gases
 - iii. Division 2.3 Toxic gases
 - c. Class 3 Flammable liquids (and Combustible liquids [US])
 - d. Class 4 Flammable solids; Substances liable to spontaneous combustion; Substances which, on contact with water emit flammable gases
 - i. Division 4.1 Flammable solids, self-reactive substances and solid desensitized explosives
 - ii. Division 4.2 Substances liable to spontaneous combustion
 - iii. Division 4.3 Substances which in contact with water emit flammable gases
 - e. Class 5 Oxidizing substances and Organic peroxides
 - i. Division 5.1 Oxidizing substances
 - ii. Division 5.2 Organic peroxides

- f. Class 6 Toxic substances and Infectious substances
 - i. Division 6.1 Toxic substances
 - ii. Division 6.2 Infectious substances
- g. Class 7 Radioactive materials
- h. Class 8 Corrosive substances
- i. Class 9 Miscellaneous dangerous goods/hazardous materials and articles **(Copied from page 6, ERG Manual)
- 2. Types of containers
 - a. Given examples of the following tank cars, the operations level responder shall identify each tank car by type, as follows:
 - i. Cryogenic liquid tank cars
 - ii. Nonpressure tank cars (general service or low-pressure cars)
 - iii. Pressure tank cars
 - b. Given examples of the following intermodal tanks, the operations level responder shall identify each intermodal tankby type, as follows:
 - i. Nonpressure intermodal tank
 - 1. IM-101 (IMO Type 1)
 - 2. IM-102 (IMO Type 2)
 - ii. Pressure intermodal tanks (Spec 51/IMO Type 5)
 - iii. Specialized intermodal tanks, including the following:
 - 1. Cryogenic intermodal tanks (IMO Type 7)
 - 2. Tube modules
 - c. Given examples of the following cargo tanks, the operations level responder shall identify each cargo tank by type, as follows:
 - i. Compressed gas tube trailers
 - ii. Corrosive liquid tanks
 - 1. DOT 412
 - 2. TC412
 - 3. SCT 312
 - 4. MC 312
 - 5. TC 312

- iii. Cryogenic liquid tanks
 - 1. MC338
 - 2. TC 338
 - 3. SCT 338
 - 4. TC 341
 - 5. CGA 341
- iv. Dry bulk cargo tanks
- v. High pressure tanks
 - 1. MC331
 - 2. TC 331
 - 3. SCT 331
- vi. Low pressure chemical tanks
 - 1. DOT 407
 - 2. TC407
 - 3. SCT 307
 - 4. MC 307
 - 5. TC 307
- vii. Non-pressure liquid tanks
 - 1. DOT 406
 - 2. TC406
 - 3. SCT 306
 - 4. MC 306
 - 5. TC 306

Instructor Note

CGA=Compressed Gas Association, MC= Motor Carrier, TC=Transport Canada, DOT=Dept. of Transportation, SCT=Secretariat of Communications and Transportation [Mexico]

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

- 1. Cryogenic liquid tank
 - a. Refrigerated storage tanks=less than 15 psi
 - b. High pressure cryogenic tanks=greater than 15psi
- 2. Non-pressure tank (Atmospheric pressure=0-0.5 psi)
 - a. Horizontal tank
 - b. Cone roof tank
 - c. Floating roof tank
 - d. Covered floating roof tank

- e. Floating roof with geodesic dome
- f. Lifter roof tank
- g. Vapor dome roof tank
- h. Underground storage tanks
- 3. Pressure tank
 - a. Low Pressure (0.5-15 psi)
 - i. Vertical dome roof tanks
 - b. High pressure (greater than 15 psi)
 - i. Horizontal pressure vessel
 - ii. Spherical pressure vessel
 - iii. Noded spheroid
 - iv. Underground high pressure

Given examples of the following non-bulk packaging, the operations level responder shall identify each package by type, as follows:

- 1. Bags
- 2. Carboys and Jerricans
- 3. Cylinders
- 4. Drums
 - a. Types
 - i. Open head
 - ii. Closed head
 - b. Construction Materials
 - i. Metal
 - ii. Plastic
 - iii. Fiberboard
 - iv. Other suitable materials
 - c. Fittings
 - i. Bungs
 - ii. Chime ring
- 5. Dewar flask (cryogenic liquids)

Given examples of the following packaging, the operations level responder shall identify the characteristics of each container or package by type as follows:

1. Intermediate bulk container (IBC)

- a. Rigid intermediate bulk containers (RIBCs)
- b. Flexible intermediate bulk containers (FIBCs)

2. Ton container

- a. Convex
- b. Concave

Given examples of the following radioactive material packages, the operations level responder shall identify the characteristics of each container or package by type, as follows:

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

End of Container list.

- 3. Container identification markings
 - a. DOT placarding/labeling/marking system
 - i. Placards (bulk containers)
 - ii. Labels (non-bulk containers)
 - iii. Stenciling and markings
 - 1. Highway transportation vehicles, including cargo tanks
 - a. Company names and logos
 - b. Vehicle identification numbers
 - c. Manufacturers' specification plate
 - 2. Intermodal equipment, including tank containers
 - a. Reporting marks
 - b. Tank number
 - c. Specification markings
 - Rail transport vehicles, including tank cars

 Commodity stencils

- b. Capacity stencils
- c. Specification markings
- d. Standard transportation commodity code (STCC)
- e. Reporting marks
- 4. Radioactive containers
 - a. Radioactive White-I Label
 - i. Radioactive contents (isotope)
 - ii. Activity
 - b. Radioactive Yellow-II Label
 - i. Radioactive contents (isotope)
 - ii. Activity
 - iii. Transportation Index (TI)
 - c. Radioactive Yellow-III Label
 - i. Radioactive contents (isotope)
 - ii. Activity
 - iii. Transportation Index (TI)
 - d. Fissile Label
 - e. UN numbers
 - f. NFPA 704 marking system (fixed facilities)
 - g. Hazardous Materials Identification System (HMIS)
 - h. Hazardous Identification Codes (Intermodal Containers)
 - i. Also known "Hazard Identification Numbers," or
 - j. Kemler Code (ADR Code)
 - k. Global Harmonization System (GHS) Pictograms
 - I. Military Marking System
 - m. Piping markings
 - n. Facility markings
 - o. Color codes
 - p. Pipeline markings
 - i. Emergency telephone number
 - ii. Owner
 - iii. Product

4. Contacting information

- a. SDS information
- b. Shipping papers
- c. Pipeline markers
- d. Pesticide labels
- e. Facility inventory logs
- 5. Types of information to be collected during the hazardous materials/WMD incident survey
 - a. Surrounding conditions
 - i. Topography
 - ii. Land use
 - iii. Accessibility
 - iv. Weather conditions
 - v. Bodies of water
 - vi. Public exposure potential
 - vii. Overhead and underground wires and pipelines
 - viii. Storms and sewer drains
 - ix. Possible ignition sources
 - x. Adjacent land use
 - xi. Nature and extent of injuries
 - xii. Building information
 - xiii. Ventilation ducts
 - xiv. Air returns
 - b. Container information
 - i. Size
 - ii. Shape
 - iii. Condition
 - iv. General Hazardous Materials Behavior Model (GEBMO)
 - 1. Stresses
 - 2. Breach
 - 3. Release
 - 4. Dispersion/engulf
 - 5. Exposure/contact
 - 6. Harm
 - c. Product information
 - i. What are the Hazardous Materials involved?
 - 1. Hazard class
 - 2. Quantity
 - 3. Concentrations
 - 4. Reactivity

- ii. Material behavior
 - 1. Solid
 - 2. Liquid
 - 3. Gas
 - 4. Is something burning?
- 6. Availability of shipping papers in transportation and of safety data sheets (SDS) at facilities
 - a. Types of shipping papers
 - i. Bill of Lading or Freight Bill highway
 - ii. Dangerous Cargo Manifest maritime
 - iii. Waybill and/or Consist/Train List railroad
 - iv. Air Bill aircraft
 - b. Safety Data Sheets (SDS) Information Sections
 - i. Identification
 - ii. Hazard(s) Identification
 - iii. Composition/Information on Ingredients
 - iv. First Aid Measures
 - v. Fire Fighting Measures
 - vi. Accidental Release Measures
 - vii. Handling and Storage
 - viii. Exposure and Controls/Personal Protection
 - ix. Physical and Chemical Properties
 - x. Stability and Reactivity
 - xi. Toxicological Information
 - xii. Ecological Information
 - xiii. Disposal Considerations
 - xiv. Transport Information
 - xv. Regulatory Information
 - xvi. Other Information
 - c. Other transportation and facility information sources
 - i. Chemical inventory list
 - ii. Shipping and receiving documents
 - iii. Inventory records
 - iv. Risk management and hazardous communication plans
 - v. Chemical inventory reports (Tier II reports)
 - vi. Facility pre-plans

7. Types of hazard information available from/how to contact:

- a. CHEMTREC 1-800-424-9300
- a. CANUTEC Canadian Transport Emergency Centre (contact info in ERG)
- c. SETIQ Emergency Transportation System for the Chemical Industry, Mexico (contact info in ERG)
- d. Governmental authorities
 - i. Federal
 - 1. Environmental Protection Agency (EPA)
 - 2. Department of Transportation (DOT)
 - 3. Nuclear Regulatory Commission (NRC)
 - 4. Department of Energy (DOE)
 - 5. United States Coast Guard (USCG)
 - 6. Occupational Safety and Health Administration (OSHA)
 - 7. Federal Bureau of Investigation (FBI)
 - 8. Department of Homeland Security (DHS)
 - 9. Department of Defense (DoD)
 - ii. State of Texas
 - 1. Texas Commission on Environmental Quality (TCEQ)
 - 2. General Land Office (GLO)
 - 3. Texas Railroad Commission (TRRC)
 - 4. Texas Department of Transportation (TXDOT)
 - 5. Department of State Health Services (DHS)
 - 6. Texas Division of Emergency Management (TDEM)
 - 7. Texas Department of Public Safety (DPS)
 - 8. National Guard Chemical Support Team (CST)
 - iii. Local
 - 1. Department of Health
 - 2. Code Enforcement
 - 3. Local Emergency Planning Commission
 - 4. Fire Department
 - 5. Law Enforcement
 - 6. Emergency Management

7. Emergency Medical Services

d. Manufacturers

- i. Safety Data Sheets
- ii. Other manufacturer information
- e. Shippers
 - i. Shipping Papers
 - ii. Cargo manifest
- f. Carriers
 - i. Highway Bill of lading
 - ii. Rail Waybill or consist
 - iii. Water Dangerous cargo manifest
 - iv. Air Air bill
 - v. Pipeline Pipeline marker
- 1. How to communicate with carrier representatives to reduce impact of a release
 - a. Emergency contact information found in shipping papers and/or SDS
 - b. Unified command
- 2. Basic physical and chemical properties
 - a. Boiling point
 - b. Chemical reactivity
 - c. Corrosivity (pH)
 - d. Flammable (explosive) range
 - i. LFL
 - ii. LEL
 - iii. UFL
 - iv. UEL
 - e. Flash point
 - f. Ignition (autoignition) temperature
 - g. Particle size
 - h. Persistence
 - i. Physical state
 - i. Solid
 - ii. Liquid
 - iii. Gas

- j. Radiation
 - i. Ionizing
 - ii. Nonionizing
- k. Specific gravity
- I. Toxic products of combustion
- m. Vapor density
- n. Vapor pressure
- o. Water solubility
- p. Viscosity
- q. Polymerization
- r. Expansion ratio
- s. Biological agents and toxins
- t. Sublimation
- 3. Identifying material and container behavior based on:
 - a. A material's properties
 - i. Physical
 - ii. Chemical
 - b. The hazards associated with an identified behavior
 - i. Thermal
 - ii. Radiation
 - iii. Asphyxiation
 - iv. Chemical (i.e., poison, corrosives)
 - v. Etiological
 - vi. Mechanical
 - vii. Psychological/psychogenic
- 4. Examples of potential criminal and terrorist targets
 - a. Public assembly areas
 - b. Public buildings
 - c. Mass transit systems
 - d. Places with high economic impact
 - e. Telecommunications facilities
 - f. Places with historical or symbolic significance
 - g. Military installations
 - h. Airports
 - i. Industrial facilities
 - j. Critical infrastructure
 - k. Educational sites

- I. Medical and science facilities
- 5. Indicators of possible criminal or terrorist activity
 - a. Chemical agents
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
 - b. Unexplained patterns of sudden onset of similar, nontraumatic illnesses or deaths (patterns that might be geographic, by employer, or associated with agent dissemination methods)
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
 - c. Unexplained odors or tastes that are out of character with the surroundings
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
 - d. Multiple individuals exhibiting unexplained signs of skin, eye, or airway irritation
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
 - e. explained bomb- or munitions-like material, especially if it contains a liquid
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
 - f. Unexplained vapor clouds, mists, and plumes
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
 - g. Multiple individuals exhibiting unexplained health problems such as nausea, vomiting, twitching, tightness in chest, sweating,

pinpoint pupils (miosis), runny nose (rhinorrhea), disorientation, difficulty breathing, convulsions, or death

- i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
- ii. Intentional release of hazardous materials/WMD
- h. Trees, shrubs, bushes, food crops, and/or lawns that are dead, discolored, abnormal in appearance, or withered (not due to a current drought and not just a patch of dead weeds)
 - i. The presence of hazardous materials/WMD orlaboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
- i. Surfaces exhibiting oily droplets/films and unexplained oily film on water surfaces
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
- j. An abnormal number of sick or dead birds, animals, or fish
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
- k. Unusual security, locks, bars on windows, covered windows, or barbed wire
 - i. The presence of hazardous materials/WMD or laboratory equipment that is not relevant to the occupancy
 - ii. Intentional release of hazardous materials/WMD
- I. Biological agents
 - i. Unusual number of sick or dying people or animals (any number of symptoms; time before symptoms are observed dependent on the agent used but usuallydays to weeks)
 - ii. Healthcare facilities reporting multiple casualties with similar signs or symptoms
 - iii. Unscheduled or unusual spray being disseminated, especially if outdoors during period of darkness
 - iv. Abandoned spray devices (devices with no distinct odors)

- m. Radiological agents
 - i. Radiation Symbols
 - ii. Unusual metal debris
 - iii. Heat-emitting material
 - iv. Glowing material
 - v. Sick people/animals
- n. Illicit laboratories (i.e., clandestine laboratories, weapons labs, ricin labs)
 - i. Structures with unusual or multiple vents
 - ii. Buildings with heavy security
 - iii. Obscured windows
 - iv. Odd or unusual odors
 - v. May include mobile facilities, i.e., mobile meth labs
- o. Explosives
 - i. Prior warning or threat of attack
 - ii. Unknown explosions
 - iii. Multiple fires or explosions
 - iv. Unattended packages, backpacks and other objects left in high traffic public areas
 - v. Fragmentation damage or injuries
 - vi. Craters
 - vii. Small metal objects, i.e., nuts, bolts, nails used as shrapnel
- 6. Additional hazards associated with terrorist or criminal activities
 - a. Secondary devices **(roman numerals)
 - i. Containers with unknown liquids or materials
 - ii. Unusual devices or containers with electronic components such as wires, circuit boards, cellular phones, antennas, and other items attached or exposed
 - iii. Devices containing quantities of fuses, fireworks, match heads, black powder, incendiary materials, or other unusual materials
 - iv. Materials attached to or surrounding an item such as nails, bolts, drill bits that could be used for shrapnel
 - v. Ordnance such as blasting caps, detcord, explosives, grenades, etc.

- 7. Determining harm/outcomes associated with
 - a. Identified behavior
 - b. Surrounding conditions

Instructor Note

At the operations level, responders should be able to recognize the following containers and identify them by name: rail tank cars (pressure, nonpressure, and cryogenic tank cars); highway cargo tanks (compressed gas tube trailers, corrosive liquid tanks, cryogenic tanks, dry bulk cargo tanks, high-pressure tanks, low-pressure chemical tanks, and nonpressure liquid tanks); UN portable tanks/intermodal tanks (nonpressure, pressure, cryogenic, and tube modules); storage tanks (nonpressure, pressure, and cryogenic storage tanks); piping and pipelines; intermediate bulk containers (IBC) and ton containers; radioactive materials packages (excepted, industrial, Type A, and Type B packages); and nonbulk containers (bags, carboys, cylinders, drums, and Dewar flasks for cryogenic liquids).

To ensure that operations level personnel also understand how to obtain information pertaining to a pipeline-involved incident, line markers or pipeline markers are added to supplement the list of information sources. In a pipeline incident, the pipeline markers would be the source of information used since no shipping papers, placards, UN numbers, or other information would be available.

Hazardous materials incident survey information. This includes location, weather conditions, topography, populated buildings, bodies of water, other buildings, remedial actions taken, container/package, contents, release, container damage, time of day, and other factors that help determine the scope of the problem.

Physical and chemical properties. Predicting the behavior of hazardous materials/WMD relies on understanding certain characteristics of the material. Information identifying the following characteristics should be collected and interpreted: boiling point, chemical reactivity, corrosivity (pH), flammable (explosive) range [LFL (LEL) and UFL(UEL)], flash point, ignition (autoignition) temperature, particle size, persistence, physical state (solid, liquid, gas), radiation (ionizing and nonionizing), specific

gravity, toxic products of combustion, vapor density, vapor pressure, and water solubility.

Identifying hazards. The process for predicting/identifying the behavior of a hazardous material/WMD and its container under emergency conditions is based on the simple concepts that containers of hazardous materials/WMD under stress can open up and allow the contents to escape. The release of contents will vary in type and speed. A dispersion pattern will be formed by the escaping contents, potentially exposing people, the environment, or property to physical and/or health hazards.

This overall concept for identifying the likely behavior of a container and its contents under emergency conditions is often referred to as a general behavior model. The general behavior model considers the type of stress on the container involved and the potential type of breach, release, dispersion pattern, length of contact, and the health and physical hazards associated with the material and its container, as follows:

- (1) *Stress.* The three types of stress that could cause a container to release its contents are thermal stress, mechanical stress, and chemical stress.
- (2) *Breach.* The five ways in which containers can breach are disintegration, runaway cracking, closures opening up, punctures, and splits or tears.
- (3) *Release.* The four ways in which containment systems can release their contents are detonation, violent rupture, rapid relief, and spill or leak.
- (4) *Dispersion.* Seven dispersion patterns can be created upon release of agents: hemisphere, cloud, plume, cone, stream, pool, and irregular.
- (5) *Contact.* The three general time frames for predicting the length of time that an exposure can be in contact with hazardous materials/WMD in an endangered area are short term (minutes and hours), medium term (days, weeks, and months), and long term (years and generations).
(6) *Hazards.* The seven health and physical hazards that could cause harm in a hazardous materials/WMD incident are thermal, mechanical, poisonous, corrosive, asphyxiating, radiological, and etiologic.

Identifying outcomes. The process for identifying the potential harm and associated outcomes within an endangered area at a hazardous materials/WMD incident includes identifying the size and shape of the endangered area, the number of exposures (people, property, environment, and major systems) within the endangered area, and the physical, health, and safety hazards within the endangered area as determined from approved resources.

Resources for determining the size of an endangered area of a hazardous materials/WMD incident are the current edition of the ERG and plume dispersion modeling results from facility pre-incident plans.

The factors for determining the extent of physical, health, and safety hazards within an endangered area at a hazardous materials/WMD incident are victim presentation (including nonclinical indicators or clues of a material's presence), surrounding conditions, indication of the behavior of the hazardous material and its container, and the degree of hazard.

(B) Requisite Skills. Identifying container types, materials, location of release, and surrounding conditions at a hazardous materials/WMD incident; collecting hazard information; communicating with pipeline operators or carrier representatives; describing the likely behavior of the hazardous materials or WMD and its container; and describing the potential hazards, harm, and outcomes associated with that behavior and the surrounding conditions.

602-5.3 Identify Action Options

Instructor Note

At the operations level, approved information sources should include a minimum of ERG; SDS; CHEMTREC, CANUTEC, or SETIQ; local, state, and governmental authorities; and manufacturers', shippers', and carriers' documents (shipping papers) and contacts.

602-5.3.1 Identify the action options 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 objectives, action options, safety precautions, suitability of approved personal protective equipment (PPE) available, and emergency decontamination needs are identified.

> (A) Requisite Knowledge. Policies and procedures for hazardous materials/WMD incident operations; basic components of an incident action plan (IAP); modes of operation (offensive, defensive, and nonintervention); types of response objectives; types of action options; types of response information available from the Emergency Response Guidebook (ERG), safety data sheets (SDS), shipping papers with emergency response information, and other resources; types of information available from and how to contact CHEMTREC, CANUTEC, and SETIQ, governmental authorities, and manufacturers, shippers, and carriers (highway, rail, water, air, pipeline); safety procedures; risk analysis concepts; purpose, advantages, limitations, and uses of approved PPE to determine if PPE is suitable for the incident conditions; difference between exposure and contamination; contamination types, including sources and hazards of carcinogens at incident scenes; routes of exposure; types of decontamination (emergency, mass, and technical); purpose, advantages, and limitations of emergency decontamination; and procedures, tools, and equipment for performing emergency decontamination.

- 1. Policies and procedures for hazardous materials/WMD incident operations
 - a. 29 CFR 1910.120 Hazardous Waste Operations and Emergency Response (HAZWOPER)
 - NFPA 475: Recommended Practices for Responding to Hazardous Materials Incidents/Weapons of MassDestruction
 - c. Local Emergency Response Plans
 - d. AHJ Standard Operating Procedures
- 2. Basic components of an incident action plan (IAP)
 - a. Site restrictions
 - b. Strategies/incident objectives
 - c. Current and projected weather conditions

- d. Entry objectives
- e. Resource assignments and needs
- f. On-scene organization and control
- g. Risk assessment
- h. Hazard statement
- i. Selection of personal protective equipment
- j. Site safety plan (ICS 208HM)
- k. Medical plan
- I. Protective measures
- m. Communications procedures/plan
- n. Emergency procedures and personnel accountability
- o. Emergency medical care arrangements
- p. Rehabilitation plan
- q. Decontamination procedures
- r. On-scene work assignments (branches)
- s. Ensure debriefing and critiquing of the incident is conducted once the incident is terminated
 - i. Accomplishments
 - ii. Status of any injuries
- t. Document the plan using:
 - i. Appropriate regulatory agency methods as necessary
 - Department of Homeland Security National Incident Management System/Incident Command System standardized forms
 - 1. ICS 201 Incident Briefing Form
 - 2. ICS 202 Incident Objectives Worksheet
 - 3. ICS 203 Organization Assignment List
 - 4. ICS 204 Division Assignment List
 - 5. ICS 205 Communications Plan
 - 6. ICS 206 Medical Plan
 - 7. ICS 207 Incident Organization Chart
 - 8. ICS 208 HM Site Safety and Control Plan
 - 9. ICS 211 Incident Check-in List
 - 10. ICS 213 General Message
 - 11. ICS 214 Unit Log
 - 12. ICS 215 Incident Planning Worksheet
 - 13. ICS 215A Incident Action Plan Safety Analysis

3. Modes of operation

a. Offensive

- b. Defensive
- c. Nonintervention
- 4. Types of response objectives (strategies)
 - a. SMART
 - i. Specific
 - ii. Measurable
 - iii. Attainable
 - iv. Realistic
 - v. Timely
 - b. LIPS
 - i. Life safety
 - ii. Incident stabilization
 - iii. Property conservation
 - iv. System restoration
- 5. Types of action options (tactics)
 - a. Actions that enable responders to achieve response objectives
 - b. Examples include but are not limited to:
 - i. Scene size-up
 - ii. Establish control zones
 - iii. Non-intervention
 - 1. Protect exposures
 - 2. Implement public protective actions
 - iv. Intervention
 - 1. Control product release
 - 2. Mitigate
 - 3. Neutralize
- 6. Types of response information available
 - a. Emergency Response Guidebook (ERG)
 - b. Safety Data Sheets (SDS)
 - c. Shipping papers with emergency response information
 - d. Other resources
 - i. NIOSH Pocket Guide
 - ii. NFPA Fire Protection Guide to Hazardous Materials
 - iii. Jane's CBRN Response Handbook
 - iv. Symbol Seeker: Hazard Identification Manual
 - v. Electronic databases (i.e., CAMEO)
 - vi. Mobile applications (i.e., WISER)*

*NOTE: All mobile applications must be vetted for accuracy of information provided

- 7. Types of response information available from/how to contact:
 - a. CHEMTREC 1-800-424-9300
 - b. CANUTEC Canadian Transport Emergency Centre (contact info in ERG)
 - c. SETIQ Emergency Transportation System for the Chemical Industry, Mexico (contact info in ERG)
 - d. Governmental authorities
 - i. Federal
 - 1. Environmental Protection Agency (EPA)
 - 2. Department of Transportation (DOT)
 - 3. Nuclear Regulatory Commission (NRC)
 - 4. Department of Energy (DOE)
 - 5. United States Coast Guard (USCG)
 - 6. Occupational Safety and Health Administration (OSHA)
 - 7. Federal Bureau of Investigation (FBI)
 - 8. Department of Homeland Security (DHS)
 - 9. Department of Defense (DoD)
 - ii. State of Texas
 - 1. Texas Commission on Environmental Quality (TCEQ)
 - 2. General Land Office (GLO)
 - 3. Texas Railroad Commission (TRRC)
 - 4. Texas Department of Transportation (TXDOT)
 - 5. Department of State Health Services (DHS)
 - 6. Texas Division of Emergency Management (TDEM)
 - 7. Texas Department of Public Safety (DPS)
 - 8. National Guard Chemical Support Team (CST)
 - iii. Local
 - 1. Department of Health
 - 2. Code Enforcement
 - 3. Local Emergency Planning Commission
 - 4. Fire Department
 - 5. Law Enforcement
 - 6. Emergency Management
 - 7. Emergency Medical Services

- e. Manufacturers
 - i. Safety Data Sheets
 - ii. Other manufacturer information
- f. Shippers
 - i. Shipping Papers
 - ii. Cargo manifest
- g. Carriers
 - i. Highway Bill of lading
 - ii. Rail Waybill or consist
 - iii. Water Dangerous cargo manifest
 - iv. Air Air bill
 - v. Pipeline Pipeline marker
- 1. Safety procedures
- 2. Risk analysis concepts
 - a. Risk vs. reward
 - b. Cost benefit analysis
- 3. Uses of approved PPE to determine if PPE is suitable for the incident (See 602-5.4.1(8))
 - a. Purpose
 - b. Advantages
 - c. Limitations
- 4. Difference between exposure and contamination
- 5. Contamination types: sources and hazards
 - a. Carcinogens
 - b. Biological/etiological
 - c. Chemical
 - d. Radiological
 - e. Irritants
 - f. Sensitizers
 - g. Dust/particulates (i.e., silica and asbestos)
- 6. Routes of exposure
 - a. Absorption
 - b. Inhalation
 - c. Ingestion

- d. Injection
- 7. Types of decontamination (See 602-5.5.1)
 - a. Emergency
 - b. Mass
 - c. Gross
 - d. Technical
- 8. Emergency decontamination
 - a. Purpose
 - b. Advantages
 - c. Limitations
- 9. Performing emergency decontamination
 - a. Procedures
 - b. Tools
 - c. Equipment

Instructor Note

Modes of operation are offensive, defensive, and nonintervention and include the following:

- Common response objectives, for example, product control; fire control; protection of people, the environment, and property; identification and isolation; evidence protection; rescue; recovery; and termination
- (2) Common response options, for example, spill control, leak control, foam, control exposures, evacuation, isolation, shelter-in-place, and establishment of product control zones
- (3) Contamination types: primary, secondary, and tertiary.

(B) Requisite Skills. Identifying response objectives and action options based on the scope of the problem and available resources; identifying whether approved PPE is suitable for the incident conditions; and identifying emergency decontamination needs based on the scope of the problem.

602-5.4 Action Plan Implementation

Instructor Note

Operations level responders should be able to identify their role during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures; the levels of hazardous materials/WMD incidents as defined in the emergency response plan; the purpose, need, benefits, and elements of the incident command system for hazardous materials/WMD incidents; the duties and responsibilities of the incident safety officer and hazardous materials branch or group; considerations for determining the location of the incident command post; procedures for requesting additional resources; and the role and response objectives of other responding agencies.

Executive Summary – Field Decon

Over the past decade, research has been published linking higher rates of cancer in fire service personnel to repeated, chronic exposure to the byproducts of smoke and particulates from structure fires. Various studies have proven that fire fighters are experiencing higher rates of certain types of cancers and that they are more likely to have rare forms of cancers than the general population. See NIOSH Study of Cancer among U.S. Fire Fighters athttps://www.cdc.gov/niosh/firefighters/.

602-5.4.1 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 described, 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 gross decontamination of personnel, tools, equipment, and PPE is conducted in the field.

(A) Requisite Knowledge. Scene control procedures; procedures for protective actions, including evacuation and sheltering-in-place; procedures for ensuring coordinated communications between responders and to the public; evidence recognition and preservation procedures; incident command organization; purpose, importance, benefits, and

organization of incident command at hazardous materials/WMD incidents; policies and procedures for implementing incident command at hazardous materials/WMD incidents; capabilities, limitations, inspection, donning, working in, going through decontamination while wearing, doffing approved PPE; signs and symptoms of thermal stress; safety precautions when working at hazardous materials/WMD incidents; purpose, advantages, and limitations of gross decontamination; the need for gross decontamination in the field based on the task(s) performed and contamination received, including sources and hazards of carcinogens at incident scenes; gross decontamination procedures for personnel, tools, equipment, and PPE; and cleaning, disinfecting, and inspecting tools, equipment, and PPE.

- 1. Scene control procedures
 - a. Establish initial isolation perimeter
 - b. Establish control zones (i.e., hot, warm, cold)
- 2. Procedures for protective actions
 - a. Evacuation
 - b. Sheltering-in-place
- 3. Coordinated communications
 - a. Between responders
 - b. To the public
- 4. Evidence recognition and preservation procedures
 - a. Identification
 - b. Secure and isolate the scene
 - c. Coordinate with law enforcement
 - d. AHJ SOP
- 5. Incident command organization (NFPA 472 5.4.3)
 - a. Identify the role of the operations level responder during hazardous materials/WMD incidents as specified in the emergency response plan and/or standard operating procedures.
 - b. Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan.

- c. Identify the purpose, need, benefits, and elements of the incident command system for hazardous materials/WMD incidents.
- d. Identify the duties and responsibilities of the following functions within the incident management system:
 - i. Incident Safety Officer
 - 1. Obtains briefing from:
 - a. Incident Commander; or
 - b. Incident Safety Officer; and
 - c. Hazard Branch Director or Hazard Division/Group Supervisor
 - 2. Participates in:
 - a. Preparation of incident safety plan
 - b. Implementation of the incident safety plan
 - c. Medical monitoring of entry team personnel before and after entry
 - 3. Advises Incident Commander or Hazard Branch Director or Hazard Division/Group Supervisorof:
 - a. Deviations from the incident safety plan
 - b. Dangerous or unsafe activities
 - 4. Alters, suspends, or terminates any operation that is considered unsafe
 - ii. Hazardous materials branch or group
 - 1. Decon Team
 - 2. Site Access
 - a. Safe Refuge Area
 - 3. Entry Team
 - 4. Technician
 - 5. Assistant Safety Officer Hazmat
- e. Identify the considerations for determining the location of the incident command post for a hazardous materials/WMD incident.
- f. Identify the procedures for requesting additional resources ata hazardous materials/WMD incident.
- g. Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.
- 1. Incident command at hazardous materials/WMD incidents
 - a. Purpose
 - b. Importance

- c. Benefits
- d. Organization
 - i. Incident Commander
 - ii. Incident Safety Officer
 - iii. Operation Section Chief
 - iv. Hazmat Group Supervisor
 - 1. Decon Team Leader
 - 2. Site Access Specialist
 - a. Safe Refuge Area Manager
 - 3. Entry Team Leader
 - 4. Technician Specialist
 - 5. Assistant Safety Officer Hazmat
- 2. Implementing incident command at hazardous materials/WMD incidents
 - a. Policies
 - b. Procedures
 - c. Single Command vs. Unified Command
 - d. AHJ/SOP
- 3. Capabilities, limitation, inspection, donning, working in, going through decontamination while wearing, and doffing approved PPE
 - a. Structural Firefighting Protective Ensemble (NFPA 1971)
 - b. High Temperature Protective Clothing
 - i. Proximity Suits (ARFF) (NFPA 1971)
 - ii. Fire Entry Suits
 - c. Chemical Protective Clothing (CPC)
 - i. Vapor Protective Clothing (NFPA 1991)
 - ii. Splash Protective and Support Garments (NFPA 1992)
 - iii. CBRNE Garments (NFPA 1994)
 - d. Using Personal Protective Equipment (NFPA 472 5.4.4)
 - i. Given the personal protective equipment provided by the AHJ, the operations level responder shall describe considerations for the use of personal protective equipment provided by the AHJ, and shall meet the following requirements:
 - 1. Identify the importance of the buddy system
 - 2. Identify the importance of the backup personnel

- Identify the safety precautions to be observed when approaching and working at hazardous materials/WMD incidents
- 4. Identify the signs and symptoms of heat and cold stress (thermal stress) and procedures for their control
- 5. Identify the capabilities and limitations of personnel working in the personal protective equipmentprovided by the AHJ
- 6. Identify the procedures for cleaning, disinfecting, and inspecting personal protective equipment provided by the AHJ
- 7. Describe the maintenance, testing, inspection, and storage procedures for personal protective equipment provided by the AHJ according to the manufacturer's specifications and recommendations
- e. Determining the suitability of Personal Protective Equipment (NFPA 472 5.3.3)
 - i. Identify the respiratory protection required for a given response option and the following:
 - Describe the advantages, limitations, uses, and operational components of the following types of respiratory protection at hazardous materials/WMD incidents:
 - a. Positive pressure self-contained breathing apparatus (SCBA)
 - b. Positive pressure air-line respirator with required escape unit
 - c. Closed-circuit SCBA
 - d. Powered air-purifying respirator (PAPR)
 - e. Air-purifying respirator (APR)
 - f. Particulate respirator
 - ii. Identify the required physical capabilities and limitations of personnel working in respiratory protection.
- f. Identify the personal protective clothing required for a given option and the following:
 - i. Identify skin contact hazards encountered at hazardous materials/WMD incidents.
 - 1. Burns
 - 2. Rash
 - 3. Absorption

- ii. Identify the purpose, advantages, and limitations of the following types of protective clothing at hazardous materials/WMD incidents:
 - 1. Chemical-protective clothing: liquid splashprotective clothing and vapor-protective clothing
 - 2. High temperature–protective clothing: proximity suits and entry suits
 - 3. Structural fire-fighting protective clothing
- 4. Safety precautions at hazardous materials/WMD incidents
 - a. Resist rushing in
 - b. Approach cautiously from upwind, uphill or upstream
 - c. Secure the scene
 - d. Identify the hazards
 - e. Assess the situation
 - f. Obtain help
 - g. Respond cautiously and appropriately
 - h. Do not assume that gases and vapors are harmless because they lack a smell
- 5. Gross decontamination
 - a. Purpose
 - b. Advantages
 - c. Limitations
- 6. The need for gross decontamination in the field based on thetask(s) performed/contamination received
- 7. Carcinogens at incident scenes
 - a. Sources
 - b. Hazards (of)
- 8. Gross decontamination procedures
 - a. Personnel
 - b. Tools
 - c. Equipment
 - d. PPE

- 9. Cleaning, disinfecting, and inspecting
 - a. Tools
 - b. Equipment
 - c. PPE

Instructor Note

Evidence preservation. Preservation of evidence is essential to the integrity and credibility of an incident investigation. Preservation techniques must be acceptable to the law enforcement agency having jurisdiction; therefore, it is important to get that agency's input ahead of time on the techniques specified in the AHJ emergency response plan or the organization's standard operating procedures.

General procedures for preserving evidence include the following:

- (1) Secure and isolate any incident area where evidence is located. This can include discarded personal protection equipment, specialized packaging (shipping or workplace labels and placards), biohazard containers, glass or metal fragments, containers (e.g., plastic, pipes, cylinders, bottles, fuel containers), and other materials that appear relevant to the occurrence, such as roadway flares, electrical components, fluids, and chemicals.
- (2) Leave fatalities and body parts in place and secure the area in which they are located.
- (3) Isolate any apparent source location of the event (e.g., blastarea, spill release point).
- (4) Leave in place any explosive components or housing materials.
- (5) Place light-colored tarpaulins on the ground of access and exit corridors, decontamination zones, treatment areas, and rehabilitation sectors to allow possible evidence that might drop during decontamination and doffing of clothes to be spotted and collected.
- (6) Secure and isolate all food vending locations in the immediatearea. Contaminated food products will qualify as primary or secondary evidence in the event of a chemical or biological incident.

The collection (as opposed to preservation) of evidence is usually conducted by law enforcement personnel, unless other protocols are in place. If law enforcement personnel are not equipped or trained to enter the hot zone, hazardous materials technicians should be trained to collect samples in such a manner as to maintain the integrity of the samples for evidentiary purposes and to document the chain of evidence.

Safety precautions. Safety precautions should include buddy systems, backup systems, accountability systems, safety briefing, and evacuation/escape procedures. The following items should be considered in a safety briefing prior to allowing personnel to work at hazardous materials/WMD incidents:

- (1) Preliminary evaluation
- (2) Hazard identification
- (3) Description of the site
- (4) Task(s) to be performed
- (5) Length of time for task(s)
- (6) Required PPE
- (7) Monitoring requirements
- (8) Notification of identified risk

(B) **Requisite Skills.** Establishing and maintaining scene control; recognizing and preserving evidence; inspecting, donning, working in, going through decontamination while wearing, and doffing approved PPE; isolating contaminated tools, equipment, and PPE; conducting gross decontamination of contaminated personnel, tools, equipment, and PPEin the field; and cleaning, disinfecting, and inspecting approved tools, equipment, and PPE.

Instructor Note

The operations level responder should implement the incident command system as required by the AHJ by completing the following requirements:

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

- (2) Identify the levels of hazardous materials/WMD incidents as defined in the emergency response plan
- (3) Identify the purpose, need, benefits, and elements of the incident command system for hazardous materials/WMD incidents
- (4) Identify the duties and responsibilities of the following functions within the incident management system:
 - (a) Incident safety officer
 - (b) Hazardous materials branch or group
- (5) Identify the considerations for determining the location of the incident command post for a hazardous materials/WMD incident
- (6) Identify the procedures for requesting additional resources at a hazardous materials/WMD incident
- (7) Describe the role and response objectives of other agencies that respond to hazardous materials/WMD incidents.

602-5.5 Emergency Decontamination

602-5.5.1 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.

(A) Requisite Knowledge. Contamination, cross contamination, and exposure; contamination types; routes of exposure; types of decontamination (emergency, mass, and technical); purpose, advantages, and limitations of emergency decontamination; policies and procedures for performing emergency decontamination; approved tools and equipment for emergency decontamination; and hazard avoidance for emergency decontamination.

- 1. Contamination, cross-contamination, and exposure
 - a. Contamination
 - b. Cross-contamination
 - c. Exposure
- 2. Contamination types
 - a. Primary
 - b. Secondary
 - c. Tertiary
- 3. Routes of exposure
 - a. Absorption
 - b. Inhalation
 - c. Injection
 - d. Ingestion
- 4. Types of decontamination
 - a. Decon options
 - i. Wet decon
 - ii. Dry decon
 - iii. Chemical decon options
 - iv. Physical decon options
 - b. Emergency
 - c. Mass
 - d. Technical
 - i. Absorption
 - ii. Adsorption
 - iii. Vacuuming
 - iv. Washing
 - v. Chemical degradation
 - vi. Dilution
 - vii. Disinfection
 - viii. Evaporation
 - ix. Neutralization
 - x. Solidification
 - xi. Sterilization
 - xii. Isolation and disposal
- 5. Emergency decontamination
 - a. Purpose

- b. Advantages
- c. Limitations
- 6. Performing emergency decontamination
 - a. Policies
 - b. Procedures
- 7. Approved tools and equipment
- 8. Hazard avoidance for emergency decon
 - a. Establish control zones
 - b. Establish entry and exit corridors
 - c. Supervise the decon being performed (extra eyes)

(B) Requisite Skills. Selecting an emergency decontamination method; setting up emergency decontamination in a safe area; using PPE in the proper manner; implementing emergency decontamination; preventing spread of contamination; and avoiding hazards during emergency decontamination.

602-5.6 Progress Evaluation and Reporting

Instructor Note

All responders should understand why their efforts must be evaluated. If they are not making progress, the plan must be re-evaluated to determine why. The evaluation should include what changes have occurred with the circumstances of the incident (behavior of container or its contents).

To decide whether the actions being taken at an incident are effective and the objectives are being achieved, the responder must determine whether the incident is stabilizing or increasing in intensity. Factors to be considered include reduction of potential impact to persons or the environment and status of resources available to manage the incident. The evaluation should take place upon initiation of the IAP, and the IC/unified command and general staff should constantly monitor the status of the incident. The actions taken should be leading to a desirable outcome, with minimal loss of life and property. Changes in the status of

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the incident should influence the development of the IAP for the next operational period.

602-5.6.1 Evaluate and report the progress of the assigned tasks for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment, policies and procedures, status of assigned tasks, and approved communication tools and equipment, so that the effectiveness of the assigned tasks is evaluated and communicated to the supervisor, who can adjust the IAP as needed.

(A) Requisite Knowledge. Components of progress reports; policies and procedures for evaluating and reporting progress; use of approved communication tools and equipment; signs indicating improving, static, or deteriorating conditions based on the objectives of the action plan; and circumstances under which it would be prudent to withdraw from a hazardous materials/WMD incident.

- 1. Components of progress reports
- 2. Evaluating/reporting progress
 - a. Policies
 - b. Procedures
 - c. AHJ/SOP
- 3. Approved communication tools and equipment
 - a. Hazardous area classifications
 - i. National electric code (NEC)
 - ii. Underwriters Laboratories (UL)
 - iii. NFPA 70 National Electrical Code
 - b. Explosion-proof vs. intrinsically safe
- 4. Signs indicating improving, static, or deteriorating conditions based on the objectives of the action plan
 - a. Hand and arm signals
 - b. Air horn signals (i.e., emergency evacuation)
 - c. E-notifications (i.e., TPASS)
 - d. Radio emergency alert

5. When to withdraw from a hazardous material/WMD incident

Instructor Note

Remaining in the immediate vicinity of an incident when nothing can be done to mitigate it and the situation is about to deteriorate is pointless. If flames are impinging on an LP-Gas vessel, for example, and providing the necessary volume of water to cool it is impossible, it would be prudent to withdraw to a safe distance. ICs should always evaluate the benefit of operations against the risk. Refer to the ERG or other references to determine appropriate action to be taken under the circumstances.

(B) Requisite Skills. Determining incident status; determining whether the response objectives are being accomplished; using approved communications tools and equipment; and communicating the status of assigned tasks.

Instructor Note

The proper methods for communicating the status of the planned response lie within the guidelines of the ICS and are dictated by the incident specific IAP. The ICS identifies two types of communication at an incident, formal and informal. Formal communication should be used for all policy related communication, using the ICS principles of unity of command and chain of command, while maintaining span of control. Ideally, all critical information should be communicated face-to-face.

The format for communications within the ICS must be established by the IC/unified command with input from the general staff.

A procedure should be established to allow responders to notify the IC immediately when conditions become critical and personnel are threatened. For example, the notification could take the form of a pre-established emergency radio message or tone that signifies danger, or it might be repeated blasts on an air horn. The message should not be delayed while responders try to locate a specific person in the chain of command.

CERTIFICATION CURRICULUM MANUAL – CHAPTER SIX

HAZARDOUS MATERIALS OPERATIONS

(Mission Specific Competencies)

REFERENCE LIST FOR THE HAZARDOUS MATERIALS OPERATIONS - MISSION SPECIFIC COMPETENCIES CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is <u>not</u> all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

<u>Texts</u>

- *Certification Curriculum Manual.* Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.
- Code of Federal Regulations, Title 29 Part 1910.120, Appendix A. United States. U.S. Department of Labor, Occupational Safety & Health Administration. http://edocket.access.gpo.gov/cfr_2007/julqtr/pdf/29cfr1910.120.pdf
- *Emergency Response Guidebook.* United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- *Essentials of Fire Fighting ,* 7th *edition*. International Fire Service Training Association. (2018). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- *Fundamentals of Fire Fighter Skills and Hazardous Materials Response,* 4th edition. International Association of Fire Chiefs, & National Fire Protection Association. (2019). Burlington , MA: Jones and Bartlett.
- Hazardous Materials Awareness and Operations, 3rd Edition. Schnepp (2019). Sudbury, MA: Jones & Bartlett.
- Hazardous Materials for First Responders, 5th edition. International Fire Service Training Association. (2017). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- Hazardous Materials: Managing the Incident, 4th edition. Noll, G. G., Hildebrand, M. S., Schnepp, R. & Rudner, G.D. (2014). Burlington, MA: Jones and Bartlett.
- Hazardous Materials/Weapons of Mass Destruction Response Handbook,/2018 edition. McGowan, T. (2018). Quincy, MA: National Fire Protection Association.
- NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. (2018 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.
- NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications. (2017 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.

- NIOSH Pocket Guide to Chemical Hazards. National Institute for Occupational Safety and Health. (Most current edition). Cincinnati, OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. http://www.cdc.gov/niosh/npg/
- Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

<u>Texts</u>

- Bretherick's Handbook of Reactive Chemical Hazards. Urben, P. G., Pitt, M. J., & Bretherick, L. (2007). Amsterdam: Elsevier.
- *Emergency Care for Hazardous Materials Exposure*. Currance, P., Bronstein, A. C., & Clements, B. (2005). St. Louis, MO: Mosby.
- *Field Guide to Tank Cars.* Bureau of Explosives. (2010). Pueblo, Colorado: Association of American Railroads.
- *Fire Protection Guide to Hazardous Materials*. 2010 edition. National Fire Protection Association. Quincy, MA: National Fire Protection Association.
- Hawley's Condensed Chemical Dictionary. 15th edition. Lewis, R. J. (2007). West Sussex: Wiley.
- *Hazardous Materials: Managing the Incident Field Operations Guide*. 2nd edition. Bevelacqua, A. S., (2014). Jones and Bartlett.

Media

- *Chlorine Emergencies: An Overview for First Responders*. Chlorine Institute. (2007). Arlington, VA: The Chlorine Institute.
- Hazardous Materials Containment Series. Action Training Systems. [4 Disc DVD Set] Hazardous materials containment - series of 4 titles. Seattle, WA: Action Training Systems.
- Hazardous Materials: Managing the Incident DVD Series. Massingham, G., Noll, G. G., Hildebrand, M. S., & Noll, G. G. (2005). [8 Disc DVD Set] Edgartown, MA: Emergency Film Group.
- How to Use the Chlorine Institute Emergency Kit "A" for 100 lb. and 150 lb. Chlorine Cylinders. Chlorine Institute. (Sept. 2013). New York. NY: The Chlorine Institute. [DVD + pamphlet]
- How to Use the Chlorine Institute Emergency Kit "B" for Chlorine Ton Containers. New Chlorine Institute. (Dec. 2013). York, NY: The Chlorine Institute. [DVD + pamphlet]

How to Use the Chlorine Institute Emergency Kit "C" for Chlorine Tank Cars and Tank Trucks. Chlorine Institute. (Feb. 2014). New York, NY: The Chlorine Institute. [DVD + pamphlet]

CHAPTER 6

SECTION 603 HAZARDOUS MATERIALS OPERATIONS - MISSION SPECIFIC COMPETENCIES CURRICULUM OUTLINES

*Sections 603-6.2 Mission Specific Competencies: Personal Protective Equipment and 603-6.6 Mission Specific Competencies: Product Control are required for TCFP Basic Structure Fire Fighter curriculum training. All other Hazardous Materials Operations-Mission Specific Competencies are provided for optional training use by the AHJ.

SECTION	SUBJECT	RECOMMENDED HOURS
603-6.1	General - Introduction - Laws, Regulations, and National Consensus Standards	1
603-6.2	Mission Specific Competencies: Personal Protective Equipment*	8
603-6.3	Mission Specific Competencies: Mass Decontamination	Reserved
603-6.4	Mission Specific Competencies: Technical Decontamination	Reserved
603-6.5	Mission Specific Competencies: Evidence Preservation and Public Safety Sampling	Reserved
603-6.6	Mission Specific Competencies: Product Control*	8
603-6.7	Mission Specific Competencies: Detection, Monitoring and Sampling	Reserved
603-6.8	Mission Specific Competencies: Victim Rescue and Recovery	Reserved
603-6.9	Mission Specific Competencies: Response to Illicit Laboratories	Reserved

Mission Specific - Personal Protective Equipment*		
SECTION	SUBJECT	RECOMMENDED HOURS
603-6.2	Mission Specific Competencies: Personal Protective Equipment	
603-6.2.1	General - Introduction - Laws, Regulations, and National Consensus Standards	1
603-6.2.2	Analyzing the Incident - Reserved - None Required at this Level	
603-6.2.3	Planning the Response	3
603-6.2.4	Implementing the Planned Response	3
603-6.2.5	Terminating the Incident	1
	TOTAL RECOMMENDED HOURS	8

Mission Specific – Product Control*		
SECTION	SUBJECT	RECOMMENDED HOURS
603-6.6	Mission Specific Competencies: Product Control	
603-6.6.1	General - Introduction - Laws, Regulations, and National Consensus Standards	1
603-6.6.2	Analyzing the Incident - Reserved - None Required at this Level	
603-6.6.3	Planning the Response	2
603-6.6.4	Implementing the Planned Response	5
603-6.6.5	Evaluating Progress - Reserved - None Required at this Level	
603-6.6.6	Terminating the Incident - Reserved - None Required at this Level	
	TOTAL RECOMMENDED HOURS	8

The recommended hours include time for skills evaluation and are based on 12 students. Hours needed depend on the actual number of students.

Course Instructor Information

Hazardous Materials

Operations-Mission Specific Competencies (MSC)

Overview

The Hazardous Materials curricula are designed to provide clear guidance that ensures adequate presentation of the information required to meet the Job Performance Requirements (JPRs) of National Fire Protection Association (NFPA) 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*, 2017 edition.

The Hazardous Materials curricula is found in Chapter 6 of the TCFP Curriculum Manual.

Certification Level	TCFP Section Number	NFPA 1072 Chapter
Awareness	601	4
Operations	602	5
Operations-Mission	603	6
Specific Competencies		
(MSC)		
*Technician	604	7
*Incident Commander	605	8

Layout

The NFPA numbering sequence is mirrored to allow easy correlation between this document and the NFPA Standard. For example, 601-4.1.2 identifies the section in Awareness that corresponds to NFPA section 4.1.2.

When a section references information from "Annex A Explanatory Material" in the NFPA Standard, it is identified by a boxed Instructor Note. For example, the boxed Instructor Note listed in 601-4.2.1 and that immediately follows the Requisite Knowledge section corresponds to the NFPA Annex A information for NFPA 1072 section 4.2.1.

* Asterisks by Technician and Incident Commander above indicate that both are voluntary (non-mandatory) certifications. Therefore, **a formal "curriculum outline" is not provided**. Please use chapters 7 and 8, respectively, of NFPA 1072 as a guide when creating your own course curricula or selecting a prepared instructional curriculum package from a publisher/vendor for Technician and Incident Commander.

TCFP Standards Manual

It is critical that you review the chapters in the TCFP Standards Manual that apply to this curriculum. Of primary importance are the following two chapters: Chapter 423, which defines the course of study, documentation and medical requirements necessary

for Awareness and Operations certification (required) and Chapter 453, which covers certification requirements for Technician and Incident Commander (voluntary). Additionally, instructors are expected to review the following chapters as they pertain to the instructional, examination, certification processes:

- Chapter 421, Standards for Certification
- Chapter 427, Training Facility Certification
- Chapter 435, Fire Fighter Safety
- Chapter 437, Fees
- Chapter 439, Examinations for Certification
- Chapter 441, Continuing Education

These chapters do not address every issue that could impact this curriculum; therefore, you are encouraged to become familiar with the TCFP Standards Manual.

Instructor Qualifications

Hazardous Materials courses must be taught by an instructor meeting the requirements described in Chapter 427.307 of the TCFP Standards Manual.

Supplemental Information

Instructors are expected to provide supplemental information if the main reference text does not provide adequate information to ensure successful completion of the Job Performance Requirements as listed in the curriculum.

Components of the Curricula

Each section of a curriculum identifies the NFPA Job Performance Requirement (JPR) and subdivides the requisite knowledge requirements into learning components. For example:

	View within the Curriculum	Explanation
601-4.3.1	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.	Section Number and NFPA JPR
	Requisite Knowledge: Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to	Requisite Knowledge Statement

p p d fc	rotect responders and the public; policies and rocedures for isolating the hazard area and enying entry; and the purpose of and methods or isolating the hazard area and denying entry.	
(1) Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to protect responders and the public	First part of Requisite Knowledge
	Identify precautions to be taken to protect responders/the public using ERG, SDS, shipping papers with emergency response information, other approved reference sources Identify the hazard a. Isolate the hazard area b. Deny entry c. Call for trained personnel d. Secure the scene	Associated learning components
(2	Policies and procedures for isolating the hazard area and denying entry	Second part of Requisite Knowledge
	Policies and procedures, per AHJ/SOP a. Isolating the hazard area b. Denying entry	Associated learning components
(3	3) And the purpose of and methods for isolating the hazard area and denying entry	Third part of Requisite Knowledge
	 Purpose/methods a. Isolating the hazard area i. Establish perimeter ii. Erect barriers b. Denying entry i. Restrict hazard area access to 	Associated learning components

appropriately trained personnel only ii. Maintain perimeter	
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency response	Requisite Skills Statement
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency responseInstructor NoteRecommended precautions found on numbered guides in the ERG include public safety issues; recommended protective clothing; evacuation; emergency response to fire, spill, and leak; and first aid sections.Examples of required knowledge include (1) precautions for providing emergency medical 	Requisite Skills Statement
the ERG numbered guide; techniques for isolating the hazard area and denying entry to unauthorized persons; how to recognize and protect evidence; and use of approved tools and equipment; (2) basic personal protective actions: staying clear of vapors, fumes, smoke,	
and spills; keeping vehicle at a safe distance from the scene; approaching from upwind, uphill, and upstream; and (3) types of protective actions and their purpose (e.g., isolate hazard area and deny entry, evacuation, and shelter-in- place); basic factors involved in the choice of protective actions (e.g., hazardous materials/WMD involved, population threatened,	

and weather conditions).	

Unless otherwise specified, all curriculum references are to NFPA 1072. In some cases, (see, for example, 601-4.2.1), reference is also made under the section number and JPR to similar material in NFPA 472.

601-4.2.1	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 and their hazards are identified. Given a hazardous materials/WMD incident, and approved reference sources, awareness level personnel shall recognize those situations where hazardous materials/WMD are present. (472-4.2.1)	Additional reference to NFPA 472
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Skills

NFPA Requisite Skill requirements are addressed in the corresponding Skill Sheets in Chapter 6 of the TCFP Curriculum Skills Manual.

Definitions of Certification Levels

Awareness Level Personnel: Personnel who, in the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene. These personnel have met all the performance requirements of Chapter 4 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications

Operations Level Personnel: Personnel who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release. These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications

Operations-Mission Specific Competencies (MSC) Level Personnel: Responders assigned mission-specific responsibilities at hazardous materials/WMD incidents are

those operations level responders designated by the authority having jurisdiction (AHJ) to perform additional tasks to support the AHJ's response mission, expected tasks, equipment, and training in the following areas:

- (1) Personal protection equipment (PPE)
- (2) Mass decontamination
- (3) Technical decontamination
- (4) Evidence preservation and sampling
- (5) Product control
- (6) Detection, monitoring, and public safety sampling
- (7) Victim rescue and recovery
- (8) Illicit laboratories incidents

These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications and have also met the performance requirements of the subchapter(s) of Chapter 6 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, to which they are trained and credentialed to perform.

Note: Basic TCFP Structural Fire Fighter certification requires that Structure Fire Fighter personnel meet all performance requirements for:

- Hazardous Materials Awareness
- Hazardous Materials Operations
- Hazardous Materials Operations MSC 6.2 Personal Protective Equipment
- Hazardous Materials Operations MSC 6.6 Product Control

Technician Level Personnel: Persons who respond to hazardous materials/weapons of mass destruction (WMD) incidents using a risk-based response process by which they analyze a problem involving hazardous materials/WMD, plan a response to the problem, evaluate progress of the planned response, and assist in terminating the incident. These personnel have met all the performance requirements of Chapter 7 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction *Emergency Response Personnel Professional Qualifications.*

Incident Commander Level Personnel: That person, designated by the AHJ, responsible for all incident activities/operations, including the development of strategies and tactics and the ordering and release of resources. These personnel have met all the performance requirements of Chapter 8 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.*

SECTION 603

HAZARDOUS MATERIALS OPERATIONS

MISSION SPECIFIC COMPETENCIES

Hazardous Materials Operations – Mission Specific Competencies are <u>optional</u> job performance requirements (JPRs) which <u>may</u> be adopted by the authority having jurisdiction (AHJ). These JPRs <u>may</u> be adopted in whole or in part for the Operations Level Responders to perform.

Hazardous Materials Operations Level Responders trained to perform Mission Specific Competencies must first master all the job performance requirements and knowledge, skills and abilities pertaining to:

- Awareness Level Personnel, and
- Operations Level Responders.

The Operations Level Responder may be required to perform any combination of the following Operations level mission specific tasks by the authority having jurisdiction (AHJ):

- Use personal protective equipment, as provided by the AHJ
- Perform mass decontamination
- Perform technical decontamination
- Perform Evidence Preservation and Public Safety Sampling actions
- Perform product control
- Perform detection, monitoring, and sampling operations
- Reformed victim rescue and recovery operations
- Respond to illicit laboratory incidents

Operations level mission specific tasks must be performed under the supervision and guidance of a hazardous materials technician, allied professional or established standard operating procedure.

In order to successfully complete the Texas Commission on Fire Protection's Basic Structure Firefighter curriculum, all the job performance requirements and knowledge, skills and abilities must be mastered pertaining to:

- Awareness Level Personnel
- Operations Level Responders, and
- Hazardous Materials Operations Level Mission Specific Competencies of:
 - Personal Protective Equipment
 - Product Control

This is in accordance with the competency requirements of *NFPA 1001: Standard for Fire Fighter Professional Qualifications* 2019 Ed., the *TCFP Standards Manual* and the *TCFP Curriculum Manual*.

<u>603-6.1 General</u>

- 603-6.1.1 Operations level responders assigned mission-specific responsibilities at hazardous materials/WMD incidents are those operations level responders designated by the AHJ to perform additional tasks to support the AHJ's response mission, expected tasks, equipment, and training in the following areas: (1) Personal protection equipment (PPE) (see Section 6.2) (2) Mass decontamination (see Section 6.3) (3) Technical decontamination (see Section 6.4) (4) Evidence preservation and sampling (see Section 6.5) (5) Product control (see Section 6.6) (6) Detection, monitoring, and public safety sampling (see Section 6.7) (7) Victim rescue and recovery (see Section 6.8) (8) Illicit laboratory incidents (see Section 6.9)
- **603-6.1.2** Operations level responders assigned mission-specific responsibilities at hazardous materials/weapons of mass destruction (WMD) incidents shall meet the job performance requirements defined in Sections 4.2 through 4.4.
- **603-6.1.3** Operations level responders assigned mission-specific responsibilities at hazardous materials/WMD incidents shall meet the job performance requirements defined in Sections 5.2 through 5.6.
- **603-6.1.4** Operations level responders assigned mission-specific responsibilities at hazardous materials/WMD incidents shall have additional competencies that are specific to their response mission, expected tasks, equipment, and training as determined by the AHJ.
- **603-6.1.5** Qualification for operations level responders assigned mission-specific responsibilities at hazardous materials/WMD incidents is specific to a mission area. For qualification, operations mission-specific responders shall perform all the job performance requirements listed in at least one level of a specialty area (Sections 6.2 through 6.9). Operations mission specific responders will be identified by their specialty.

Instructor Note

Operations level responders need only be trained to meet the competencies in Chapter 5. All the competencies listed in Chapter 6 (mission-specific competencies) are not required for qualification as

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operations level responders and should be viewed as optional at the discretion of the AHJ, based on an assessment of local risks. The purpose of Chapter 6 is to provide a more effective and efficient process so that the AHJ can match the expected tasks and duties of its personnel with the required competencies to perform those tasks.

603-6.1.6 Operations level responders assigned mission-specific responsibilities at hazardous materials/WMD incidents shall operate under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures.

Instructor Note

Although some of the mission-specific JPRs in this chapter are taken from Chapter 7 of NFPA 472, the technical committee wants to clearly state that operations mission specific responders are not replacements for or qualified as hazardous materials technicians. Operations mission-specific responders can perform some technician skills, but they do not have the broader skills and competencies required of a hazardous materials technician, particularly regarding risk assessment and the selection of control options. The following two options are examples of how guidance can be provided to ensure that operations mission-specific responders do not go beyond their level of training and equipment:

Direct guidance. Operations mission-specific responders are working under the control of a hazardous materials technician or an allied professional who has the ability to (1) continuously assess and/or observe their actions and (2) provide immediate feedback. Guidance by a hazardous materials technician or an allied professional can be provided through direct visual observation or through assessment reports communicated by the operations mission-specific responders to them.

Written guidance. Written standard operating procedures or similar guidance should clearly state the rules of engagement for operations mission-specific responders' competency. Emphasis should be placed on the following:

(1) Tasks expected of operations level responders

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- (2) Tasks beyond the capability of operations level responders
- (3) Required PPE and equipment to perform the expected tasks
- (4) Procedures for ensuring coordination within the AHJ ICS.

603-6.1.7 General Knowledge Requirements (Reserved)

- 603-6.1.8 General Skills Requirements (Reserved)
- 603-6.2 Personal Protective Equipment

Instructor Note

At this level, PPE refers to personal protective equipment that would be used in situations where contact with hazardous materials/WMD is possible or expected. Such equipment can include chemical-protective clothing, bomb suits, respirators, or other equipment that typically would not be worn by operations level responders. Specialized PPE also refers to operations level responders' PPE that requires changes to donning, doffing, and usage procedures — for example, taping gaps in fire-fighter protective clothing, doffing in a decontamination corridor, or working in the hot zone as a member of a buddy system. Personnel should be able to describe the types of PPE available and the options for thermal hazards, radiological hazards, asphyxiation hazards, chemical hazards, etiological/biological hazards, and mechanical hazards. (See also A.6.1.6.)

603-6.2.1 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; response objectives and options 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, an emergency response plan, or standard operating procedures, and 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; and all reports and documentation pertaining to PPE use are completed.

(A) Requisite Knowledge. Policies and procedures for PPE selection and use; importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures when selecting and using PPE; the capabilities and limitations of and specialized donning, doffing, and usage procedures for approved PPE; components of an incident action plan (IAP); procedures for decontamination, inspection, maintenance, and storage of approved PPE; process for being decontaminated while wearing PPE; and procedures for reporting and documenting the use of PPE.

- 1. PPE selection and use
 - a. Policies
 - b. Procedures
 - c. AHJ/SOP
- 2. Importance of selecting and using PPE under guidance
 - a. Hazardous materials technician
 - b. Allied hazardous material professional
 - c. Emergency response plan
- 3. Approved PPE
 - a. Capabilities and limitations
 - b. Specialized donning procedures
 - c. Specialized doffing procedures
 - d. Specialized usage procedures
- 4. Components of an incident action plan (IAP)
- 5. Procedures for approved PPE
 - a. decontamination
 - b. inspection
 - c. maintenance
 - d. storage of approved
- 6. Process for being decontaminated while wearing PPE

7. Use of PPE

- a. Procedures for reporting
- b. Procedures for documenting

Instructor Note

Limitations of PPE include permeation, penetration, and degradation of protective clothing and limitations of respiratory protective equipment, such as air-purifying respirators.

(A) Requisite Knowledge includes the ability to describe the types of PPE that are available for response based on NFPA standards and the PPE options for thermal hazards, radiological hazards, asphyxiating hazards, chemical hazards, etiological/biological hazards, and mechanical hazards.

(B) Requisite Skills. Selecting PPE for the assignment; inspecting, maintaining, storing, donning, working in, and doffing PPE; going through decontamination (emergency and technical) while wearing the PPE; and reporting and documenting the use of PPE.

603-6.3 Mass Decontamination

- **603-A.6.3** See A.6.1.5.
- 603-6.3.1 Perform mass decontamination for ambulatory and nonambulatory victims at a hazardous materials/WMD incident, given a hazardous materials/WMD incident that requires mass decontamination; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, 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, a mass decontamination process is selected, set up, implemented, evaluated, and terminated; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and all reports and documentation of mass decontamination operations are completed.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; advantages and limitations of operations and methods of mass decontamination; policies and procedures for performing mass decontamination; approved tools, equipment, and PPE for performing mass decontamination; crowd management techniques; and AHJ's mass decontamination team positions, roles and responsibilities; and requirements for reporting and documenting mass decontamination operations.

- 1. Types of PPE and the hazards for which they are used
- 2. Operations and methods of mass decontamination
 - a. Advantages
 - b. Limitations
- 3. Performing mass decontamination
 - a. Policies
 - b. Procedures
 - c. Approved tools
 - d. Equipment
 - e. PPE
- 4. Crowd management techniques
- 5. AHJ'S mass decontamination team
 - a. Positions
 - b. Roles
 - c. Responsibilities
- 6. Mass decontamination
 - a. Requirements for reporting
 - b. Requirements for documenting

Instructor Note

Policies and procedures for performing mass decontamination include containment of runoff according to the following EPA guidance: "During a hazardous materials incident (including a chemical/biological agent terrorist event), first responders should undertake any necessary emergency actions to save lives and protect the public and themselves.

Once any imminent threats to human health and life are addressed, first responders should immediately take all reasonable efforts to contain the contamination and avoid or mitigate environmental consequences. EPA will not pursue enforcement actions against state and local responders for the environmental consequences of necessary and appropriate emergency response actions. First responders would not be protected under CERCLA from intentional contamination such as washing hazardous materials down the storm-sewer during a response action as an alternative to costly and problematic disposal or in order to avoid extra effort."

(B) Requisite Skills. Selecting and using PPE; selecting a mass decontamination method to minimize the hazard; setting up and implementing mass decontamination operations in a safe location; evaluating the effectiveness of the mass decontamination method; and completing required reports and supporting documentation for mass decontamination operations.

Instructor Note

Methods that can be useful in assessing the effectiveness of decontamination (determining if entry personnel, tools and equipment, and victims have been decontaminated) include the following:

- (1) Visual observation (stains, discolorations, corrosive effects, etc.)
- (2) Monitoring devices [such as photoionization detectors (PIDs), detector tubes, radiation monitors, and pH paper strips/meters] that show whether contamination levels are at least below the device's detection limit]
- (3) Wipe sampling, which provides after-the-fact information on the effectiveness of decontamination (Once a wipe swab is taken, it is analyzed by chemical means, usually in a laboratory. Protective clothing, equipment, and skin can be tested using wipe samples.)

603-6.4 <u>Technical Decontamination</u>

603-6.4.1 Perform 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 that requires technical decontamination; an assignment in an IAP; scope of the problem: policies and procedures for technical decontamination; approved tools, equipment, 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, a technical decontamination method is selected, set up, implemented, evaluated, and terminated; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; personnel, tools, and equipment are decontaminated; and all reports and documentation of technical decontamination operations are completed.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures; advantages and limitations of operations and methods of technical decontamination; technical decontamination methods and their advantages and limitations; policies and procedures for performing technical decontamination; approved tools, equipment, and PPE for performing technical decontamination; AHJ's technical decontamination team positions, roles, and responsibilities; and requirements for reporting and documenting technical decontamination operations.

- 1. Types of PPE and the hazards for which they are used
- 2. Importance of working under guidance (of):
 - a. Hazardous Materials technician
 - b. Allied professional
 - c. Emergency response plan
 - d. Standard operating procedures
- 3. Operations and methods of technical decontamination
 - a. Advantages
 - b. Limitations

4. Technical decontamination methods

- a. Advantages
- b. Limitations
- 5. Performing technical decontamination
 - a. policies

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- b. procedures
- c. approved tools
- d. equipment
- e. PPE
- 6. AHJ'S technical decontamination team
 - a. Positions
 - b. Roles
 - c. Responsibilities
- 7. Technical decontamination
 - a. Requirements for reporting
 - b. Requirements for documenting

(B) Requisite Skills. Selecting and using PPE; selecting a technical decontamination procedure to minimize the hazard; setting up and implementing technical decontamination operations; evaluating the effectiveness of the technical decontamination process; and completing reporting and documentation requirements.

Evidence Preservation and Public Safety Sampling 603-6.5

603-6.5.1 Perform evidence preservation and public safety sampling at a hazardous materials/WMD incident, given a hazardous materials/WMD incident involving potential violations of criminal statutes or governmental regulations, including suspicious letters and packages, illicit laboratories, a release/attack with a WMD agent, and environmental crimes; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, and PPE; and access to a hazardous materials technician, an allied professional, including law enforcement personnel or others with similar authority, 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, hazardous materials/WMD incidents with a potential violation of criminal statutes or governmental regulations are identified; notify agency/agencies having investigative jurisdiction and

hazardous explosive device responsibility for the type of incident are notified; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; evidence is identified and preserved; public safety samples are collected, and packaged, and the outside packaging is decontaminated; emergency responders, tools, and equipment are decontaminated; and evidence preservation and public safety sampling operations are reported and documented.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; importance of working under the guidance of a hazardous materials technician, an allied professional including law enforcement personnel or others with similar authority, an emergency response plan, or standard operating procedures; unique aspects of a suspicious letter, a suspicious package or device, an illicit laboratory, or a release/attack with a WMD agent; potential violations of criminal statutes or governmental regulations; agencies having response authority to collect evidence and public safety samples; agencies having investigative law enforcement authority to collect evidence or public safety samples; notification procedures for agencies having investigative law enforcement authority and hazardous explosive device responsibility; chain-of-custody procedures; securing, characterization, and preservation of the scene and potential forensic evidence; approved documentation procedures; types of evidence; use and limitations of equipment to conduct field screening of samples to screen for corrosivity, flammability, oxidizers, radioactivity, volatile organic compounds (VOC), and fluorides for admission into the Laboratory Response Network or other forensic laboratory system; use of collection kits; collection and packaging of public safety samples; decontamination of outside packaging; prevention of secondary contamination; protection and transportation requirements for sample packaging; and requirements for reporting and documenting evidence preservation and public safety sampling operations.

- 1. Types of PPE and the hazards for which they are used
- 2. Importance of working under guidance (of):
 - a. Hazardous materials technician
 - b. Allied professional
 - i. Law enforcement personnel
 - ii. Others with similar authority

c. Emergency response plan

- d. Standard operating procedures
- 3. Unique aspects
 - a. Suspicious letter
 - b. Suspicious package/device
 - c. Illicit laboratory
 - d. Release/attack with a WMD agent
- 4. Potential violations
 - a. Criminal statutes
 - b. Governmental regulations
- 5. Agencies having response authority to collect evidence and public safety samples
- 6. Agencies having investigative law enforcement authority to collect evidence or public safety samples
- 7. Notification procedures for agencies having investigative law enforcement authority and hazardous explosive device responsibility
- 8. Chain-of-custody procedures
- 9. Scene and potential forensic evidence
 - a. Securing
 - b. Characterization
 - c. preservation
- 10. Approved documentation procedures
- 11. Types of evidence
- 12. Use and limitations of equipment to conduct field screening of samples for admission into the Laboratory Response Network to screen for:
 - a. corrosivity
 - b. flammability
 - c. oxidizers
 - d. radioactivity
 - e. volatile organic compounds (VOC)
 - f. fluorides

- 13. Use of collection kits
- 14. Collection and packaging of public safety samples
- 15. Decontamination of outside packaging
- 16. Prevention of secondary contamination
- 17. Protection and transportation requirements for sample packaging
- 18. Requirements for reporting and documenting
 - a. evidence preservation
 - b. public safety sampling operations

(B) Requisite Skills. Identifying incidents with a potential violation of criminal statutes or governmental regulations; identifying the agency having investigative jurisdiction over an incident that is potentially criminal in nature or a violation of government regulations; operating field screening and sampling equipment to screen for corrosivity, flammability, oxidizers, radioactivity, volatile organic compounds (VOC), and fluorides; securing, characterizing, and preserving the scene; identifying and protecting potential evidence until it can be collected by an agency with investigative authority; following chain-of-custody procedures; characterizing hazards; performing protocols for field screening samples for admission into the Laboratory Response Network or other forensic laboratory system; protecting evidence from secondary contamination; determining agency having response authority to collect public safety samples; collecting public safety samples; packaging and labeling samples; decontaminating samples; determining agency having investigative law enforcement authority to collect evidence and public safety samples; decontaminating outside sample packaging; preparing samples for protection and transportation to a laboratory; and completing required reports and supporting documentation for evidence preservation and public safety sampling operations.

603-6.6 Product Control

Instructor Note

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HAZARDOUS MATERIALS OPERATIONS MISSION SPECIFIC COMPETENCIES For the purposes of this section, the intent is to focus on confining or containing the release with limited risk of personal exposure. The applicable techniques include absorption, adsorption, damming, diking, dilution, diversion, remote valve shutoff, retention, vapor dispersion, and vapor suppression. Product control also includes techniques for controlling flammable liquid incidents and flammable gas incidents.

Tools and equipment include such items as Class B foam application equipment, diking equipment, damming equipment, approved absorbent materials and products, shovels and other hand tools, piping, heavy equipment (such as backhoes), floats, and spill booms.

Control agents can include Class B foam, dispersal agents, and so on.

603-6.6.1 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.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures; definitions of control, confinement, containment, and extinguishment; policies and procedures; product control methods for controlling a release with limited risk of personal exposure; safety precautions associated with each product control method; location and operation of remote/emergency shutoff devices in cargo tanks and intermodal tanks in transportation and containers at facilities, that contain flammable liquids and flammable gases; characteristics and applicability of approved product control agents; use of approved tools and equipment;

and requirements for reporting and documenting product control operations.

- 1. Types of PPE and the hazards for which they are used
- 2. Importance of working under guidance (of):
 - a. Hazardous materials technician
 - b. Allied professional
 - c. Emergency response plan
 - d. Standard operating procedures
- 3. Definitions
 - a. Control
 - b. Confinement
 - c. Containment
 - d. Extinguishment
- 4. Policies and procedures
- 5. Product control methods for controlling a release with limited risk of personal exposure
- 6. Safety precautions associated with each product control method
- 7. Location and operation of remote/emergency shutoff devices in cargo tanks and intermodal tanks in transportation and containers at facilities, that contain
 - a. Flammable liquids
 - b. Flammable gases
- 8. Approved product control agents
 - a. Characteristics
 - b. Applicability
- 9. Use of approved tools and equipment
- 10. Product control operations
 - a. Requirements for reporting
 - b. Requirements for documenting

Instructor Note

Product control techniques that focus on confining/containing the release with limited risk of personal exposure include absorption, adsorption, damming, diking, dilution, diversion, remote valve shutoff, retention, vapor dispersion, and vapor suppression. Product control also includes techniques for controlling flammable liquid incidents and flammable gas incidents. Remote/emergency shutoff devices include those for MC-306/DOT-406, MC-407/DOT-407, MC-331 cargo tanks, and intermodal tanks.

(B) Requisite Skills. Selecting and using PPE; selecting and performing product control techniques to confine/contain the release with limited risk of personal exposure; using approved control agents and equipment on a release involving hazardous materials/WMD; using remote control valves and emergency shutoff devices on cargo tanks and intermodal tanks in transportation and containers at fixed facilities; and performing product control techniques.

Instructor Note

Product control techniques that focus on confining/containing the release with limited risk of personal exposure include absorption, adsorption, damming, diking, dilution, diversion, remote valve shutoff, retention, vapor dispersion, and vapor suppression. Techniques for controlling flammable liquid incidents and flammable gas incidents (e.g., hose handling, nozzle patterns, and attack operations) can be found in NFPA 1001.

603-6.7 Detection. Monitoring. and Sampling

603-6.7.1 Perform detection, monitoring, and sampling at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; scope of the problem; policies and procedures; approved resources; detection, monitoring, and sampling equipment; 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, detection, monitoring, and sampling methods are selected; approved equipment is selected for detection, monitoring, or sampling of solid, liquid, or gaseous hazardous materials/WMD; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; detection, monitoring, and sampling operations are implemented as needed; results of detection, monitoring, and sampling are read, interpreted, recorded, and communicated; personnel and their equipment are decontaminated; detection, monitoring, and sampling equipment is maintained; and detection, monitoring, and sampling operations are reported and documented.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; capabilities and limitations of approved PPE; importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures; approved detection, monitoring, and sampling equipment; policies and procedures for detection, monitoring, and sampling; process for selection of detection, monitoring, and sampling equipment for an assigned task; operation of approved detection, monitoring, and sampling equipment; capabilities, limitations, and local monitoring procedures, including action levels and field testing; how to read and interpret results; methods for decontaminating detection, monitoring, and sampling equipment according to manufacturers' recommendations or AHJ policies and procedures; maintenance procedures for detection, monitoring, and sampling equipment according to manufacturers' recommendations or AHJ policies and procedures; and requirements for reporting and documenting detection, monitoring, and sampling operations.

- 1. Types of PPE and the hazards for which they are used
- 2. Approved PPE
 - a. Capabilities
 - b. Limitations
- 3. Importance of working under the guidance (of):
 - a. A hazardous materials technician
 - b. An allied professional
 - c. An emergency response plan
 - d. Standard operating procedures

- 4. Approved equipment
 - a. Detection
 - b. Monitoring
 - c. Sampling
 - d. Process of selection for an assigned task
 - e. Operation (of)
- 5. Detection, monitoring, and sampling
 - a. Policies
 - b. Procedures
- 6. Local monitoring procedures, including action levels and field testing
 - a. Capabilities
 - b. Limitations
- 7. How to read and interpret results
- 8. Decontamination methods for detection, monitoring, and sampling equipment
 - a. According to manufacturers' recommendations
 - b. According to AHJ policies and procedures
- 9. Maintenance procedures for detection, monitoring, and sampling equipment
 - a. according to manufacturers' recommendations or
 - b. According to AHJ policies and procedures
- 10. Detection, monitoring, and sampling operations
 - a. Reporting
 - b. Documenting

Instructor Note

Field tests include bump tests, calibration, and other tests performed at the incident scene to prepare the equipment for use.

(B) Requisite Skills. Selecting and using PPE; field testing and operating approved detection, monitoring, and sampling equipment; reading, interpreting, and documenting the readings from detection, monitoring, and sampling equipment; communicating results of detection, monitoring, and sampling; decontaminating detection, monitoring, and sampling equipment; maintaining detection, monitoring, and sampling equipment according to manufacturers' specifications or AHJ policies and procedures; and completing required reports and supporting documentation for detection, monitoring, and sampling operations.

603-6.8 Victim Rescue and Recovery

603-6.8.1 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 in an IAP; scope of the problem; policies and procedures; approved tools, equipment, including special rescue equipment, 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, 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 options 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.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; capabilities and limitations of approved PPE; importance of working under the guidance of a hazardous materials technician, an allied professional, an emergency response plan, or standard operating procedures; the difference between victim rescue and victim recovery; victim prioritization and patient triage methods; considerations for determining the feasibility of rescue or recovery operations; policies and procedures for implementing rescue and recovery; safety issues; capabilities and limitations of approved PPE; procedures, specialized

rescue equipment required, and incident response considerations for rescue and recovery in the following situations: (1) line-of-sight with ambulatory victims, (2) line-of-sight with nonambulatory victims, (3) nonline-of sight with ambulatory victims, (4) non-line-of-sight with nonambulatory victims, and (5) victim rescue operations versus victim recovery operations; AHJ's rescue team positions, roles, and responsibilities; and procedures for reporting and documenting victim rescue and recovery operations.

- 1. Types of PPE and the hazards for which they are used
- 2. Approved PPE
 - a. Capabilities
 - b. Limitations

Importance of working under guidance

- a. Hazardous materials technician
- b. Allied professional
- c. An emergency response plan
- d. standard operating procedures
- 4. The difference between victim rescue and victim recovery
- 5. Victim prioritization and patient triage methods
- 6. Considerations for determining the feasibility of rescue or recovery operations
- 7. Policies and procedures for implementing rescue and recovery
- 8. Safety issues
- 9. Approved PPE
- 10. Capabilities and limitations
- 11. Capabilities and limitations of approved PPE

- 12. Procedures, specialized rescue equipment required, and incident response considerations for rescue and recovery in the following situations:
 - a. Line-of-sight with ambulatory victims
 - b. Line-of-sight with nonambulatory victims
 - c. Non-line-of sight with ambulatory victims
 - d. Non-line-of-sight with nonambulatory victims
 - e. Victim rescue operations versus victim recovery operations
- 13. AHJ's rescue team
 - a. Positions
 - b. Roles
 - c. Responsibilities
- 14. Procedures for reporting and documenting victim rescue and recovery operations

Instructor Note

Victim prioritization utilizes risk-based factors to establish an action plan for victim removal and eventual treatment. Patient triage is a clinical prioritization employed to maximize survival and to prioritize application of therapeutic modalities.

(B) Requisite Skills. Identifying both rescue and recovery situations; victim prioritizing and patient triaging; selecting proper rescue or recovery options; using available specialized rescue equipment; selecting and using PPE for the victim and the rescuer; searching for, rescuing, and recovering victims; and completing required reports and supporting documentation for victim rescue and recovery operations.

603-6.9 Response to Illicit Laboratories

603-6.9.1 Perform response operations at an illicit laboratory at a hazardous materials/WMD incident, given a hazardous materials/WMD incident involving an illicit laboratory; an assignment in an IAP; scope of the problem; policies and procedures; approved tools, equipment, and PPE; and access to a hazardous materials technician, an allied professional including law enforcement agencies or others having similar investigative

authority, an emergency response plan, or standard operating procedures, so that under the guidance of a hazardous materials technician, an allied professional including law enforcement agencies or others having similar investigative authority, an emergency response plan, or standard operating procedures, the scene is secured; the type of laboratory is identified; potential hazards are identified; approved PPE is selected and used; exposures and personnel are protected; safety procedures are followed; hazards are avoided or minimized; control procedures are implemented; evidence is identified and preserved; personnel, victims, tools, and equipment are decontaminated; and illicit laboratory operations are reported and documented.

(A) Requisite Knowledge. Types of PPE and the hazards for which they are used; importance of working under the guidance of a hazardous materials technician, an allied professional including law enforcement personnel or others with similar authority, an emergency response plan, or standard operating procedures; types of illicit laboratories and how to identify them; operational considerations at illicit laboratories; hazards and products at illicit laboratories; booby traps often found at illicit laboratories; law enforcement agencies or others having similar investigative authority and responsibilities at illicit laboratories: crime scene coordination with law enforcement agencies or others having similar investigative authority; securing and preserving evidence; procedures for conducting a joint hazardous materials/hazardous devices assessment operation; procedures for determining atmospheric hazards through detection, monitoring, and sampling; procedures to mitigate immediate hazards; safety procedures and tactics; factors to be considered in the selection of decontamination, development of a remediation plan, and in decontaminating tactical law enforcement personnel, weapons, and law enforcement canines; procedures for decontaminating potential suspects; procedures for going through technical decontamination while wearing PPE; and procedures for reporting and documenting illicit laboratory response operations.

- 1. Types of PPE/hazards for which they are used
- 2. Importance of working under guidance
 - a. Hazardous materials technician
 - b. Allied professionals
 - i. Law enforcement personnel
 - ii. Others with similar authority

- c. Emergency response plan
- d. Standard operating procedures
- 3. Illicit laboratories
 - a. Types
 - b. How to identify
 - c. Operational considerations
 - d. Hazards and products
- 4. Booby traps
- 5. Law enforcement agencies
- 6. Crime scene coordination
 - a. (With) law enforcement agencies
 - b. (With) others having similar investigative authority
- 7. Securing and preserving evidence
- 8. Conducting a joint hazardous materials/hazardous devices assessment operation
- 9. Determining atmospheric hazards through:
 - a. Detection
 - b. Monitoring
 - c. Sampling
- 10. Procedures to mitigate immediate hazards
- 11. Safety procedures and tactics
- 12. Factors to be considered in:
 - a. The selection of decontamination
 - b. The development of a remediation plan
 - c. Decontaminating
 - i. Tactical law enforcement personnel
 - ii. Weapons
 - iii.
 - iv. Law enforcement canines

- 13. Decontaminating potential suspects
- 14. Technical decontamination while wearing PPE
- 15. Reporting and documenting illicit laboratory response operations

Instructor Note

Types of illicit laboratories include chemical, biological, explosive, and drug manufacturing. Booby traps found at illicit laboratories include antipersonnel devices. Clearance of such devices is carried out by explosive ordnance disposal (EOD) personnel trained for these procedures.

Law enforcement agencies having investigative jurisdiction might differ based on whether the situation involves illicit drug manufacturing, illicit WMD manufacturing, or environmental crimes resulting from illicit laboratory operations. Agency jurisdiction, investigative guidelines, and investigative priorities are complex and dynamic. Specific jurisdictional situations should be identified with governmental investigative agencies.

Considerations for decontaminating and contaminate neutralization tactical law enforcement personnel include being aware of specialized equipment used by law enforcement, including weapons; ammunition; concussion devices; persons in custody; procedures for securing evidence, weapons, and ammunition; and coordination to ensure a safe operating zone.

(B) Requisite Skills. Implementing scene control procedures; selecting and using PPE; selecting detection, monitoring, and sampling equipment; implementing technical decontamination for personnel; securing an illicit laboratory; identifying and isolating hazards; identifying safety hazards; conducting a joint hazardous materials/hazardous devices assessment operation; decontaminating potential suspects, tactical law enforcement personnel, weapons and law enforcement canines; and completing required reports and supporting documentation for illicit laboratory response operations.

CERTIFICATION CURRICULUM MANUAL – CHAPTER SIX

HAZARDOUS MATERIALS TECHNICIAN

REFERENCE LIST FOR THE HAZARDOUS MATERIALS TECHNICIAN CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

<u>Texts</u>

Certification Curriculum Manual. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

- Code of Federal Regulations, Title 29 Part 1910.120, Appendix A. United States. U.S. Department of Labor, Occupational Safety & Health Administration. http://edocket.access.gpo.gov/cfr_2007/julqtr/pdf/29cfr1910.120.pdf
- *Emergency Response Guidebook.* United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- *Hazardous Materials: Managing the Incident*, 4th edition. Noll, G. G., Hildebrand, M. S., Schnepp, R. & Rudner, G.D. (2014). Burlington, MA: Jones and Bartlett.
- Hazardous Materials Technician, 2nd edition. (2017) Stillwater, OK: International Fire Service Training Association.
- Hazardous Materials/Weapons of Mass Destruction Response Handbook, /2018 edition. McGowan, T. (2018). Quincy, MA: National Fire Protection Association.
- NFPA 472: Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. (2018 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.
- NFPA 1072: Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications. (2017 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association.
- NIOSH Pocket Guide to Chemical Hazards. National Institute for Occupational Safety and Health. (Most current edition). Cincinnati, OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health.
- Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

<u>Texts</u>

- Bretherick's Handbook of Reactive Chemical Hazards. Urben, P. G., Pitt, M. J., & Bretherick, L. (2007). Amsterdam: Elsevier.
- *Field Guide to Tank Cars*. Bureau of Explosives. (2010). Pueblo, Colorado: Association of American Railroads.
- *Fire Fighter's Handbook of Hazardous Materials*, 7th edition. Baker, Charles T., (2006). Sudsbury, MA: Jones and Bartlett.
- *Fire Protection Guide to Hazardous Materials*. National Fire Protection Association. (2010 edition). Quincy, MA: National Fire Protection Association.
- Hawley's Condensed Chemical Dictionary. Lewis, R. J., & Hawley, G. G. (2007). West Sussex, England: Wiley.
- Hazardous Materials: Managing the Incident: Field Operations Guide. Bevelacqua, A. 2nd Edition (2013). MD: Jones and Bartlett Publishing
- Hazardous Materials Technician. Weber, Chris (2013). Upper Saddle River, NJ: Pearson Education, Inc.

<u>Media</u>

- *Chlorine Emergencies: An Overview for First Responders*. Chlorine Institute. (2007). Arlington, VA: The Chlorine Institute.
- Hazardous Materials Containment Series. Action Training Systems. [4 Disc DVD Set] Hazardous materials containment - series of 4 titles. Seattle, WA: Action Training Systems.
- Hazardous Materials: Managing the Incident DVD Series. Massingham, G., Noll, G. G., Hildebrand, M. S., & Noll, G. G. (2005). [8 Disc DVD Set] Edgartown, MA: Emergency Film Group.
- How to Use the Chlorine Institute Emergency Kit "A" for 100 lb. and 150 lb. Chlorine Cylinders. Chlorine Institute. (Sept. 2013). New York. NY: The Chlorine Institute. [DVD + pamphlet]
- How to Use the Chlorine Institute Emergency Kit "B" for Chlorine Ton Containers. New Chlorine Institute. (Dec. 2013). York, NY: The Chlorine Institute. [DVD + pamphlet]
- How to Use the Chlorine Institute Emergency Kit "C" for Chlorine Tank Cars and Tank Trucks. Chlorine Institute. (Feb. 2014). New York, NY: The Chlorine Institute. [DVD + pamphlet]

HAZARDOUS MATERIALS TECHNICIAN

Intermodal Containers. Noll, G. G., Hildebrand, M. S., & Donahue, M. L. (2002). [DVD] Edgartown, MA: Emergency Film Group.

Petroleum Storage Tanks. Hildebrand, M. S., & Noll, G. G. (2003). [DVD] Edgartown, MA: Emergency Film Group.

CHAPTER 6 SECTION 604 HAZARDOUS MATERIALS TECHNICIAN CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
604-7.1	General - Introduction - Laws, Regulations, and National Consensus Standards	4
604-7.2	Analyze the Incident	24
604-7.3	Response Planning	24
604-7.4	Action Plan Implementation	16
604-7.5	Evaluating and Reporting	6
604-7.6	Terminating the Incident	6
	TOTAL RECOMMENDED HOURS	80

The recommended hours include time for skills evaluation and are based on 12 students. Hours needed depend on the actual number of students.



Course Instructor Information Hazardous Materials Technician

Overview

The Hazardous Materials curricula are designed to provide clear guidance that ensures adequate presentation of the information required to meet the Job Performance Requirements (JPRs) of National Fire Protection Association (NFPA) 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*, 2017 edition.

The Hazardous Materials curricula is found in Chapter 6 of the TCFP Curriculum Manual.

Certification Level	TCFP Section Number	NFPA 1072 Chapter
Awareness	601	4
Operations	602	5
Operations-Mission Specific Competencies (MSC)	603	6
*Technician	604	7
*Incident Commander	605	8

Layout

The NFPA numbering sequence is mirrored to allow easy correlation between this document and the NFPA Standard. For example, 601-4.1.2 identifies the section in Awareness that corresponds to NFPA section 4.1.2.

When a section references information from "Annex A Explanatory Material" in the NFPA Standard, it is identified by a boxed Instructor Note. For example, the boxed Instructor Note listed in 601-4.2.1 and that immediately follows the RequisiteKnowledge section corresponds to the NFPA Annex A information for NFPA 1072 section4.2.1.

* Asterisks by Technician and Incident Commander above indicate that both are voluntary (non-mandatory) certifications. Therefore, **a formal "curriculum outline" is not provided**. Please use chapters 7 and 8, respectively, of NFPA 1072 as a guide when creating your own course curricula or selecting a prepared instructional curriculum package from a publisher/vendor for Technician and Incident Commander.

TCFP Standards Manual

It is critical that you review the chapters in the TCFP Standards Manual that apply to this curriculum. Of primary importance are the following two chapters: Chapter 423, which defines the course of study, documentation, and medical requirements necessary

for Awareness and Operations certification (required) and Chapter 453, which covers certification requirements for Technician and Incident Commander (voluntary). Additionally, instructors are expected to review the following chapters as they pertain to the instructional, examination, certification processes:

- Chapter 421, Standards for Certification
- Chapter 427, Training Facility Certification
- Chapter 435, Fire Fighter Safety
- Chapter 437, Fees
- Chapter 439, Examinations for Certification
- Chapter 441, Continuing Education

These chapters do not address every issue that could impact this curriculum; therefore, you are encouraged to become familiar with the TCFP Standards Manual.

Instructor Qualifications

Hazardous Materials courses must be taught by an instructor meeting the requirements described in Chapter 427.307 of the TCFP Standards Manual.

Supplemental Information

Instructors are expected to provide supplemental information if the main reference text does not provide adequate information to ensure successful completion of the Job Performance Requirements as listed in the curriculum.

Components of the Curricula

Each section of a curriculum identifies the NFPA Job Performance Requirement (JPR) and subdivides the requisite knowledge requirements into learning components. For example:

	View within the Curriculum	Explanation
601-4.3.1	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.	Section Number and NFPA JPR
	Requisite Knowledge: Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to	Requisite Knowledge Statement

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protect responders and t procedures for isolating denying entry; and the p for isolating the hazard a	the public; policies and the hazard area and urpose of and methods area and denying entry.	
(1) Use of the ERG, SDS emergency response approved reference s precautions to be tak responders and the p	S, shipping papers with information, and other sources to identify en to protect bublic	of e
Identify precautions to responders/the public shipping papers with information, other app sources Identify the hazard a. Isolate the hazard b. Deny entry c. Call for trained pe d. Secure the scene	o be taken to protect c using ERG, SDS, emergency response proved reference d area	d nts
(2) Policies and procedu hazard area and den	res for isolating the ying entry Second pa Requisite Knowledge	art of e
Policies and procedu a. Isolating the haza b. Denying entry	res, per AHJ/SOP Associated ard area componen	d nts
(3) And the purpose of a isolating the hazard a	nd methods for area and denying entry Knowledge	of e
Purpose/methods		
a. Isolating the haza i. Establish perir ii. Erect barriers	meter Associated learning component	d nts
b. Denying entry i. Restrict haza	rd area access to	

appropriately trained personnel only ii. Maintain perimeter Requisite Skills: Use of the ERG, SDS, shipping papers with emergency response Requisite Ski Statement
ii. Maintain perimeter Requisite Skills: Use of the ERG, SDS, Requisite Ski shipping papers with emergency response Statement
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency responseRequisite Ski Statement
Instructor Note
Recommended precautions found on numbered guides in the ERG include public safety issues; recommended protective clothing; evacuation; emergency response to fire, spill, and leak; and first aid sections.
Examples of required knowledge include (1) precautions for providing emergency medical care to victims; typical ignition sources; ways hazardous materials/WMD are harmful to people, the environment, and property; general routes of entry for human exposure; emergency action (fire, spill, or leak; first aid); actions recommended not to be performed (e.g., closing of pipeline valves); protective actions (isolation of area and denial of entry, evacuation, shelter-in-place); size and shape of recommended initial isolation and protective action distances; difference between small and large spills; conditions that require the use of the ERG Table of Initial Isolation and Protective Action Distances and the isolation distances in the ERG numbered guide; techniques for isolating the hazard area and denying entry to unauthorized persons; how to recognize and protect evidence; and use of approved tools and equipment; (2) basic personal protective actions : staying clear of vapors, fumes, smoke, and spills; keeping vehicle at a safe distance from the scene; approaching from upwind, uphill, and upstream; and (3) types of protective actions and their purpose (e.g., isolate hazard area and deny entry, evacuation, and shelter-in- place); basic factors involved in the choice of protective actions (e.g., hazardous

and weather conditions).	

Unless otherwise specified, all curriculum references are to NFPA 1072. In some cases, (see, for example, 601-4.2.1), reference is also made under the section number and JPR to similar material in NFPA 472.

601-4.2.1	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 and their hazards are identified. Given a hazardous materials/WMD incident, and approved reference sources, awareness level personnel shall recognize those situations where hazardous materials/WMD are present. (472-4.2.1)	Additional reference to NFPA 472

Skills

NFPA Requisite Skill requirements are addressed in the corresponding Skill Sheets in Chapter 6 of the TCFP Curriculum Skills Manual.

Definitions of Certification Levels

Awareness Level Personnel: Personnel who, in the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene. These personnel have met all the performance requirements of Chapter 4 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications

Operations Level Personnel: Personnel who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release. These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*

Operations-Mission Specific Competencies (MSC) Level Personnel: Responders assigned mission-specific responsibilities at hazardous materials/WMD incidents are

those operations level responders designated by the authority having jurisdiction (AHJ) to perform additional tasks to support the AHJ's response mission, expected tasks, equipment, and training in the following areas:

- (1) Personal protection equipment (PPE)
- (2) Mass decontamination
- (3) Technical decontamination
- (4) Evidence preservation and sampling
- (5) Product control
- (6) Detection, monitoring, and public safety sampling
- (7) Victim rescue and recovery
- (8) Illicit laboratories incidents

These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications and have also met the performance requirements of the subchapter(s) of Chapter 6 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, to which they are trained and credentialed to perform.

Note: Basic TCFP Structural Fire Fighter certification requires that Structure Fire Fighter personnel meet all performance requirements for:

- Hazardous Materials Awareness
- Hazardous Materials Operations
- Hazardous Materials Operations MSC 6.2 Personal Protective Equipment
- Hazardous Materials Operations MSC 6.6 Product Control

Technician Level Personnel: Persons who respond to hazardous materials/weapons of mass destruction (WMD) incidents using a risk-based response process by which they analyze a problem involving hazardous materials/WMD, plan a response to the problem, evaluate progress of the planned response, and assist in terminating the incident. These personnel have met all the performance requirements of Chapter 7 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.

Incident Commander Level Personnel: That person, designated by the AHJ, responsible for all incident activities/operations, including the development of strategies and tactics and the ordering and release of resources. These personnel have met all the performance requirements of Chapter 8 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.*

CERTIFICATION CURRICULUM MANUAL – CHAPTER SIX

HAZARDOUS MATERIALS INCIDENT COMMANDER

REFERENCE LIST FOR THE HAZARDOUS MATERIALS INCIDENT COMMANDER CURRICULUM

This Reference List is provided as a general guide for both instructors and students to locate information pertaining to the specific objectives in the TCFP Curriculum. This list is **not** all-inclusive and does not in any way limit TCFP development and use of questions to test the objectives of the curriculum:

Required References

<u>Texts</u>

Certification Curriculum Manual. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

- Code of Federal Regulations, Title 29 Part 1910.120, Appendix A. United States. U.S. Department of Labor, Occupational Safety & Health Administration. http://edocket.access.gpo.gov/cfr_2007/julqtr/pdf/29cfr1910.120.pdf
- *Emergency Response Guidebook.* United States. (Most current edition). Washington, DC: U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration.
- Hazardous Materials Awareness and Operations, 3rd Edition. Schnepp (2019). Sudbury, MA: Jones & Bartlett.
- Hazardous Materials for First Responders, 5th edition (2017). Stillwater, OK: Fire Protection Publications, Oklahoma State University.
- Hazardous Materials: Managing the Incident. Chester Noll, G. G., Hildebrand, M. S., Rudner, G., & Schnepp, R. (2014). Burlington, MA: Jones & Bartlett.
- Hazardous Materials/Weapons of Mass Destruction Response Handbook. McGowan, T. (2018). Quincy, MA: National Fire Protection Association.
- NFPA 472: Standard for Competence of Responders to Hazardous Materials Incidents/Weapons of Mass Destruction. (2018 ed.). Quincy, MA: NFPA Publications. National Fire Protection Association
- NIOSH Pocket Guide to Chemical Hazards. Cincinnati National Institute for Occupational Safety and Health. (Most current edition). OH: US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health. http://www.cdc.gov/niosh/npg/
- Standards Manual for Fire Protection Personnel. Texas Commission on Fire Protection. (Most current edition). Austin, TX: Texas Commission on Fire Protection.

Recommended References

The most current edition of the following publications and media are recommended (not required) supplemental material for program use.

<u>Texts</u>

- Bretherick's Handbook of Reactive Chemical Hazards. Urben, P. G., Pitt, M. J., & Bretherick, L. (2007). Amsterdam: Elsevier.
- *Chlorine Emergencies: An Overview for First Responders*. Chlorine Institute. (2007). Arlington, VA: The Chlorine Institute.
- CHRIS: Chemical Hazards Response Information System. United States. (1992). COMDTINST, M16465.11B. Washington, DC: U.S. Dept. of Transportation, U.S. Coast Guard.
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- *Emergency Care for Hazardous Materials Exposure*. Currance, P., Bronstein, A. C., & Clements, B. (2005). St. Louis, MO: Mosby.
- *Emergency Handling of Hazardous Materials in Surface Transportation.* Association of American Railroads. (2009). Washington, DC: Association of American Railroads.
- *Fire Protection Guide to Hazardous Materials*. National Fire Protection Association. (2001). Quincy, MA: National Fire Protection Association.
- Hazardous Materials: Managing the Incident: Field Operations Guide. Chester Bevelacqua, A. S., Hildebrand, M. S., & Noll, G. G. (2007). MD: Red Hat Publishing, Inc.
- Hawley's Condensed Chemical Dictionary. Lewis, R. J., & Hawley, G. G. (2007). West Sussex, England: Wiley.
- *Symbol Seeker: Hazard Identification Manual.* Burns, P. P. (2002). Preston, England: Symbol Seeker.

<u>Media</u>

- Hazardous Materials Containment Series. Action Training Systems. [4 Disc DVD Set]. Hazardous materials containment - series of 4 titles. Seattle, WA: Action Training Systems.
- Hazardous Materials: Managing the Incident DVD Series. Massingham, G., Noll, G. G., Hildebrand, M. S., & Noll, G. G. (2005). [8 Disc DVD Set]. Edgartown, MA: Emergency Film Group.

CHAPTER 6 SECTION 605 HAZARDOUS MATERIALS INCIDENT COMMANDER CURRICULUM OUTLINE

SECTION	SUBJECT	RECOMMENDED HOURS
605-8.1	General - Introduction - Laws, Regulations, and National Consensus Standards	1
605-8.2	Analyze the Incident	4
605-8.3	Plan the Response	9
605-8.4	Implement the Incident Action Plan (IAP)	4
605-8.5	Evaluate Progress and Adjust IAP	2
605-8.6	Termination	4
	TOTAL RECOMMENDED HOURS	24

The recommended hours include time for skills evaluation and are based on 12 students. Hours needed depend on the actual number of students.



Course Instructor Information Hazardous Materials Incident Commander

Overview

The Hazardous Materials curricula are designed to provide clear guidance that ensures adequate presentation of the information required to meet the Job Performance Requirements (JPRs) of National Fire Protection Association (NFPA) 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*, 2017 edition.

The Hazardous Materials curricula is found in Chapter 6 of the TCFP Curriculum Manual.

Certification Level	TCFP Section Number	NFPA 1072 Chapter
Awareness	601	4
Operations	602	5
Operations-Mission Specific Competencies (MSC)	603	6
*Technician	604	7
*Incident Commander	605	8

Layout

The NFPA numbering sequence is mirrored to allow easy correlation between this document and the NFPA Standard. For example, 601-4.1.2 identifies the section in Awareness that corresponds to NFPA section 4.1.2.

When a section references information from "Annex A Explanatory Material" in the NFPA Standard, it is identified by a boxed Instructor Note. For example, the boxed Instructor Note listed in 601-4.2.1 and that immediately follows the Requisite Knowledge section corresponds to the NFPA Annex A information for NFPA 1072 section4.2.1.

* Asterisks by Technician and Incident Commander above indicate that both are voluntary (non-mandatory) certifications. Therefore, **a formal "curriculum outline" is not provided**. Please use chapters 7 and 8, respectively, of NFPA 1072 as a guide when creating your own course curricula or selecting a prepared instructional curriculum package from a publisher/vendor for Technician and Incident Commander.

TCFP Standards Manual

It is critical that you review the chapters in the TCFP Standards Manual that apply to this curriculum. Of primary importance are the following two chapters: Chapter 423, which defines the course of study, documentation, and medical requirements necessary
for Awareness and Operations certification (required) and Chapter 453, which covers certification requirements for Technician and Incident Commander (voluntary). Additionally, instructors are expected to review the following chapters as they pertain to the instructional, examination, certification processes:

- Chapter 421, Standards for Certification
- Chapter 427, Training Facility Certification
- Chapter 435, Fire Fighter Safety
- Chapter 437, Fees
- Chapter 439, Examinations for Certification
- Chapter 441, Continuing Education

These chapters do not address every issue that could impact this curriculum; therefore, you are encouraged to become familiar with the TCFP Standards Manual.

Instructor Qualifications

Hazardous Materials courses must be taught by an instructor meeting the requirements described in Chapter 427.307 of the TCFP Standards Manual.

Supplemental Information

Instructors are expected to provide supplemental information if the main reference text does not provide adequate information to ensure successful completion of the Job Performance Requirements as listed in the curriculum.

Components of the Curricula

Each section of a curriculum identifies the NFPA Job Performance Requirement (JPR) and subdivides the requisite knowledge requirements into learning components. For example:

	View within the Curriculum	Explanation
601-4.3.1	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.	Section Number and NFPA JPR
	Requisite Knowledge: Use of the ERG, SDS, shipping papers with emergency response information, and other approved reference sources to identify precautions to be taken to	Requisite Knowledge Statement

protect resp procedures denying ent for isolating	onders and the public; policies and for isolating the hazard area and ry; and the purpose of and methods the hazard area and denying entry.	
(1) Use of the emerger approve precaution responde	ne ERG, SDS, shipping papers with ncy response information, and other d reference sources to identify ons to be taken to protect ers and the public	First part of Requisite Knowledge
Identify p responde shipping informati sources Identify t a. Isolat b. Deny c. Call f d. Secu	precautions to be taken to protect ers/the public using ERG, SDS, papers with emergency response ion, other approved reference the hazard te the hazard area r entry for trained personnel re the scene	Associated learning components
(2) Policies hazard a	and procedures for isolating the area and denying entry	Second part of Requisite Knowledge
Policies a. Isolat b. Deny	and procedures, per AHJ/SOP ting the hazard area ring entry	Associated learning components
(3) And the isolating	purpose of and methods for the hazard area and denying entry	Third part of Requisite Knowledge
Purpose a. Isolat i. E ii. E b. Deny i. F	/methods ting the hazard area stablish perimeter rect barriers ring entry Restrict hazard area access to	Associated learning components

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appropriately trained personnel only ii. Maintain perimeter	
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency response	Requisite Skills Statement
Requisite Skills: Use of the ERG, SDS, shipping papers with emergency responseInstructor NoteRecommended precautions found on numbered guides in the ERG include public safety issues; recommended protective clothing; evacuation; emergency response to fire, spill, and leak; and first aid sections.Examples of required knowledge include (1) precautions for providing emergency medical 	Requisite Skills Statement
protective actions (e.g., hazardous materials/WMD involved, population threatened,	

and weather conditions).	

Unless otherwise specified, all curriculum references are to NFPA 1072. In some cases, (see, for example, 601-4.2.1), reference is also made under the section number and JPR to similar material in NFPA 472.

601-4.2.1	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 and their hazards are identified. Given a hazardous materials/WMD incident, and approved reference sources, awareness level personnel shall recognize those situations where hazardous materials/WMD are present. (472-4.2.1)	Additional reference to NFPA 472

Skills

NFPA Requisite Skill requirements are addressed in the corresponding Skill Sheets in Chapter 6 of the TCFP Curriculum Skills Manual.

Definitions of Certification Levels

Awareness Level Personnel: Personnel who, in the course of their normal duties, could encounter an emergency involving hazardous materials/weapons of mass destruction (WMD) and who are expected to recognize the presence of the hazardous materials/WMD, protect themselves, call for trained personnel, and secure the scene. These personnel have met all the performance requirements of Chapter 4 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications

Operations Level Personnel: Personnel who respond to hazardous materials/weapons of mass destruction (WMD) incidents for the purpose of implementing or supporting actions to protect nearby persons, the environment, or property from the effects of the release. These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications*

Operations-Mission Specific Competencies (MSC) Level Personnel: Responders assigned mission-specific responsibilities at hazardous materials/WMD incidents are

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those operations level responders designated by the authority having jurisdiction (AHJ) to perform additional tasks to support the AHJ's response mission, expected tasks, equipment, and training in the following areas:

- (1) Personal protection equipment (PPE)
- (2) Mass decontamination
- (3) Technical decontamination
- (4) Evidence preservation and sampling
- (5) Product control
- (6) Detection, monitoring, and public safety sampling
- (7) Victim rescue and recovery
- (8) Illicit laboratories incidents

These personnel have met all the performance requirements of Chapter 5 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications and have also met the performance requirements of the subchapter(s) of Chapter 6 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications, to which they are trained and credentialed to perform.

Note: Basic TCFP Structural Fire Fighter certification requires that Structure Fire Fighter personnel meet all performance requirements for:

- Hazardous Materials Awareness
- Hazardous Materials Operations
- Hazardous Materials Operations MSC 6.2 Personal Protective Equipment
- Hazardous Materials Operations MSC 6.6 Product Control

Technician Level Personnel: Persons who respond to hazardous materials/weapons of mass destruction (WMD) incidents using a risk-based response process by which they analyze a problem involving hazardous materials/WMD, plan a response to the problem, evaluate progress of the planned response, and assist in terminating the incident. These personnel have met all the performance requirements of Chapter 7 of NFPA 1072, Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.

Incident Commander Level Personnel: That person, designated by the AHJ, responsible for all incident activities/operations, including the development of strategies and tactics and the ordering and release of resources. These personnel have met all the performance requirements of Chapter 8 of NFPA 1072, *Standard for Hazardous Materials/Weapons of Mass Destruction Emergency Response Personnel Professional Qualifications.*

SKILLS MANUAL

CHAPTER SIX HAZARDOUS

MATERIALS

NFPA 470 2022 Edition

Effective January 1, 2025



Texas Commission on Fire Protection P.O. Box 2286 Austin, Texas 78768-2286 (512) 936-3838

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
MS 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	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
Technician	Implementing the Planned Response	7	Performing Control Functions	Overpacking Nonbulk and Radioactive Materials	11.4.3.3

DISCIPLINE	OBJECTIVE	#	SKILL NAME	FUNCTIONAL NAME	NFPA #
	Implementing the				
Technician	Planned	8	Performing Control	Liquid Product Transfer	11.4.3.4
	Response		Functions		
Technician	Implementing the	9	Decontamination	Mass Decontamination	11.4.4.1
	Implementing the				
Technician	Planned	10	Decontamination	Technical Decontamination	11.4.4.2
	Response				
нміс	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

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:

- 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:

- 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) (currented.)
- 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
- 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
 - o ICS 201 Incident Briefing Form
 - o ICS 202 Incident Objectives Worksheet
 - o ICS 203 Organization Assignment List
 - ICS 204 Division Assignment List
 - ICS 205 Communications Plan
 - o ICS 206 Medical Plan
 - o ICS 208HM Site Safety and Control Plan
 - o ICS 211 Incident Check-in List
 - ICS 213 General Message
 - o ICS 214 Unit Log
 - o ICS 215 Incident Planning Worksheet
 - o ICS 215A Incident Action Plan Safety Analysis

GENERAL

Recognition and Identification; Initiate Protective Actions; Notification Skill # 1

PERFORMANCE STANDARD

Section 601

Awareness

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 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.

GENERAL

Recognition and Identification; Initiate Protective Actions; Notification Skill #1

Candidate:_____ Date: _____

Academy:_____ Test Site: _____

HAZARDOUS MATERIALS AWARENESS	<u>TE</u>	<u>ST</u>	RETE	<u>EST</u>
Skill #1				
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.				
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), and other approved reference sources to identify hazardous materials/WMD and primary hazards. 		
 c) Identify, isolate and secure the hazard area. Recognize precautions for protecting responders and public Identify isolation areas Deny entry Avoid hazards 		
 d) Communicating in accordance with policies and procedures Policies and procedures for notification Reporting Communications 		

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet performance objective

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆

Performance Standards

General Identify Potential Hazards and Action Options Skill #1

PERFORMANCE STANDARD

NFPA 470, 2022 Edition, 7.2.1

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

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?

Section 602

Operations

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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.

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations

Performance Standards

General Identify Potential Hazards and Action Options Skill #1

Candidate:_____ Date:_____

Academy:_____ Test Site:_____

HAZARDOUS MATERIALS OPERATIONS	TE	ST	RET	EST
Skill #1	•			
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.				
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				

Performance Standards

c) Detail the actions of communicating with pipeline		
operators, carrier representatives and or responsible party.		
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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
, ,		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
, C		Pass 🛛 Fail 🗆

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Performance Standards

General Action Plan Implementation Skill #2

PERFORMANCE STANDARD

NFPA 470, 2022 Edition, 7.4.1,7.6.1

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,

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Section 602

Operations

Performance Standards

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.

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:

Performance Standards

- 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.
- 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.

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations

Performance Standards

General Action Plan Implementation Skill #2

Candidate:_____ Date:_____

Academy:_____ Test Site:_____

HAZARDOUS MATERIALS OPERATIONS		ST	RE	<u>TEST</u>
Skill #2				
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				
The candidate shall:	S	U	S	U
a) Establish and maintain scene control				

Performance Standards

b) Determine incident status		
c) Recognize and preserve evidence		

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HAZARDOUS MATERIAL OPERATIONS

EFFECTIVE JANUARY 1, 2025

Performance Standards

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		
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		
 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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
, ,		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
, ,		Pass 🗆 🛛 Fail 🗖

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HAZARDOUS MATERIAL OPERATIONS

Performance Standards

General Emergency Decontamination Skill #3

PERFORMANCE STANDARD

NFPA 470, 2022 edition, 7.5.1

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.

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Section 602

Operations

Performance Standards

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

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations

Performance Standards

General Emergency Decontamination Skill #3

Candidate:	Date:
------------	-------

Academy:_____

Test Site:_____

HAZARDOUS MATERIALS OPERATIONS		ST	<u>RET</u>	EST
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.				
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				

Performance Standards

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆

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

Performance Standards

General
Personal Protective Equipment & Product Control
Skill #4

PERFORMANCE STANDARD

Section 603

NFPA 470, 2022 Edition, 9.2.1, 9.6.1

Operations-MSC (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; 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 emergency response plan, or standard operating procedures, so that under the guidance of a Hazardous Materials Technician, 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

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

select the appropriate PPE and product control options.

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.

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations – Mission Specific Competencies

Performance Standards

- 3. Selecting and performing product control techniques to confine/contain 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.

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations – Mission Specific Competencies

Performance Standards

	General			
Personal Protec	tive Equipment & ۲۰۱۱ #۸	Product C	ontrol	
Candidate:	Date:			
Academy:	Test Site:			
HAZARDOUS MATERI OPERATIONS	ALS	TEST	RETES	
MISSION-SPECIFIC COMPETENCIES	;		L	
Skill #4				
(9.2.1) Select, don, work in, and doff approve hazardous materials/WMD incident; a specific assignment in an IAP that rec PPE; the scope of the problem; strate for the incident; access to a Hazardou Technician, an allied professional, an response plan, or standard operating approved PPE; and policies and proc under the guidance of a Hazardous M Technician, an allied professional, an response plan, or standard operating approved PPE; selected, inspected, worked in, decontaminated, and doffe and personnel are protected; safety p followed; hazards are avoided or mini maintained and stored consistent with and procedures and NFPA 1891; and documentation pertaining to PPE use	ed PPE at a jiven a mission- quires use of egies and tactics us Materials emergency procedures; edures, so that laterials emergency procedures, donned, ed; exposures rocedures are mized; PPE is a AHJ policies all reports and are completed.			
(9.6.1) Perform product control techniques w risk of personal exposure at a hazard materials/WMD incident, given a haza materials/WMD incident with release assignment in an IAP; scope of the pr and procedures; approved tools, equi agents, and PPE; and access to a Ha	rith a limited ous ardous of product; an roblem; policies pment, control uzardous			

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

Performance Standards

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.					
The candidate shall:	S	U	S	\$ <u>U</u>	
Mission Specific	PPE		()		
a) Select and use the appropriate PPE for the					
assignment					
 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 Prod	uct Contro				
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:					
cargo tanks					
intermodal tanks in transportation					
containers at fixed facilities					
c) Perform product control techniques					

TEXAS COMMISSION ON FIRE PROTECTION

Hazardous Materials Operations – Mission Specific Competencies

Performance Standards

S = Satisfactorily completed/performed

U = Unsatisfactorily performed/failed to meet performance

objective Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
, ,		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
, ,		Pass 🗆 🛛 Fail 🗆
Analyzing the IncidentDetection, Monitoring and Sampling and Hazard and Response Information Collection
and Interpretation
Skill #1

PERFORMANCE STANDARD

NFPA 1072, 2017 edition, 7.2.1, 7.2.1(B), 7.2.2, 7.2.2(B)

OBJECTIVE

7.2.1

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 a hazardous materials/WMD incident 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; personnel using the detection, monitoring, and sampling 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.

7.2.1(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 [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), 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; collect samples gases, liquids, and solids; monitoring, reading, interpreting, reporting, and communicating readings from detection, monitoring, and sampling equipment according to the manufacturers' specifications and recommendations; and

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Section 604

TECHNICIAN

completing required reports and supporting documentation for detection, monitoring, and sampling operations.

7.2.2

Collect and interpret hazard and response information at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, policies and procedures, approved reference sources, and approved tools and equipment, so that hazard and response information is collected, interpreted, and communicated.

7.2.2(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 and containers.

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 information at a hazardous materials/WMD incident.

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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:

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

Analyzing the Incident

Detection, Monitoring and Sampling and Hazard and Response Information Collection

and Interpretation

Skill #1

Candidate:_____

Date:____

Academy:

Test Site:

HAZARDOUS MATERIALS TECHNICIAN	TES	TEST		EST
Skill #1	S	U	S	U
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 a hazardous materials/WMD incident 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; personnel using the detection, monitoring, and sampling 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. (7.2.1) Selecting and using PPE: determining radiation dose rates				
from radioactive material labels; using each of the following				

types of detection, monitoring, and sampling equipment				
[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), 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; collect samples of				
gases, liquids, and solids; monitoring, reading, interpreting,				
reporting, 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.				
(7.2.1(B))				
Collect and interpret hazard and response information at a				
hazardous materials/WMD incident, given a hazardous				
materials/WMD incident, an assignment in an IAP, policies				
and procedures, approved reference sources, and approved				
tools and equipment, so that hazard and response				
information is collected, interpreted, and communicated.				
(7.2.2)				
Collecting and interpreting hazard and response information:				
identifying signs and symptoms of exposure to bazardous				
materials/WMD including target organ effects of				
exposure to hazardous materials/WMD ⁻ and determining				
radiation exposure rates from labels attached to radioactive				
materials and containers.				
(7.2.2(B))				
The candidate shall:	S	U	S	U
Using each of the following types of detection,				
monitoring and sampling equipment:				
 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 		
a) Classify hazardous materials by basic hazard		
categories or verify the presence of hazardous		
materials or determine the concentration of		
hazardous materials		
 b) Collect samples of gases, liquids, and solids 		
c) Monitor, read, interpret, report, and communicate		
readings from detection, monitoring, and sampling		
equipment according to the manufacturers'		
specifications and recommendations		
d) Determine radiation exposure rates from labels		
attached to radioactive materials and containers		
e) Identify signs and symptoms of exposure to		
hazardous materials/WMD, including target organ		
effects of exposure to hazardous materials/WMD		
f) Collect and interpret hazard and response information		
g) Select and use approved PPE		
h) 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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score

Chemical Data Worksheet

Chemical Name:				Date
Synonym/Trade Names:				DOT UN #
Physical Description:				CAS #
Molecular Formula:		Molecular Weight:		Structure:
	Physical, Chemica	al and Toxicological	Properties	1
	Source #1	Source #2	Source #3	Source #4
Reference Source				
Page #				
	Phy	sical 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				
	Che	mical Properties		
Reactivities/Incompatibilities				
Corrosively (pH)				
Fire/Spill/Release Rec.				
Other				
	Toxico	ological 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				

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Analyzing the Incident

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

PERFORMANCE STANDARD

Section 604

NFPA 1072, 2017 edition, 7.2.3, 7.2.3(B), 7.2.4, 7.2.4(B), 7.2.5, 7.2.5(B) TECHNICIAN

OBJECTIVE

7.2.3

Collect and interpret hazard and response information at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, policies and procedures, approved reference sources, and approved tools and equipment, so that hazard and response information is collected, interpreted, and communicated.

7.2.3(B)

Assessing the condition of the container and its closures, identifying the type of damage and level of risk associated with the damage, identifying stress(es) on the container and its closures and the level of risk associated with that condition.

7.2.4

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 in an IAP; 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.

7.2.4(B)

Using the process to predict likely behavior of materials and their containers when multiple materials are involved, identifying reactivity issues associated with mixing various hazardous materials, and communicating the predicted behavior.

7.2.5

Estimate the potential outcomes at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, 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

Performance Standards

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.

7.2.5(B)

Using approved resources and equipment; determining concentrations of materials within the endangered area; identifying the physical, health and safety hazards within the endangered area; identifying the areas of potential harm in the endangered area; estimating the potential outcomes in the endangered area; and communicating the potential outcomes.

INSTRUCTIONS

Given a simulated Hazardous Materials/WMD incident and approved reference sources (hard copy and electronic databases – i.e., ERG, SDS, NIOSH Pocket Guide, WISER, 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. The use of WISER or 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)

Performance Standards

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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Analyzing the Incident

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

Candidate:______

Date:_____

Academy:_____

Test Site:_____

HAZARDOUS MATERIALS TECHNICIAN	TEST		OUS MATERIALS TECHNICIAN <u>TEST</u> <u>RETE</u>		EST
Skill #2	S	U	S	U	
Collect and interpret hazard and response information at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, policies and procedures, approved reference sources, and approved tools and equipment, so that hazard and response information is collected, interpreted, and communicated. (7.2.3)					
Assessing the condition of the container and its closures, identifying the type of damage and level of risk associated with the damage, identifying stress(es) on the container and its closures and the level of risk associated with that condition. (7.2.3(B))					
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 in an IAP; 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. (7.2.4)					

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Performance Standards

Using the process to predict likely behavior of materials and their containers when multiple materials are involved, identifying reactivity issues associated with mixing various hazardous materials, and communicating the predicted behavior. (7.2.4(B)) Estimate the potential outcomes at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, 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. (7.2.5)				
Using approved resources and equipment; determining concentrations of materials within the endangered area; identifying the physical, health and safety hazards within the endangered area; identifying the areas of potential harm in the endangered area; estimating the potential outcomes in the endangered area; and communicating the potential outcomes. (7.2.5(B))				
The candidate shall:	S	U	S	U
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) Identify stress(es) on the container and its closures and the level of risk associated with that condition 				
 d) Use the process 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				

Performance Standards

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		
 Communicate the potential outcomes 		

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
<i>,</i> , ,		Pass 🗆 🛛 Fail 🗆

Technician Container Identification Worksheet

	RAILCAR TANK							
	Container Name	Container Capacity	Common Materials	Common Hazard Classes				
1								
2								
3								
4								
5								
		INTERMOD	AL TANK					
	Container Name/Spec.	Container Capacity	Common Materials	Common Hazard Classes				
1								
2								
3								
4								
5								
		HIGHWAY CA	RGO TANK					
	Container Name/Spec.	Container Capacity	Common Materials	Common Hazard Classes				
1								
2								
3								
4								
5								
6								
7								
		NON-BULK CONTAI	NER PACKAGING					
	Container Name	Container Capacity	Common Materials	Common Hazard Classes				
1								
2								
3								
4								
5								
	Ir	ntermediate Bulk Contai	ners & Ton Containers					
	Container	r Name	Туріс	al Contents				
1								
2								
3								
		FIXED FACILITY ST	TORAGE TANK					
	Container	r Name	Туріс	al Contents				
1								
2								
3								
	RADIOACTIVE MATERIAL PACKAGING							
	Container	r Name	Туріс	al Contents				
1								
2								
3								
4								
5								

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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 1072, 2017 edition, 7.3.1, 7.3.1(B), 7.3.3, 7.3.3(B), 7.3.4, 7.3.4(B), 7.5.1, 7.5.1(B)

OBJECTIVE

7.3.1

Develop and recommend to the incident commander or hazardous materials officer response objectives and action options at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; 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 response objectives are identified for the incident and action options are identified for each response objective.

7.3.1(B)

Developing response objectives for a hazardous materials incident and identifying action options for each response objective.

7.3.3

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

7.3.3(B)

Selecting decontamination procedures (operations and methods) and identifying the equipment required to implement decontamination procedure (operations and methods).

7.3.4

Develop a plan of action for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, results of the incident analysis, response objectives and options for the given incident, available resources, and policies and procedures, so that the tasks and resources required to meet the response objectives are identified, specified response objectives and response options are

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TECHNICIAN

Performance Standards

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.

7.3.4(B)

Preparing an action plan, identifying site safety and control components, identifying points for a safety briefing, identifying pre-entry tasks, identifying atmospheric and physical safety hazards when incident involves a confined space, and preserving and collecting legal evidence.

7.5.1

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

7.5.1(B)

Comparing predicted behavior of the material and its container to the actual behavior, determining effectiveness of response options and actions, communicating the status of response options and actions, and modifying the response options and actions based on the incident status review.

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 (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

Performance Standards

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

- <u>Scenario A</u>: A transportation emergency involving a chemical or flammable material release.
- <u>Scenario B</u>: A fixed facility emergency involving a chemical or flammable material release.
- <u>Scenario C</u>: 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 WISER or 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 preparedworksheet.
- 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
 - Wireless Information System for Emergency Responders (WISER), Computer Aided Management of Emergency Operations (CAMEO), etc.
 - Safety data sheet(s) (SDS)
 - 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

Performance Standards

- ICS 204 Division Assignment List
- ICS 205 Communications Plan
- ICS 206 Medical Plan
- ICS 208 HM Site Safety and Control Plan

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:_____

Academy:_____

Test Site:_____

Date:_____

HAZARDOUS MATERIALS TECHNICIAN		<u>TEST</u>		<u>EST</u>
Skill #3	S	U	S	U
Develop and recommend to the incident commander or hazardous materials officer response objectives and action options at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; 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 response objectives are identified for the incident and action options are identified for each response objective. (7.3.1)				
Developing response objectives for a hazardous materials incident and identifying action options for each response objective. (7.3.1(B))				
Select the decontamination method for a given response option at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, response objectives and options for the incident, available resources, and policies and procedures, so that a decontamination method to minimize the hazards for each response option is identified and the equipment required to implement the decontamination method is identified. (7.3.3)				
Selecting decontamination procedures (operations and methods) and identifying the equipment required to implement decontamination procedure (operations and methods). (7.3.3(B))				

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Performance Standards

Develop a plan of action for a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an				
assignment in an IAP, results of the incident analysis, response objectives and options for the given incident,				
available resources, and policies and procedures, so that the				
objectives are identified, specified response objectives and				
response options are addressed, plan is consistent with the				
plan is within the capability of available personnel, PPE, and control equipment. (7.3.4)				
Dreparing on action plan, identifying aits safety and control				
components, identifying points for a safety briefing, identifying pre-entry tasks, identifying atmospheric and				
physical safety hazards when incident involves a confined space, and preserving and collecting legal evidence.				
(7.3.4(B))				
Evaluate and report the progress of assigned tasks at a				
materials/WMD incident, an assignment in an IAP, current				
incident conditions, response options and actions taken, and approved communication equipment, so that the actual				
behavior of material and container is compared to that				
predicted, the effectiveness of response options and actions in accomplishing response objectives is determined				
modifications to the response options and actions are made,				
and the results are communicated. (7.5.1)				
Comparing predicted behavior of the material and its				
of response options and actions, communicating the status				
of response options and actions, and modifying the				
review.				
(7.5.1(B))	6		6	
a) Develop response objectives for a homordove	3	U	Э	U
a) Develop response objectives for a nazardous materials incident				
b) Identify action options for each response objective				

Performance Standards

methods)		
d) Identify the equipment required to implement		
decontamination procedure (operations and methods)		
e) Prepare an action plan		
f) Identify site safety and control components		
g) Identify points for a safety briefing		
h) Identify pre-entry tasks		
i) Identify atmospheric and physical safety hazards		
when incident involves a confined space		
 j) Preserve and collect legal evidence 		
k) Compare predicted behavior of the material and its		
container to the actual behavior		
I) Determine effectiveness of response options and		
actions		
m) Communicate the status of response options and		
actions		
n) Modify the response options and actions based on		
the incident status review		

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

HazMat Technician #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	CHANGE	CHANGE	CHANGE	CHANGE	CHANGE
APPLIED	BREACH	QUANTITY	DANGER	EXPOSURES	SEVERITY
STRESSES	SIZE	RELEASE	ZONE SIZE	CONTACTED	OF HARM

RESPONSE OPTIONS AND SAFETY CONSIDERATIONS

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Response Planning

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

PERFORMANCE STANDARD

Section 604

TECHNICIAN

NFPA 1072, 2017 edition, 7.3.2, 7.3.2(B), 7.4.2, 7.4.2(B)

OBJECTIVE

7.3.2

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

7.3.2(B)

Selecting PPE ensembles for a specified response option based on all hazards identified and determining the effectiveness of protective clothing based in its uses and limitations.

7.4.2

Don, work in, and doff PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, policies and procedures, results of the incident analysis, response objectives and options for the incident, and PPE ensembles as identified in the IAP, so that PPE is selected, 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.

7.4.2(B)

Inspecting, donning, working in, going through technical decontamination while wearing PPE; and completing required reports and supporting documents for the use of PPE.

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

Performance Standards

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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Response Planning

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

Candidate:_____

Date:_____

Academy:_____

Test Site:_____

HAZARDOUS MATERIALS TECHNICIAN		<u>TEST</u>		<u>RETEST</u>	
Skill #4	S	U	S	U	
Select the PPE ensemble required for a given response option at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, results of the incident analysis, response objectives and options for the incident, approved references, and policies and procedures, so that required PPE is identified for each response option.					
(7.3.2)					
Selecting PPE ensembles for a specified response option based on all hazards identified and determining the effectiveness of protective clothing based in its uses and limitations. (7.3.2(B))					
Don, work in, and doff PPE at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, policies and procedures, results of the incident analysis, response objectives and options for the incident, and PPE ensembles as identified in the IAP, so that PPE is selected, 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. (7.4.2)					
Inspecting, donning, working in, going through technical decontamination while wearing PPE; and completing required reports and supporting documents for the use of PPE.					

Performance Standards

(7.4.2(B))				
The candidate shall:	S	U	S	U
a) Select approved PPE ensembles for a specified				
response option based on all hazards identified				
b) Determine the effectiveness of protective clothing				
based in its uses and limitations				
c) Inspect, don, work in and go through technical				
decontamination while wearing approved PPE				
d) Complete required reports and supporting documents				
for the use of PPE				

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆

```
Name:_____
```

Chemical Protective Clothing Date:_____ Selection Worksheet

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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Action Plan Implementation

Performing Assigned IMS/ICS Duties and Terminating the Incident **Skill #5**

PERFORMANCE STANDARD

Section 604

TECHNICIAN

NFPA 1072, 2017 edition, 7.4.1, 7.4.1(B), 7.6.1, 7.6.1(B)

OBJECTIVE

7.4.1

Perform assigned hazardous materials branch or group functions within the incident command system (ICS) at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; 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.

7.4.1(B)

Performing the duties and responsibilities of an assigned function in the hazardous materials branch or a group organization; and communicating observations to hazardous materials branch director/group supervisor, ICS operations section chief, or IC.

7.6.1

Terminate a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, 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.

7.6.1(B)

Communicating operational observations (incident information) at debriefings and critiques; and completing, forwarding, and filing required reports, records, and supporting documentation.

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.

Performance Standards

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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Action Plan Implementation

Performing Assigned IMS/ICS Duties and Terminating the Incident Skill #5

Candidate:_____ Date:_____

Academy:_____ Test Site:_____

HAZARDOUS MATERIALS TECHNICIAN		<u>TEST</u>		<u>RETEST</u>	
Skill #5	S	U	S	U	
Perform assigned hazardous materials branch or group functions within the incident command system (ICS) at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; 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. (7.4.1)					
Performing the duties and responsibilities of an assigned function in the hazardous materials branch or a group organization; and communicating observations to hazardous materials branch director/group supervisor, ICS operations section chief, or IC. (7.4.1(B))					
Terminate a hazardous materials/WMD incident, given a hazardous materials/WMD incident, an assignment in an IAP, 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. (7.6.1)					
Communicating operational observations (incident information) at debriefings and critiques; and completing,					

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Performance Standards

forwarding, and filing required reports, records, and				
supporting documentation.				
(7.6.1(B))				
The candidate shall:	S	U	S	U
a) Perform the duties and responsibilities of an assigned				
function in the hazardous materials branch or a group				
organization				
b) Communicate observations to the hazardous				
materials branch director/group supervisor, ICS				
operations section chief, or IC				
c) Communicate operational observations (incident				
information) at debriefings and critiques				
d) Complete, forward, and file required reports, records,				
and supporting documentation				

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
, C		Pass 🛛 Fail 🗆

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Incident Command Worksheet

Date:	
Incident Name:	
Incident Address/Location:	
Incident Command Post Location:	
Staging Area Location:	
Dispatch Time:	
On-Scene Time:	
Controlled:	
Extinguishment:	

Incident Commander(s)			
Name	Date/Time		

		Scene Sketch	
1st Alarm		Side C	
Unit			
Engine			
Engine			
Ladder			
EMS			
2nd Alarm			
	Side B		Side D
3rd Alarm			
Mutual Aid			
Dept Resource			
		Side A	

Assignments					
Division/Group	Division/Group	Division/Group	Division/Group	Division/Group	Division/Group

Incident Command Worksheet

Summary of Resources							
	Resource Ordered	Resource ID	ETA	OS	# of Personnel	Location	Released
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							
26							
27							
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29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Response Objectives
Life Safety
Incident Stabilization
Environmental Protection
Property Preservation

Tactical Priorities	
Rescue	
Exposures	
Confinement	
Extinguishment	
Overhaul	
Ventilation	
Salvage	

8 Step Hazmat Mgmt Process
Site Management & Control
Identify the Material Involved
Identify the Hazards and Risks
Select Proper PPE/CPC
Coordinate Info & Resources
Develop & Implement Objs
Decontamination
Termination Activities



Incident Command Worksheet

Summary of Actions					
	Time/Date	Activity			
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
INCIDENT BRIEFING	1. IN(CIDENT NAME	2. DATE PREPARED	3. TIME PREPARED	
-----------------------------------	--------	---------------	---------------------	---------------------	
		4. MAP SKETCH			
ICS 201 (12/93) NFES 1325 PAGE	1	5. PREPARED B	Y (NAME AND POSIT	TON)	

6. SUMMARY OF CURRENT ACTIONS
ICS 201 (12/93) NFES 1325 PAGE 2



	8. RES	OURCE	S SUMMA	RY
RESOURCES ORDERED	RESOURCES IDENTIFICATION	ETA	ON SCENE √	LOCATION/ASSIGNMENT
			ı 	
			I 	
			- 	
			<u> </u> 	
ICS 201 (12/93)	PAGE 4			

					221
	INCIDENT OBJECTIVES	5	1. INCIDENT NAME	2. DATE PREPARED	3.TIME PREPARED
4. OPE	RATIONAL PERIOD (DATE/TIME)				
5. GEN	ERAL CONTROL OBJECTIVES FOR THE INCIDENT	(INCLUDE	ALTERNATIVES)		
6. WEA	THER FORECAST FOR OPERATIONAL PERIOD				
7. GEN	ERAL SAFETY MESSAGE				
8. ATTA	ACHMENTS (IF ATTACHED)			_	
$\begin{bmatrix} 0\\0\\0 \end{bmatrix}$	ORGANIZATION LIST {ICS 203)0ASSIGNMENT LIST (ICS 204)0COMMUNICATIONS PLAN {ICS 205)0	MEDICA INCIDEN TRAFFIC	L PLAN {ICS 206) IT MAP C PLAN		
9. PREI	PARED BY (PLANNING SECTION CHIEF)	10.	APPROVED BY (INCIDENT	COMMANDER)	

ORGANIZATION ASSIGNMENT LIST

1. INCIDENT NAME

2. DATEPREPARED

POSITION	NAME	4. OPERATIONAL PERIOD (DATE/TIME)	
-5. INCIDENT COMMANDER AND STAFF	-	9. OPERATIONS SECTION	
INCIDENTCOMMANDER		CHIEF	
DEPUTY		DEPUTY	
SAFTEY OFFICER		a. BRANCH I- DIVISION/GROUPS	
INFORMATION OFFICER		BRANCH DIRECTOR	
LIAISON OFFICER		DEPUTY	
		DIVISION/GROUP	
6. AGENCY REPRESENTATIVES		DIVISION/GROUP	
AGENCY NAME		DIVISION/GROUP	
		DIVISION/GROUP	
		DIVISION/GROUP	
		b. BRANCH II- DIVISION/GROUPS	1
		BRANCH DIRECTOR	
		DEPUTY	
		DIVISION/GROUP	
		DIVISION/GROUP	
7. PLANNING SECTION		DIVISION/GROUP	
CHIEF			
DEPUTY			
RESOURCES UNIT			
SITUATION UNIT		C BRANCH III- DIVISION/GROUPS	
DOCUMENTATION UNIT		BRANCH DIRECTOR	
DEMOBILIZATION UNIT		DEPUTY	
TECHNICAL SPECIALISTS		DIVISION/GROUP	
		d. AIR OPERATIONS BRANCH	
8. LOGISTICS SECTION		AIR OPERATIONS BR. DIR.	
CHIEF			
DEPUTY		AIR SUPPORT GROUP SUP	
_		HELICOPTER COORDINATOR	
		AIR TANKER/FIXED WING CRD.	
FACILITIES UNIT		10. FINANCE/ADMINISTRATION SECTION	γ
GROUND SUPPORT UNIT		CHIEF	
	1	DEPUTY	
		TIME UNIT	
		PROCUREMENT UNIT	
		COMPENSATION/CLAIMS UNIT	
		COST UNIT	
		-	
PREPARED BY (RESOURCES UNIT)			

								223	3
1. BRANCH	2. DIVISI	ON/GROUP		A	SSIG	NMEN	T LIS	T	
3. INCIDENT NAME			4. OPE	RATIONAL P	ERIOD				
		DATETIME							_
		5. OP	ERATION	AL PERSON	NEL				
OPERATIONS CHIEF		DIVISION/GROUP SUPERVISOR							
BRANCH DIRECTOR			AIF	R TACTICAL (GROUPSUF	PERVISOR			
		6 RESOU	RCES AS	SIGNED THIS		-			
	,	0. 1(2000)							
STRIKE TEAM/TASK FORCE	EMT	LEADEF	२	NUMBER PERSONS	TRANS. NEEDED	PICKUP PT./TIME	DF PT	ROP OFF ./TIME	-
	-								
	+								
7. CONTROL OPERATIONS									
8. SPECIAL INSTRUCTIONS									
		9. DIVISION/GRO			NS SUMMA	ARY			
FUNCTION FREQ.	S	;YSTEM	CHAN.	FUNCTION		EQ.	SYSTEM		CHAN.
COMMAND REPEAT				SUPPORT RE	EPEAT				
				GROUND					
PREPARED BY (RESOURCE	UNIT LE/	ADER) APPR	NOVED B	Y (PLANNING	SECT. CH	.) DATE		TIME	
		,		x		,			

					224					
INCIDENT RADIO COMMUNICATIONS PLAN			1. INCIDENT NAME	2. DATE/TIME PREPARED	3. OPERATIONAL PERIOD DATE/TIME					
4. BASE RADIO CHANNEL UTILIZATION										
SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY/TONE	ASSIGNMENT	REMARKS					
					-					
					-					
					-					
5. PREPARED BY (COMMUNICATIONS	UNIT)									

								22	5
MEDICAL PLAN	1. INCIDENT N	AME	2. DATE PREPAR	3. TII ED Pf	ME REPARED	4. OPERAT	IONAL PERIOD		
		5. INCIDENT MEDICA	L AID STATIO	NS					
							P	ARAME	DICS
MEDICAL AID STATIONS			LOCATIO	N			YES		NO
		6. TRANSPOR	RTATION						
		A. AMBULANCE	E SERVICES						
							PA	RAME	DICS
NAME			ADDRESS			PHONE	YES	3	NO
		B. INCIDENT AME	BULANCES						
							PA	RAME	DICS
NAME			LOCA	LOCATION YES NO					
		7. HOSP	ITALS		r				
NAME	А	DDRESS	TRAVE	L TIME	PHON	HELI E	PAD	BURN	CENTER
			AIR	GANO	-	YES	NO	YES	NO
							l		1
							1		
		8. MEDICAL EMERGE		URES		1		1	
206 res 8/78 ^{9.} PRE	PARED BY (MED	DICAL UNIT LEADER)	1	10. rev	VIEWED BY	(SAFETY O	FFICER)		

SITE SAFETY AND CONTROL PLAN ICS 208 HM	1. Inciden	Int Name: 2. Date Prepared: 3. Op Time			3. Operational Period: Time:									
1 Incident Location:			Sect	ion I. Si	te Inform	nation								
4. Incluent Location.														
5 1 1 1 0		Section II. Organization												
5. Incident Commander:		6.	HM Gro	up Superv	isor:			7. le	ch. Spe	cialist - H	M Refei	rence:		
8. Safety Officer:		9.	9. Entry Leader: 10. Site Access Cor					Control L	_eader:					
11. Asst. Safety Officer - HM:		12. [Decontar	nination L	eader:			13. Saf	e Refuge	e Area Mo	gr:			
14. Environmental Health:		15.						16.						
17. Entry Team: (Buddy System)		1			18. Decc	ontaminat	ion Ele	ment:						
Name:			PPE L	.evel				Na	me:		Р	PPE Level		
Entry 1					Decon 1									
Entry 2					Decon 2									
Entry 3					Decon 3									
Entry 4					Decon 4									
		5	Section	III. Haz	ard/Risk	Analysi	s		1	· · · · ·	1			
19. Material:	Cont ty	tainer pe	Qty.	Phys. State	pH	IDLH	F.P.	I.T.	V.P.	V.D.	S.G.	LEL	UEL	
					_	ļ								
					_									
					_									
Comment [.]														
			Section	n IV. Ha	zard Mo	nitoring								
20. LEL Instrument(s):					21. O₂ In:	strument((s):							
22. Toxicity/PPM Instrument(s):					23. Radiological Instrument(s):									
Comment:					1									
		Secti			inction F									
24 Standard Decontamination Proc	edures.	Secti	on v. D	econtam	ination F	roceau	res			VES.		NO		
										160.		NO.		
		S	Section	VI. Site	Commu	nication	s							
25. Command Frequency:		26.	Tactical F	- requency	:			27. Ent	ry Frequ	ency:				
		:	Section	VII. Me	dical As	sistance)							
28. Medical Monitoring:	YES:	NO:		29. Med	ical Treatm	nent and ⁻	Transpo	ort In-pla	ace:		YES:	NC	D:	
Comment:														

			227
Sectio	NVIII. Site Map		
30. Site Map:			
			Ť
Weather 🗅 Command Post 🖵 Zones 🖵 As	sembly Areas 📮 Escape Routes	s 🖵 Other	
Weather Command Post Zones As	sembly Areas Escape Routes Entry Objectives	s 🖵 Other	
Weather Command Post Zones As Section IX 31. Entry Objectives:	sembly Areas	s 🖬 Other	
Weather Command Post Zones As Section IX 31. Entry Objectives:	sembly Areas 🖬 Escape Routes . Entry Objectives	s 🖬 Other	<u> </u>
Weather Command Post Zones As Section IX 31. Entry Objectives:	sembly Areas	s 🖬 Other	<u> </u>
Weather Command Post Zones As Section IX 31. Entry Objectives:	sembly Areas 🖵 Escape Routes . Entry Objectives	s 🖵 Other	
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S	sembly Areas Escape Routes Temporal Escape Routes Tempora Escape Routes Temporal Escape Routes Temporal Escape Ro	s 🖬 Other	
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices:	sembly Areas Escape Routes Entry Objectives Ind Safe Work Practices	s 🖬 Other	NO:
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Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment:	sembly Areas Escape Routes Tentry Objectives Ind Safe Work Practices	s 🖬 Other	NO:
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Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment:	sembly Areas Escape Routes Tentry Objectives Ind Safe Work Practices	s 🖬 Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. Entry	sembly Areas Escape Routes Temporal Escape Routes Tempora Escape Routes Temporal Escape Routes Temporal Escape Ro	S Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. E 33. Emergency Procedures:	Sembly Areas Escape Routes The Secape Routes Th	s D Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. E 33. Emergency Procedures:	Sembly Areas Escape Routes Tentry Objectives and Safe Work Practices mergency Procedures	S Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. Section XI. Same gency Procedures:	Sembly Areas Escape Routes Tentry Objectives Ind Safe Work Practices mergency Procedures	s D Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. E 33. Emergency Procedures:	Sembly Areas Escape Routes Tentry Objectives and Safe Work Practices mergency Procedures	S Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. E 33. Emergency Procedures:	Sembly Areas Escape Routes Entry Objectives Ind Safe Work Practices mergency Procedures	s D Other	NO:
Weather Command Post Zones As Section IX Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. Section XI. 33. Emergency Procedures: Section XI. 34. Asst. Safety Officer - HM Signature: Section XI.	Safety Briefing Completed (Time):	s D Other	NO:
Weather Command Post Zones As Section IX Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Comment: Section XI. E 33. Emergency Procedures: Section XI. E 34. Asst. Safety Officer - HM Signature: Section X	sembly Areas Escape Routes Entry Objectives mod Safe Work Practices mergency Procedures I. Safety Briefing Safety Briefing Completed (Time):	s D Other	NO:
Weather Command Post Zones As Section IX 31. Entry Objectives: Section X. SOP S 32. Modifications to Documented SOP s or Work Practices: Comment: Section XI. 33. Emergency Procedures: Section X Section XI. Section XI. Section XI. 34. Asst. Safety Officer - HM Signature: 35. HM Group Supervisor Signature:	Sembly Areas Escape Routes Entry Objectives and Safe Work Practices mergency Procedures I. Safety Briefing Safety Briefing Completed (Time): 36. Incident Commander Signature:	S Other	□ NO:

INSTRUCTIONS FOR COMPLETING THE SITE SAFETY AND CONTROL PLAN ICS 208 HM

A Site Safety and Control Plan must be completed by the Hazardous Materials Group Supervisor and reviewed by all within the Hazardous Materials Group prior to operations commencing within the Exclusion Zone.

Item Number	Item Title	Instructions
1.	Incident Name/Number	Print name and/or incident number.
2.	Date and Time	Enter date and time prepared.
3.	Operational Period	Enter the time interval for which the form applies.
4.	Incident Location	Enter the address and or map coordinates of the incident.
5 - 16.	Organization	Enter names of all individuals assigned to ICS positions. (Entries 5 & 8 mandatory). Use Boxes 15 and 16 for other functions: i.e., Medical Monitoring.
17 - 18.	Entry Team/Decon Element	Enter names and level of PPE of Entry & Decon personnel. (Entries 1 - 4 mandatory buddy system and back-up.)
19.	Material	Enter names and pertinent information of all known chemical products. Enter UNK if material is not known. Include any which apply to chemical properties. (Definitions: ph = Potential forHydrogen (Corrosivity), IDLH = Immediately Dangerous to Life and Health, F.P. = Flash Point, I.T. = Ignition Temperature, V.P. = Vapor Pressure, V.D. = Vapor Density, S.G. = Specific Gravity, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit)
20 - 23.	Hazard Monitoring	List the instruments which will be used to monitor for chemical.
24.	Decontamination Procedures	Check NO if modifications are made to standard decontamination procedures and make appropriate Comments including type of solutions.
25 - 27.	Site Communications	Enter the radio frequency(ies) which apply.
28 - 29.	Medical Assistance	Enter comments if NO is checked.
30.	Site Map	Sketch or attach a site map which defines all locations and layouts of operational zones. (Check boxes are mandatory to be identified.)
31.	Entry Objectives	List all objectives to be performed by the Entry Team in the Exclusion Zone and any parameters which will alter or stop entry operations.
32 - 33.	SOP s, Safe Work Practices, and Emergency Procedures	List in Comments if any modifications to SOP s and any emergency procedures which will be affected if an emergency occurs while personnel are within the Exclusion Zone.
34 - 36.	Safety Briefing	Have the appropriate individual place their signature in the box once the Site Safety and Control Plan is reviewed. Note the time in box 34 when the safety briefing has been completed.

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Performing Control Functions

Product Control and Controlling Container Leaks Skill #6

PERFORMANCE STANDARD

Section 604

NFPA 1072, 2017 edition, 7.4.3.1, 7.4.3.1(B), 7.4.3.2, 7.4.3.2(B)

TECHNICIAN

OBJECTIVE

7.4.3.1

Perform product control techniques at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product, an assignment in an IAP, results of the incident analysis, policies and procedures for product control, response objectives and options 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.

7.4.3.1(B)

Selecting and using PPE, selecting, and using approved control agents and equipment on a release involving hazardous materials/WMD, using container control valves and remote emergency shutoff devices, performing product and control techniques, inspecting, and maintaining tools and equipment; and completing required and supporting documentation for product control operations.

7.4.3.2

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 in an IAP; 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.

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Performance Standards

7.2.3.2(B)

Selecting and using PPE, selecting, and using approved control agents and equipment; controlling leaks on containers and their closures (patching, plugging, sealing closures, remote valve shutoff, closing valves, repositioning container; replacing missing plugs, and tightening loose fittings); decontaminating tools and equipment; inspecting and maintaining tools and equipment; and requirements for reporting and documenting product control operations.

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 <u>bulk or non-bulk</u> pressure container or its closures
- Scenario B a leak from a non-bulk liquid container or its closures
- Scenario C a leak from a <u>bulk</u> 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 WISER or CAMEO on their personal electronic device (cell phone or tablet) or provided electronic equipment is also acceptable.

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Performance Standards

The candidate may provide a written or verbal response, per the direction of th 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
- 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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Performing Control Functions

Product Control and Controlling Container Leaks Skill #6

Candidate:_____

Date:_____

Academy:_____

Test Site:_____

HAZARDOUS MATERIALS TECHNICIAN	<u>TE</u>	<u>ST</u>	<u>RET</u>	<u>EST</u>
Skill #6	S	U	s	U
Perform product control techniques at a hazardous materials/WMD incident, given a hazardous materials/WMD incident with release of product, an assignment in an IAP, results of the incident analysis, policies and procedures for product control, response objectives and options 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. (7.4.3.1)				
Selecting and using PPE, selecting, and using approved control agents and equipment on a release involving hazardous materials/WMD, using container control valves and remote emergency shutoff devices, performing product and control techniques, inspecting, and maintaining tools and equipment; and completing required and supporting documentation for product control operations. (7.4.3.1(B))				
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 in an IAP; results of				

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Performance Standards

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. (7.4.3.2)				
Selecting and using PPE, selecting, and using approved control agents and equipment; controlling leaks on containers and their closures (patching, plugging, sealing closures, remote valve shutoff, closing valves, repositioning container; replacing missing plugs, and tightening loose fittings); decontaminating tools and equipment; inspecting and maintaining tools and equipment; and requirements for reporting and documenting product control operations. (7.2.3.2(B))				
The candidate shall:	S	U	S	U
 a) Select and use approved PPE, control agents and equipment on a release involving hazardous materials/WMD 				
b) Inspect tools and equipment				
c) Use container control valves and remote emergency				
c) Use container control valves and remote emergency shutoff devices				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging Sealing closures Demote valve shuteff 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging Sealing closures Remote valve shutoff 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging Sealing closures Remote valve shutoff Closing valves Papositioning container 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging Sealing closures Remote valve shutoff Closing valves Repositioning container Replacing missing plugs 				
 c) Use container control valves and remote emergency shutoff devices d) Perform product and control techniques e) Control leaks on containers and their closures, using the following techniques: Patching Plugging Sealing closures Remote valve shutoff Closing valves Repositioning container Replacing missing plugs f) Tightening loose fittings 				

Performance Standards

h) Inspect and maintain tools and equipment		
i) Complete and demonstrate knowledge of		
requirements for reporting and documenting product		
control operations		

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
- 0		Pass 🗆 🛛 Fail 🗆

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Performing Control Functions

Overpacking Nonbulk and Radioactive Materials Skill #7

PERFORMANCE STANDARD

Section 604

NFPA 1072, 2017 edition, 7.4.3.3, 7.4.3.3(B)

OBJECTIVE

7.4.3.3

Overpack damaged or leaking nonbulk and radioactive materials containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; 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.

7.4.3.3(B)

Selecting and using PPE; placing a damaged or leaking nonbulk materials container into the overpack container; placing a damaged or leaking radioactive materials container into an overpack container; following safety procedures and minimizing and avoiding hazards; decontaminating tools and equipment; inspecting and maintaining tools and equipment; and completing requirements for reporting and documenting product control operations.

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?

TECHNICIAN

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Performance Standards

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
- Radiological detection equipment

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Performing Control Functions

Overpacking Nonbulk and Radioactive Materials Skill #7

Candidate:_____

Date:____

Academy:

Test Site:

HAZARDOUS MATERIALS TECHNICIAN		ST	RET	EST
Skill #7	S	U	S	U
Overpack damaged or leaking nonbulk and radioactive materials containers at a hazardous materials/WMD incident, given a hazardous materials/WMD incident; an assignment in an IAP; 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. (7.4.3.3)				
Selecting and using PPE; placing a damaged or leaking nonbulk materials container into the overpack container; placing a damaged or leaking radioactive materials container into an overpack container; following safety procedures and minimizing and avoiding hazards; decontaminating tools and equipment; inspecting and maintaining tools and equipment; and completing requirements for reporting and documenting product control operations. (7.4.3.3(B))				
The candidate shall:	S	U	S	U
a) Select and use approved PPE				
b) <u>Scenario A</u> - Place a damaged or leaking nonbulk				
materials container into the overpack container Scenario B - Scenario Place a damaged or leaking				

Performance Standards

radioactive materials container into an overpack container		
 c) Follow safety procedures and minimizing and avoiding hazards 		
d) Decontaminate tools and equipment		
e) Complete requirements for reporting and documenting product control operations		

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	_
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	-
		Pass 🗆 🛛 Fail 🗆

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Performing Control Functions Liquid Product Transfer Skill #8

PERFORMANCE STANDARD

Section 604

NFPA 1072, 2017 edition, 7.4.3.4, 7.4.3.4(B)

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 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, 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.

7.4.3.4(B)

Selecting and using PPE; identifying a compatible recovery container and transfer equipment; monitoring for hazards; grounding and bonding containers; transferring liquid product from a leaking container to a recovery container; suppressing vapors; decontaminating tools and equipment; inspecting and maintaining tools and equipment; and completing reports and supporting documentation for product control operations.

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.

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TECHNICIAN

Performance Standards

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 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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Performing Control Functions

Liquid Product Transfer

Skill #8

Candidate:_____

Date:____

Academy:

Test Site:

HAZARDOUS MATERIALS TECHNICIAN		ST	RET	EST
Skill #8	S	U	S	U
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, 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. (7.4.3.4)				
Selecting and using PPE; identifying a compatible recovery container and transfer equipment; monitoring for hazards; grounding and bonding containers; transferring liquid product from a leaking container to a recovery container; suppressing vapors; and completing reports and supporting documentation for product control operations. (7.4.3.4(B))				
The candidate shall:	S	U	S	U
a) Select and use approved PPE				
 b) Identify a compatible recovery container and transfer equipment 				
c) Monitor for hazards				

Performance Standards

d) Ground and bond containers		
e) Transfer liquid product from a leaking container to a		
recovery container		
f) Suppress vapors		
g) Complete reports and supporting documentation for		
product control operations		

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
, ,		Pass 🛛 Fail 🗆

AZARDOUS MATERIALS TECHNICI

Performance Standards

Decontamination

Mass Decontamination

Skill #9

PERFORMANCE STANDARD

Section 604

NFPA 1072, 2017 edition, 7.4.4.1, 7.4.4.1(B)

OBJECTIVE

7.4.4.1

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.

7.4.4.1(B)

Selecting and using suitable PPE, selecting a mass decontamination procedure to minimize the hazard, setting up and implementing mass decontamination operations for ambulatory and non-ambulatory victims, evaluating the effectiveness of the mass decontamination process, and completing reporting and documentation requirements.

INSTRUCTIONS

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 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?

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TECHNICIAN

Performance Standards

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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Decontamination

Mass Decontamination Skill #9

Candidate:_____

Date:____

Academy:

Test Site:

HAZARDOUS MATERIALS TECHNICIAN		<u>ST</u>	RET	<u>EST</u>
Skill #9	S	U	S	U
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. (7.4.4.1)				
decontamination procedure to minimize the hazard, setting up and implementing mass decontamination operations for ambulatory and non-ambulatory victims, evaluating the effectiveness of the mass decontamination process, and completing reporting and documentation requirements. (7.4.4.1(B))				
The candidate shall:	s	U	S	U
a) Select and use suitable PPE				
 b) Select a mass decontamination procedure to minimize the hazard c) Set up and implement mass decontamination 				
d) Evaluate the effectiveness of the mass				
decontamination process				

Performance Standards

e) Complete reporting and documentation requirements
--

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆

Performance Standards

Decontamination Technical Decontamination Skill #10

PERFORMANCE STANDARD

Section 604

TECHNICIAN

NFPA 1072, 2017 edition, 7.4.4.2, 7.4.4.2(B)

OBJECTIVE

7.4.4.2

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 in an IAP; results of the incident analysis; policies and procedures; 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; and all reports and documentation of technical decontamination operations are completed.

7.4.4.2(B)

Selecting and using PPE, selecting a technical decontamination procedure to minimize the hazard, setting up and implementing technical decontamination operations, evaluating the effectiveness of the technical decontamination procedure, and completing required reports and supporting documentation for technical decontamination operations.

INSTRUCTIONS

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.

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Performance Standards

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

HAZARDOUS MATERIALS TECHNICIAN

Performance Standards

Decontamination

Technical Decontamination

Skill #10

Candidate:_____

Date:____

Academy:

Test Site:

HAZARDOUS MATERIALS TECHNICIAN		<u>TEST</u>		RETEST	
Skill #10	S	U	S	U	
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 in an IAP; results of the incident analysis; policies and procedures; 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; and all reports and documentation of technical decontamination operations are completed. (7.4.4.2)					
Selecting and using PPE, selecting a technical decontamination procedure to minimize the hazard, setting up and implementing technical decontamination operations, evaluating the effectiveness of the technical decontamination procedure, and completing required reports and supporting documentation for technical decontamination operations. (7.4.4.2(B))					
The candidate shall:	S	U	S	U	
a) Select and use approved PPE					
b) Select a technical decontamination procedure to minimize the hazard					
c) Set up and implement technical decontamination					

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HAZARDOUS MATERIAL TECHNICIAN

Performance Standards

operations		
d) Evaluate the effectiveness of the technical		
decontamination procedure		
e) Complete required reports and supporting		
documentation for technical decontamination		
operations		

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
, ,		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
<i>,</i> , ,		Pass 🗆 🛛 Fail 🗆

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HAZARDOUS MATERIAL TECHNICIAN

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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 1072, 2017 edition, 8.2.1, 8.2.1(B), 8.3.1, 8.3.1(B), 8.4.1, 8.4.1(B), 8.5.1, 8.5.1(B), 8.6.1, 8.6.1(B)

OBJECTIVE

8.2.1

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.

8.2.1(B)

Assessing hazards and evaluating risks; written and verbal communication.

8.3.1

Plan the response to a hazardous materials/WMD incident, given a hazardous materials/WMD incident, the results of the incident analysis, and available resources, so that the response objectives are identified, potential response options are identified, level of personal protective equipment (PPE) is approved, decontamination process is approved, response options are selected based on available resources, and an IAP is developed.

8.3.1(B)

Approving the personal protective equipment for response options, developing a plan of action, and ability to use verbal and written communication.

8.4.1

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

8.4.1(B)

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HAZARDOUS MATERIAL INCIDENT COMMANDER

EFFECTIVE JANUARY 1,2025

TEXAS COMMISSION ON FIRE PROTECTION HAZARDOUS MATERIALS INCIDENT COMMANDER

Performance Standards

Implementing IMS/ICS including unified command as necessary, assigning, and directing resources, and establishing information transfer focal point.

8.5.1

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

8.5.1(B)

Comparing predicted behavior of the material and its container to the actual behavior, determining effectiveness of action options and actions, and modifying the IAP when needed.

8.6.1

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.

8.6.1(B)

Transferring command; participating in a debriefing, post-incident analysis, and critiques; and completing required reports and supporting documentation for overall incident response operations.

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

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Performance Standards

- redirect resources and transfer command as necessary to support the completion of tactical objectives as identified in the incident actionplan.
- 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 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:_____

Date:_____

Academy:_____

Test Site:_____

HAZARDOUS MATERIALS INCIDENT COMMANDER	TEST RET		<u>EST</u>	
SKILL #1	S	U	S	U
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. (8.2.1)				
Assessing hazards and evaluating risks; written and verbal communication. (8.2.1(B))				
Plan the response to a hazardous materials/WMD incident, given a hazardous materials/WMD incident, the results of the incident analysis, and available resources, so that the response objectives are identified, potential response options are identified, level of personal protective equipment (PPE) is approved, decontamination process is approved, response options are selected based on available resources, and an IAP is developed. (8.3.1)				
Approving the personal protective equipment (PPE) for response options, developing a plan of action, and ability to use verbal and written communication. (8.3.1(B))				
Implement the planned response in a hazardous materials/WMD incident, given a hazardous materials/WMD				

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Performance Standards

incident and resources and equipment available, so that IMS/ICS is implemented, resources are directed, a focal point for information transfer is established, and actions are taken to meet the response objectives of the IAP. (8.4.1)			
Implementing IMS/ICS including unified command as necessary, assigning and directing resources, and establishing information transfer focal point. (8.4.1(B))			
Evaluate the progress and adjust the IAP as needed at a hazardous materials/WMD incident, given a hazardous materials/WMD incident, actions taken, and changing incident conditions, so that actual behavior of material and container is compared to that predicted, effectiveness of action options and actions is determined, and modifications to the IAP are made as needed until the scene is determined to be stabilized and hazards are controlled. (8.5.1)			
Comparing predicted behavior of the material and its container to the actual behavior, determining effectiveness of action options and actions, and modifying the IAP when needed.			
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. (8.6.1)			
Transferring command; participating in a debriefing, post- incident analysis, and critiques; and completing required reports and supporting documentation for overall incident response operations.			

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Performance Standards

(8.6.1(B))				
The candidate shall:	S	U	S	U
a) Analyze a hazardous materials/weapons of mass				
destruction (WMD) incident				
b) Assess hazards				
c) Evaluate risks				
d) Demonstrate satisfactory written and verbal				
communication skills				
e) Approve the personal protective equipment (PPE) for				
response options				
f) Develop a plan of action				
g) Demonstrate satisfactory verbal and written				
communication skills				
 h) Implement IMS/ICS including unified command as 				
necessary				
i) Assign resources and direct resources				
 j) Establish an information transfer focal point 				
k) Compare predicted behavior of the material and its				
container to actual behavior				
 Determine effectiveness of action options and actions 				
m) Modify IAP when needed				
n) Transfer command				
o) Conduct a:				
Debriefing				
 Post-incident analysis 				
Critiques				
p) Complete required reports and supporting				

S = Satisfactorily completed/performed

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

Evaluator/Candidate Comments:

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Performance Standards

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

		Overall Skill Sheet Score
Certifying Examiner	Date	
		Pass 🗆 Fail 🗆
		Overall Skill Sheet Re-Test Score
Re-Test Certifying Examiner	Date	
		Pass 🗆 🛛 Fail 🗆

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HAZARDOUS MATERIAL INCIDENT COMMANDER

EFFECTIVE JANUARY 1,2025

Incident Command Worksheet

Date:
Incident Name:
Incident Address/Location:
Incident Command Post Location:
Staging Area Location:
Dispatch Time:
On-Scene Time:
Controlled:
Extinguishment:

Incident Commander(s)		
Name	Date/Time	

		Scene Sketch	
1st Alarm		Side C	
Unit			
Engine			
Engine			
Ladder			
EMS			
2nd Alarm	Side B		Side D
Mutual Aid Dept Resource			
		Side A	

		Assign	ments		
Division/Group	Division/Group	Division/Group	Division/Group	Division/Group	Division/Group

Incident Command Worksheet

Resource Ordered Resource ID ETA OS # of Personnel Location Released 1			Sum	mary of	f Res	ources		
1 1 1 1 1 2 1 1 1 1 3 1 1 1 1 4 1 1 1 1 5 1 1 1 1 6 1 1 1 1 7 1 1 1 1 8 1 1 1 1 9 1 1 1 1 10 1 1 1 1 11 1 1 1 1 12 1 1 1 1 13 1 1 1 1 14 1 1 1 1 16 1 1 1 1 1 18 1 1 1 1 1 20 1 1 1 1 1 11 1 1 1 1 1 15 1 1 1 <		Resource Ordered	Resource ID	ETA	OS	# of Personnel	Location	Released
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4	3							
5	4							
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8 9	7							
9	8							
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11 11 <td< td=""><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	10							
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35	35							
36	36							
37	37							
	38						1	
	39						1	
	40						1	

Response Objectives
Life Safety
Incident Stabilization
Environmental Protection
Property Preservation

Tactical Priorities	
Rescue	
Exposures	
Confinement	
Extinguishment	
Overhaul	
Ventilation	
Salvage	

8 Step Hazmat Mgmt Process
Site Management & Control
Identify the Material Involved
Identify the Hazards and Risks
Select Proper PPE/CPC
Coordinate Info & Resources
Develop & Implement Objs
Decontamination
Termination Activities



Incident Command Worksheet

Summary of Actions						
	Time/Date	Activity				
1						
2						
3						
4						
5						
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36						
37						
38						
39						
40						

INCIDENT BRIEFING	1. IN(CIDENT NAME	2. DATE PREPARED	3. TIME PREPARED
	•	4. MAP SKETCH		
ICS 201 (12/93)		5. PREPARED B	Y (NAME AND POSIT	ION)
NFES 1325 PAGE	1			<i>.</i>

6. SUMMARY OF CURRENT ACTIONS
ICS 201 (12/93) NFES 1325 PAGE 2



	8. RES	OURCE	S SUMMA	RY
RESOURCES ORDERED	RESOURCES IDENTIFICATION	ETA	$ON_{SCENE}_{}$	LOCATION/ASSIGNMENT
			- 	
-				
ICS 201 (12/93)	PAGE 4			

			-	-	266
	INCIDENT OBJECTIVES	;	1.INCIDENT NAME	2. DATE PREPARED	3.TIME PREPARED
4. OPE	RATIONAL PERIOD (DATE/TIME)				
5. GEN	ERAL CONTROL OBJECTIVES FOR THE INCIDENT	(INCLUDE	ALTERNATIVES)		
6. WEA	THER FORECAST FOR OPERATIONAL PERIOD				
7. GEN	ERAL SAFETY MESSAGE				
8. ATTA	ACHMENTS(IF ATTACHED)				
$\begin{bmatrix} 0\\0\\0 \end{bmatrix}$	ORGANIZATION LIST {ICS 203)0ASSIGNMENT LIST (ICS 204)0COMMUNICATIONS PLAN {ICS 205)0	MEDICA INCIDEN TRAFFIC	L PLAN {ICS 206) NT MAP C PLAN	<u>□</u>	-
9. PREI	PARED BY (PLANNING SECTION CHIEF)	10.	APPROVED BY (INCIDENT	COMMANDER)	

ORGANIZATION ASSIGNMENT LIST

1. INCIDENT NAME

2. DATEPREPARED

POSITION		NAME	4. OPERATIONAL PERIOD (DATE/TIME)	
-5. INCIDENT CO	MMANDER AND STAFF		9. OPERATIONS SECTION	
INCIDENT COM	MANDER		- CHIEF	
DEPUTY			- DEPUTY	
SAFTEY OFFICE	R _		- a. BRANCH I- DIVISION/GROUPS	
INFORMATION C	DFFICER		- BRANCH DIRECTOR	
LIAISON OFFICE	R		_ DEPUTY	
			DIVISION/GROUP	
6. AGENCY REP	RESENTATIVES		DIVISION/GROUP	
AGENCY	NAME		DIVISION/GROUP	
			- DIVISION/GROUP	
			- DIVISION/GROUP	
			- b. BRANCH II- DIVISION/GROUPS	
			BRANCH DIRECTOR	
			_ DEPUTY	
			– DIVISION/GROUP	
			DIVISION/GROUP	
7. PLANNING SE	ECTION		DIVISION/GROUP	
CHIEF			DIVISION/GROUP	
DEPUTY			DIVISION/GROUP	
RESOURCES UN				
SITUATION UNIT	ſ		c. BRANCH III- DIVISION/GROUPS	
DOCUMENTATIO			BRANCH DIRECTOR	
DEMOBILIZATIO	N UNIT		DEPUTY	
TECHNICAL SPE	CIALISTS		– DIVISION/GROUP	
			DIVISION/GROUP	
			- DIVISION/GROUP	
			DIVISION/GROUP	
			- DIVISION/GROUP	
			_	
			- d. AIR OPERATIONS BRANCH	[
			- AIR OPERATIONS BR. DIR.	
			- AIR TACTICAL GROUP SUP	
DEPUT			AIR SUPPORT GROUP SUP	
			- HELICOPTER COORDINATOR	
DIRECTOR			AIR TANKER/FIXED WING CRD.	
SUPPLY UNIT				
FACILITIES UNIT	r –		10. FINANCE/ADMINISTRATION SECTIO	N
GROUND SUPPO			- CHIEF	
			DEPUTY	
b. SERVICE BRA	NCH		TIME UNIT	
DIRECTOR			PROCUREMENT UNIT	
			COMPENSATION/CLAIMS UNIT	
MEDICAL UNIT			COST UNIT	
FOOD UNIT			-	
PREPARED BY (RESOURCES UNIT)		•	

								268	3
1. BRANCH	2. DIVIS	ION/GROUP		A	SSIG	NMEN	T LIS	5T	
3. INCIDENT NAME			4. OPE	RATIONAL P	ERIOD				
			DATE			TIME			_
		5. OP	ERATION	AL PERSON	NEL				
OPERATIONS CHIEF			DIV	/ISION/GROL	JPSUPERV	/ISOR			
BRANCH DIRECTOR			AIF	R TACTICAL (GROUPSUF	PERVISOR			
		6. RESOU	RCES AS	SIGNED THIS	S PERIOD				
STRIKE TEAM/TASK FORCE	/			NUMBER	TRANS	PICKUP	DF		
RESOURCE DESIGNATOR	EMT	LEADEF	र	PERSONS	NEEDED	PT./TIME	PT	./TIME	
7. CONTROL OPERATIONS									
0. SPECIAL INSTRUCTIONS									
		9. DIVISION/GR		MUNICATIO	NS SUMMA	ARY			
FUNCTION FREQ.	S	SYSTEM	CHAN.	FUNCTION	FR	EQ.	SYSTEM		CHAN.
" LOCAL COMMAND REPEAT				LC SUPPORT	DCAL EPEAT				
DIV/GROUP				GROUND					
			טערט פי		SECT CH				<u> </u>
FREFARED DT (RESOURCE				r (Flanning	SECT. CIT	.) DATE			

					269					
INCIDENT RADIO	COMMUN	ICATIONS PLAN	1. INCIDENT NAME	2. DATE/TIME PREPARED	3. OPERATIONAL PERIOD DATE/TIME					
	4. BASE RADIO CHANNEL UTILIZATION									
SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY/TONE	ASSIGNMENT	REMARKS					
					_					
5 PREPARED BY (COMMUNICATION)	S UNIT)									

								27	0
MEDICAL PLAN	1. INCIDENT N	AME	2. DATE PREPAR	3. TII ED PF	ME REPARED	4. OPERAT	IONAL P	ERIOD	
5. INCIDENT MEDICAL AID STATIONS									
							P	ARAME	DICS
MEDICAL AID STATIONS			LOCATIO	N			YES	3	NO
		6. TRANSPOF	RTATION						
		A. AMBULANCE	SERVICES						
							PA		DICS
NAME			ADDRESS			PHONE	5	NO	
		B. INCIDENT AME	BULANCES					•	
							PA	RAME	DICS
NAME			YES	3	NO				
		7 11000							
		7. HUSP	TRLO					DUDY	
NAME	A	DDRESS	IRAVE	LIIME	PHON	E		BURN	CENTER
			AIR	GANO		YES	NO	YES	NO
I T									
		8. MEDICAL EMERGE	NCY PROCED	URES				1	<u> </u>
206 res 8/78 9. PRE	PARED BY (MED	DICAL UNIT LEADER)	1	10. rev	VIEWED BY	(SAFETY O	FFICER)		

SITE SAFETY AND CONTROL PLAN ICS 208 HM	1. Incident Name:		2. Date Prepared:			3 T	3. Operational Period: Time:						
1 Incident Location:	•		Secti	ion I. Si	te Inform	nation							
4. Incident Location:													
			Sec	ction II.	Organiza	tion							
5. Incident Commander:		6.	HM Gro	up Superv	isor:			7. Te	ch. Spe	cialist - H	M Refe	rence:	
8. Safety Officer:		9.	Entry Le	eader:				10. Site	Access	Control I	_eader:		
11. Asst. Safety Officer - HM:		12. [Decontar	mination Le	eader:			13. Saf	e Refug	e Area M	gr:		
14. Environmental Health:		15.						16.					
17. Entry Team: (Buddy System)					18. Deco	ontaminat	ion Ele	ment:					
Name:			PPE L	evel				Na	me:		Р	PE Lev	el
Entry 1					Decon 1								
Entry 2		Ì			Decon 2						Ì		
Entry 3					Decon 3								
Entry 4					Decon 4								
		S	Section	III. Haza	ard/Risk	Analysi	S						
19. Material:	Cont ty	tainer pe	Qty.	Phys. State	рH	IDLH	F.P.	I.T.	V.P.	V.D.	S.G.	LEL	UEL
0													
Comment:													
			Section	n IV. Ha	zard Mo	nitoring							
20. LEL Instrument(s):					21. O₂ In	strument((s):						
22. Toxicity/PPM Instrument(s):					23. Radiological Instrument(s):								
Comment:					1								
		Secti	on V D	econtam	ination F	Procedu	res						
24. Standard Decontamination Pro	cedures:	0000				loodaa				YES:		NO:	
Comment:										1			
		S	ection	VI. Site	Commu	nication	s		_				
25. Command Frequency:		26.	actical F	-requency				27. Ent	ry Frequ	ency:			
00 Madiati Martini	VEO	; 	Section			sistance	;				/50		2.
∠ö. Medical Monitoring:	YES:	NO:		29. Med	ical Treatn	nent and	ı ransp	ort In-pla	ace:		res:	N):

			27	2
	Section VI	. Site Map		
30. Site Map:				
				Ī
				I
Weather 🗅 Command Post 🖬 Zones 📮	I Assemt	ly Areas 📮 Escape Routes	Other D	
Se	ection IX. E	ntry Objectives		
31. Entry Objectives:				
Section X.	SOP S and	Safe Work Practices		
32. Modifications to Documented SOP s or Work Practices:	:		YES:	NO:
Comment:				
Sectio	on XI. Eme	gency Procedures		
33. Emergency Procedures:				
e	ection YII	Safety Briefing		
34 Asst Safety Officer - HM Signature:		Safety Briefing Completed (Time)		
		calog broning completed (Time).		
35. HM Group Supervisor Signature:		36. Incident Commander Signature:		
l · · · ·		5		

INSTRUCTIONS FOR COMPLETING THE SITE SAFETY AND CONTROL PLAN ICS 208 HM

A Site Safety and Control Plan must be completed by the Hazardous Materials Group Supervisor and reviewed by all within the Hazardous Materials Group prior to operations commencing within the Exclusion Zone.

Item Number	Item Title	Instructions
1.	Incident Name/Number	Print name and/or incident number.
2.	Date and Time	Enter date and time prepared.
3.	Operational Period	Enter the time interval for which the form applies.
4.	Incident Location	Enter the address and or map coordinates of the incident.
5 - 16.	Organization	Enter names of all individuals assigned to ICS positions. (Entries 5 & 8 mandatory). Use Boxes 15 and 16 for other functions: i.e., Medical Monitoring.
17 - 18.	Entry Team/Decon Element	Enter names and level of PPE of Entry & Decon personnel. (Entries 1 - 4 mandatory buddy system and back-up.)
19.	Material	Enter names and pertinent information of all known chemical products. Enter UNK if material is not known. Include any which apply to chemical properties. (Definitions: ph = Potential forHydrogen (Corrosivity), IDLH = Immediately Dangerous to Life and Health, F.P. = Flash Point, I.T. = Ignition Temperature, V.P. = Vapor Pressure, V.D. = Vapor Density, S.G. = Specific Gravity, LEL = Lower Explosive Limit, UEL = Upper Explosive Limit)
20 - 23.	Hazard Monitoring	List the instruments which will be used to monitor for chemical.
24.	Decontamination Procedures	Check NO if modifications are made to standard decontamination procedures and make appropriate Comments including type of solutions.
25 - 27.	Site Communications	Enter the radio frequency(ies) which apply.
28 - 29.	Medical Assistance	Enter comments if NO is checked.
30.	Site Map	Sketch or attach a site map which defines all locations and layouts of operational zones. (Check boxes are mandatory to be identified.)
31.	Entry Objectives	List all objectives to be performed by the Entry Team in the Exclusion Zone and any parameters which will alter or stop entry operations.
32 - 33.	SOP s, Safe Work Practices, and Emergency Procedures	List in Comments if any modifications to SOP s and any emergency procedures which will be affected if an emergency occurs while personnel are within the Exclusion Zone.
34 - 36.	Safety Briefing	Have the appropriate individual place their signature in the box once the Site Safety and Control Plan is reviewed. Note the time in box 34 when the safety briefing has been completed.

AGENDA ITEM NUMBER 11 WITH RELEVANT ATTACHMENTS

11. Matters referred to the Commission by the Firefighter Advisory Committee:

A. Discussion and possible action regarding the 2023 Injury Report **(please see attached)**.

2023 Injury Report

An Annual Summary of Fire Fighter Injuries, Exposures, and Cancer Diagnoses Reported to the Texas Commission on Fire Protection in Calendar Year 2023

By Grace Wilson of the TEXAS COMMISSION ON FIRE PROTECTION



Texas Commission on Fire Protection PO Box 2286 Austin, TX 78768 512-936-3838

This publication can be downloaded free of charge on-line: https://www.tcfp.texas.gov/services/injury-reports

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Mission

The commission shall gather and evaluate data on fire protection personnel injuries and develop recommendations for reducing injuries.

Why we are collecting injury data

Under Texas Government Code §419.048, the Texas Legislature charged the commission with gathering and evaluating data on injuries. The rules requiring regulated entities to report injuries to the commission are in Texas Administrative Code §435.23. The commission encourages volunteer entities to report injuries so that it can gain as accurate a picture as possible concerning injury trends in the Texas fire service. The injury reporting program began in March 2010.

Information the commission collects

- Minor, serious, and fatal injuries,
- Exposures (toxic and pathogenic)
- Cancer diagnoses
- Activities where fire personnel are injured
- Types of injuries (burns, strain-sprains, wounds, etc.)
- Body parts being injured
- Tasks performed at the time of injury
- Missed time
- Work assignment after injury
- Malfunctions/failures of personal protective equipment (PPE), self-contained breathing apparatus (SCBA), personal alert safety systems (PASS devices) and standard operating procedures (SOPs)

How this will help the fire service

- Identify common injuries and exposures
- Identify trends in injuries and exposures
- Identify needed training
- Evaluate and find improvements in procedures

Executive Summary

The information in this report is collected by the Texas Commission on Fire Protection (TCFP) via an on-line injury reporting application.

Under Texas Government Code §419.048, the Texas Commission on Fire Protection is charged with developing and establishing criteria to receive and analyze injury information pertaining to Texas fire fighters. The commission reviews this information to develop recommendations to help reduce injuries to fire protection personnel. The commission provides this information to the State Fire Marshal's Office (SFMO) by September 1 of each year for inclusion in the SFMO's annual Firefighter Fatality Investigations Report. The commission has enacted rules about reporting injuries in the Texas Administrative Code (TAC) Title 37, Chapter 435, and has established the criteria and policies for reporting and analyzing the information.

This report is a comprehensive analysis of injuries and exposures to Texas fire fighters. These injuries and exposures were reported to the TCFP in 2023 by fire departments throughout the state, and this report contains charts and graphs depicting the results of the information that was collected. The report also compares Texas fire fighter injury statistics with national statistics that were gathered by the National Fire Protection Association (NFPA) in 2022.

39,287 = The number of "associated" individuals in our database, meaning those who are currently employed by a regulated fire department.

1,778 = Total number of departments

825 = Regulated departments

953 = Nonregulated departments (due to being deactivated or not meeting the criteria to be regulated).

475 = Regulated training facilities (fire department-based, online-based, and private)

1,300 = Total number of departments and training facilities that are inspected and regulated by TCFP. *

*Please note: A department may be listed as both a regulated fire department/fire marshal's office (FMO) <u>and</u> as a regulated training facility if the department possesses training facility certification(s). The biennial compliance inspection of a fire department/FMO is separate from the inspection of a department with a training facility designation, and thus would require separate compliance inspections.

The commission originally built the data systems necessary to gather this information in 2010. In 2017 the data systems were migrated from a Microsoft Access database structure to a new system which was developed in-house and designed specifically to meet the information resource needs of the TCFP. The reporting process is accomplished online via TCFP's FIDO system. Fire departments regulated by the commission have been notified of the requirement to report. Several volunteer departments, which are not regulated by the commission, are also participating voluntarily.

This report concludes with recommendations from the commission to help reduce the number of fire fighter injuries in Texas and to improve the injury reporting program.

Abstract

This report contains data submitted by regulated and non-regulated entities.

Grand Totals - 2023

Total number of incidents (injury reports) submitted: 4,772 Total number of individuals who sustained an injury or exposure: 4,657* (A) Total number of injuries reported: 3,421 (B) Total number of exposures reported: 1,400 (C)

*Note that an <u>individual</u> could have more than one injury or could have an injury and an exposure. This explains why the total number of individuals who sustained an injury is less than the total number of injuries + total number of exposures. (A < B + C)

It's important to remember that one incident report can have multiple individuals involved, and each of those individuals can have one <u>or more</u> injuries. For example:

Joe and Bob were burned in a fire while on duty. This resulted in:

- One incident (one injury report), with
- Two individuals who...
- Sustained three injuries
 - Joe was burned on the hand and arm (two injuries)
 - Bob was burned on the leg (one injury)

State of Texas vs. NFPA

Comparison between the State of Texas (2022) and National Fire Protection Association (NFPA) U.S. Firefighter Injuries (2022)

For the purposes of comparison, the commission has mapped its categories to the NFPA categories as follows:

- "Fireground" includes the commission's Fire Suppression and Rescue Fire Related categories.
- "Non-Fire" includes Rescue Non-Fire, EMS and Hazmat.
- "Other On-Duty" includes Fire Prevention, Station Duties and Wellness/Fitness.

The NFPA's "Responding and Returning" and "Training" categories appear to correspond closely to the commission's categories. (The NFPA numbers include Texas statistics, although the reporting populations may not be the same.)

Please keep in mind that the comparisons between Texas and the NFPA are using numbers from 2022, and not 2023 data as in the remainder of this report. NFPA's 2023 injury data will not be published and available until 2025.

Comparing Texas 2022 and NFPA 2022

Table 1. companyon of Texas Lorr and MTTA Lorr									
	Texc	as 2022	NFP	A 2022					
Category	Count	Percent	Count	Percent					
Fireground	906	12%	21,325	32%					
Non-Fire	2,696	37%	13,200	20%					
Other On-Duty	2,971	41%	14,850	23%					
Training	491	7%	9,050	14%					
Responding and Returning	189	3%	7,225	11%					
Total	7,253	100%	65,650	100%					

Table 1: Comparison of Texas 2022 and NFPA 2022

Fatalities in 2022

NFPA: 96 on-duty firefighter fatalities **Texas**: 2 reported fatalities (a possible stroke and a suicide) All NFPA data in this report is from the <u>United States Firefighter Injuries</u> webpage, copyright 2023, National Fire Protection Association, Quincy, MA.



Figure 1: Injuries by Activity, percentages (Comparing Texas 2022 and NFPA 2022)

Texas 2022 NFPA 2022

Fire Protection Personnel Injuries

Table 2: Total Injured or Exposed Individuals by Activity and Severity, 2023

Activity	Minor	Serious	Fatal	Total	2022	2021
EMS	929	264	0	1,193	2,528	2,852
Station Duties	610	437	2	1,049	2,449	1,594
Fire Suppression	677	190	0	867	846	691
Skills Training	416	155	0	571	491	423
Wellness/Fitness	378	149	0	527	422	450
Responding to incident	92	35	0	127	137	158
Rescue - nonfire	86	19	0	105	142	116
Returning from incident	61	11	0	72	52	158
Fire prevention	45	17	0	62	100	51
Rescue - fire-related	38	6	0	44	52	51
Hazmat	36	4	0	40	26	44
Total	3,368	1,287	2	4,657	7,245	6,588

Figure 2: Total Injured or Exposed Individuals by Activity, 2023



Injuries/Exposures by Activity

EMS activities resulted in the highest number of minor injuries in 2023 (see Table 3), which is consistent with the previous five years. The effects of the COVID-19 pandemic can be seen starting in 2020.

Definitions

Minor = An injury/exposure that does not result in the employee missing a full duty period.

Serious = An injury/exposure that results in the employee missing one or more full duty periods.

Fatal = The injured/exposed individual did not survive.

	20	19	20	20	202	21	202	22	202	23
Activity	Count	%								
EMS	776	26%	2,529	56%	2,095	48%	1,461	34%	929	27%
Fire Suppression	616	21%	397	9%	537	12%	653	15%	677	20%
Station Duties	591	20%	722	16%	828	19%	1,132	27%	610	18%
Skills Training	330	11%	304	7%	303	7%	362	9%	416	12%
Wellness/Fitness	290	10%	306	7%	311	7%	293	7%	378	11%
Responding to Incident	114	4%	68	2%	123	3%	97	2%	127	4%
Rescue - Non-Fire	140	5%	89	2%	94	2%	110	3%	86	3%
Returning from Incident	39	1%	28	1%	41	1%	31	1%	61	2%
Fire Prevention	46	2%	49	1%	40	1%	39	1%	45	1%
Rescue - Fire Related	37	1%	26	1%	41	1%	55	1%	38	1%
Hazmat	24	1%	22	0%	41	1%	22	1%	36	1%
Total	2,942	100%	4,492	100%	4,372	100%	4,255	100%	3,403	100%

Table 3: Minor Injury/Exposure Activities, 2019 - 2023

(Numbers in red above = lowest number of injuries for the five-year period.)

	20	19	202	20	202	21	202	22	202	23
Activity	Count	%								
Station Duties	147	19%	731	39%	766	38%	1,316	44%	437	34%
EMS	146	19%	660	35%	755	37%	1,067	36%	264	21%
Fire Suppression	145	19%	127	7%	153	8%	192	6%	190	15%
Skills Training	139	18%	125	7%	120	6%	129	4%	155	12%
Wellness/Fitness	117	15%	116	6%	139	7%	129	4%	149	12%
Responding to Incident	28	4%	23	1%	35	2%	40	1%	35	3%
Rescue - Non-Fire	17	2%	29	2%	22	1%	32	1%	19	1%
Fire Prevention	14	2%	27	1%	11	1%	61	2%	17	1%
Returning from Incident	14	2%	13	1%	24	1%	21	1%	11	1%
Rescue - Fire Related	2	0%	3	0%	10	0%	5	0%	6	0%
Hazmat	4	1%	7	0%	3	0%	4	0%	4	0%
Total	773	100%	1,861	100%	2,038	100%	2,996	100%	1,287	100%

Table 4: <u>Serious</u> Injury/Exposure Activities, 2019 - 2023

(Numbers in red above = lowest number of injuries for the five year period.)

Fatalities

Table 5: Number of Individuals Who Sustained Fatal Injuries/Exposures, 2023

Activity	Count	Percent
Station Duties	2	100%
Total	2	100%

The TCFP's "2023 Injury Report" includes <u>two</u> fatalities: one from a possible stroke and the other, a suicide. Fatalities noted in this report include only those that were reported to the Texas Commission on Fire Protection (TCFP) by the entities it regulates.

According to the Texas State Fire Marshal's Office's "Firefighter Fatality Investigation Annual Report" dated October 2023, they conducted <u>ten</u> Texas fire fighter fatality incident investigations during their *fiscal year* 2023. Three of those ten deaths occurred in 2022, and of the remaining seven deaths, five were from volunteer departments which the TCFP does not regulate.

Comprehensive information about the fatality investigations may be found on the State Fire Marshal's Office's website at the following address: <u>https://www.tdi.texas.gov/fire/fmloddannuals.html</u>

Emergency vs. Non-Emergency Injuries

Activity	Minor	Serious	Fatal	Total
EMS	929	264	0	1,193
Fire Suppression	677	190	0	867
Rescue - Non-fire related	86	19	0	105
Responding to Incident	92	35	0	127
Returning from Incident	61	11	0	72
Hazmat	36	4	0	40
Rescue - Fire related	38	6	0	44
Total	1,919	529	0	2,448

 Table 6: Number of Injured Individuals by Emergency Activity and Severity, 2023

Table 7: Number of Injured Individuals by Non-Emergency Activity and Severity,2023

Activity	Minor	Serious	Fatal	Total
Station Duties	610	437	2	1,049
Skills Training	416	155	0	571
Wellness/Fitness	378	149	0	527
Fire Prevention	45	17	0	62
Total	1,449	758	2	2,209

Figure 3: Percentages of Injured Individuals in Emergency and Non-Emergency Activities, 2023

Non-emergency Activities = 46%

Emergency Activities = 54%


Types of Injuries

Table 8: Types of Injuries, 2023

Type of Injury	2023		
	Count	Percent	
Skeletal	2,168	63%	
Penetrating	314	9%	
Burns	144	4%	
Heat Injury	99	3%	
Internal	75	2%	
Respiratory	59	2%	
Cardiac	50	1%	
Neurological	43	1%	
Psychological	18	1%	
Roadway	9	0%	
Other	442	13%	
Total	3,421	100%	

Figure 4: Types of Injuries, 2023



Task at Time of Injury

Table 9: Top 15 Tasks at Time of Injury, 2019 - 2023 (ordered by 2023,descending)

Task	2019	2020	2021	2022	2023
#1 - Providing EMS care	556	2,704	2,398	2,057	743
#2 - Moving about station	122	975	1,100	1,599	565
#3 - Physical fitness activity	364	376	394	378	471
#4 - Extinguishing fire	416	222	306	389	430
#5 - Training activity	309	236	284	312	355
#6 - Lifting/moving patient (EMS)	220	307	168	260	229
#7 - Mounting/dismounting apparatus	159	125	175	168	187
#8 - Slips/trips/falls	154	132	177	168	177
#9 - Moving/picking up tools or equipment	153	130	142	187	155
#10 - Deploying and extending hoseline	117	100	119	133	153
#11 - Station Maintenance	235	161	123	124	113
#12 - Driving/riding in a vehicle	119	77	100	101	106
#13 - Rescue: other	126	64	79	123	97
#14 - Administrative work	37	156	98	156	83
#15 - Removing/returning equip to apparatus	76	71	72	59	69
All others	617	570	760	766	724
Total	3,780	6,406	6,495	6,980	4,657



Figure 5: Top 15 Tasks at Time of Injury, 2019 - 2023

■ #REF! ■ 2019 ■ 2020 ■ 2021 ■ 2022

Injuries by Body Part

Injured Body Part	2019	2020	2021	2022	2023
Upper Extremities	795	700	812	859	975
Lower Extremities	684	616	724	787	882
Back	466	445	492	511	547
Head	327	197	248	323	315
Multiple Parts	255	281	284	389	327
Internal	125	144	402	337	158
Chest	108	107	124	146	109
Neck	56	33	38	50	77
Нір	33	29	35	24	31
Total	2,849	2,552	3,159	3,426	3,421

Table 10: Injuries by Body Part Type, 2019 - 2023

Table 11: Injuries by Body Part Sub-Type, 2019 - 2023

Body Part by Sub-Type	2019	2020	2021	2022	2023
Back: Back	194	191	191	214	283
Back: Buttocks	3	2	2	1	3
Back: Lower Back	258	248	287	284	247
Back: Neck	4	1	8	5	4
Back: Spine	7	3	4	7	10
Chest: Abdomen	4	2	3	3	1
Chest: Abdominal Area	4	9	5	9	5
Chest: Chest	100	96	116	134	103
Head: Brain	n/a	n/a	7	24	20
Head: Cheek	7	4	7	7	4
Head: Chin	1	4	2	3	5
Head: Ear	117	50	52	50	71
Head: Eye	60	44	50	58	50
Head: Face	112	78	57	32	34
Head: Forehead	n/a	n/a	3	31	40
Head: Jaw	6	2	2	0	0

Total	2,849	2,552	3,159	3,396	3,421
Upper Extremities: Wrist	59	77	60	52	67
Upper Extremities: Upper Arm	72	45	68	94	88
Upper Extremities: Shoulder	235	170	270	245	311
Upper Extremities: Lower Arm	59	55	55	49	84
Upper Extremities: Hands	326	319	315	356	356
Upper Extremities: Elbow	44	34	44	63	69
Neck: Throat	7	3	1	1	4
Neck: Neck	49	30	37	49	73
Multiple Parts: Whole Body	149	169	173	269	181
Multiple Parts: Upper Body	76	65	74	65	82
Multiple Parts: Unknown	11	27	22	39	31
Multiple Parts: Lower Body	19	20	15	16	33
Lower Extremities: Upper Leg	41	43	41	67	58
Lower Extremities: Toes	22	13	14	17	18
Lower Extremities: Lower leg	97	95	104	59	133
Lower Extremities: Knee	273	252	316	357	372
Lower Extremities: Foot	88	78	78	95	100
Lower Extremities: Ankle	163	135	171	162	201
Internal: Trachea	1	0	1	0	0
Internal: Stomach	20	8	14	12	26
Internal: Lungs	11	51	114	150	47
Internal: Intestinal tract	4	3	2	1	4
Internal: Internal	71	74	264	156	64
Internal: Heart	7	4	6	16	, 10
Internal: Genito-urinary	11	4	1	2	7
Hip: Pelvis	10	2	20	2	5
Hip: Hip	14	18	23	16	18
Hip: Groin	1/0	2	12	51	32
	o n/a	с С	7	51	40
Head: Notin	0	10	0	40	14
Head: Mouth	14	10	Q	7	14

Individuals by Age Group

Age	2	019	2	020	2	021	2	022	2	023
Group	Count	Percent								
≤24	210	5.65%	389	6.10%	279	4.31%	329	4.54%	317	6.86%
25 - 34	1,220	32.82%	2,365	37.07%	1,986	30.65%	2,141	29.52%	1,519	32.87%
35 - 49	1,716	46.17%	2,815	44.13%	3,248	50.12%	3,548	48.92%	2,039	44.12%
50 - 64	566	15.23%	805	12.62%	961	14.83%	1,216	16.77%	735	15.91%
≥ 65	5	0.13%	5	0.08%	6	0.09%	19	0.26%	11	0.24%
Totals	3,717	100.00%	6,379	100.00%	6,480	100.00%	7,253	100.00%	4,621	100.00%

Table 12: Individuals by Age Group, 2019 - 2023





Activities Resulting in Lost Time

		Days Missed		
Activity	Count	Average	Sum	
Station Duties	274	15	4,186	
EMS	224	21	4,760	
Fire suppression	123	32	3,972	
Skills training	100	53	5,365	
Wellness/fitness	97	49	4,763	
Responding to incident	23	17	410	
Rescue - nonfire-related	16	47	760	
Fire prevention	15	17	261	
Returning from incident	6	30	183	
Rescue - fire-related	5	74	373	
Hazmat	2	23	46	
Total	885	34	25,079	

Table 13: Activities Individuals Were Doing that Resulted in Lost Time, 2023Totals

Table 14: Activities Individuals Were Doing that Resulted in Lost Time, 2023Between 1 and 30 Days

		Days Missed		
Activity	Count	Average	Sum	
Station Duties	259	10	2,614	
EMS	197	9	1,779	
Fire Suppression	89	9	804	
Skills Training	68	9	663	
Wellness/Fitness	54	12	656	
Responding to incident	20	11	234	
Fire Prevention	12	9	117	
Rescue - nonfire-related	10	7	77	
Returning from incident	5	18	91	
Rescue - fire-related	2	6	13	
Hazmat	1	12	12	
Total	717	10	7,060	

		Days Missed		
Activity	Count	Average	Sum	
Wellness/Fitness	28	49	1,388	
Fire Suppression	20	54	1,099	
EMS	16	48	768	
Station Duties	10	51	516	
Skills Training	8	62	500	
Fire Prevention	3	48	144	
Rescue - nonfire-related	3	69	207	
Responding to incident	2	36	73	
Hazmat	1	34	34	
Rescue - fire-related	1	72	72	
Total	92	52	4,801	

Table 15: Activities Individuals Were Doing that Resulted in Lost Time, 2023Between 31 and 90 Days

Table 16: Activities Individuals Were Doing that Resulted in Lost Time, 202391+ Days

		Days Missed		
Activity	Count	Average	Sum	
Skills Training	24	175	4,202	
Wellness/Fitness	15	181	2,719	
Fire Suppression	14	147	2,069	
EMS	11	201	2,213	
Station Duties	5	211	1,056	
Rescue - nonfire-related	3	158	476	
Rescue - fire-related	2	144	288	
Responding to incident	1	103	103	
Returning from incident	1	92	92	
Total	76	157	13,218	

Types of Injuries with Lost Time

Table 17: Types of Injuries Resulting in Lost Time, 2023

Type of Injury	Count
Skeletal	365
Penetrating	24
Burns	21
Respiratory	18
Heat Injury	16
Internal	16
Cardiac	12
Multiple Injuries	7
Neurological	6
Psychological	2
Other	108
Total	595

Figure 7: Types of Injuries Resulting in Lost Time, 2023



Burn Injuries

Table 18: All Burns, 2019 - 2023

All Burns - Types	2019	2020	2021	2022	2023
Heat/Fire (thermal)	72	80	66	83	120
Scald or Steam	10	11	12	19	18
Chemical	6	2	3	6	6
Electrical	2	3	4	4	0
Totals	90	96	85	112	144

Table 19: Burns by Body Part Sub-Type, 2019 - 2023

Body Part Sub-Type	2019	2020	2021	2022	2023
Back: Back	0	0	2	2	2
Back: Buttocks	0	0	0	n/a	1
Back: Lower Back	0	0	0	0	0
Back: Neck	0	0	0	0	0
Back: Spine	0	0	0	0	0
Chest: Abdomen	2	0	0	0	0
Chest: Abdominal Area	0	0	0	0	0
Chest: Chest	0	0	0	3	0
Head: Brain	n/a	n/a	0	0	0
Head: Cheek	1	1	1	4	2
Head: Chin	1	3	0	1	2
Head: Ear	17	12	13	9	23
Head: Eye	5	3	2	0	2
Head: Face	7	8	2	6	4
Head: Forehead	n/a	n/a	1	2	2
Head: Jaw	0	0	0	n/a	n/a
Head: Mouth	1	0	0	0	1
Head: Nose	0	0	1	0	1
Head: Skull	n/a	0	0	1	1
Hip: Groin	0	0	0	0	0
Нір: Нір	0	0	1	0	0

Totals	90	96	85	112	144
Upper Extremities: Wrist	11	9	3	2	7
Upper Extremities: Upper Arm	3	0	3	8	8
Upper Extremities: Shoulder	1	4	3	12	7
Upper Extremities: Lower Arm	5	14	8	10	22
Upper Extremities: Hands	16	20	24	21	22
Upper Extremities: Elbow	0	1	2	2	1
Neck: Throat	0	0	0	0	0
Neck: Neck	2	2	2	5	6
Multiple Parts: Whole Body	4	0	3	4	4
Multiple Parts: Upper Body	6	11	7	7	11
Multiple Parts: Unknown	0	0	0	1	1
Multiple Parts: Lower Body	0	0	0	1	2
Lower Extremities: Upper Leg	0	1	0	1	3
Lower Extremities: Toes	1	0	0	0	0
Lower Extremities: Lower Leg	3	1	3	5	4
Lower Extremities: Knee	1	1	0	0	2
Lower Extremities: Foot	3	4	3	4	2
Lower Extremities: Ankle	0	1	1	1	0
Internal: Trachea	0	n/a	0	n/a	n/a
Internal: Stomach	0	0	0	0	0
Internal: Lungs	0	0	0	0	1
Internal: Intestinal tract	0	0	0	0	0
Internal: Internal	0	0	0	0	0
Internal: Heart	0	0	0	0	0
Internal: Genito-urinary	0	0	0	0	0
Hip: Pelvis	0	0	n/a	0	0

Exposures

Table 20: Exposures by Sub-type, 2019 - 2023

Exposure + Sub-Type	2019	2020	2021	2022	2023
Chemical: Ammonia	3	0	6	0	1
Chemical: Battery Acid	4	0	2	1	0
Chemical: Benzene	15	1	1	0	1
Chemical: Bleach	11	0	2	0	0
Chemical: Not listed	160	70	40	25	72
Chemical: Unidentified	55	27	34	42	42
Physical: Animal venom	17	5	7	3	8
Physical: Meningitis	40	33	3	3	41
Physical: Not listed	201	42	27	35	27
Physical: Plant toxin	14	12	24	22	17
Physical: Radiation	4	1	0	0	5
Physical: Unidentified	66	13	17	24	28
Physical: UV Light	2	1	0	1	0
Respiratory: Blood	73	78	54	48	94
Respiratory: COVID 19	1	1,715	2,878	3,466	630
Respiratory: Influenza	19	7	2	2	1
Respiratory: Not listed	118	56	8	9	7
Respiratory: Saliva	22	28	15	23	22
Respiratory: Tuberculosis	76	31	16	29	55
Respiratory: Unidentified	37	6	19	13	62
Respiratory: Vomit	8	13	4	4	9
Other: Asbestos	3	1	109	30	31
Other: Carbon Monoxide	1	6	2	11	15
Other: Carcinogenic Substances	1	13	15	21	75
Other: Contaminated Water/Sewage	4	11	8	21	4
Other: Chlorine	n/a	n/a	6	3	1
Other: Heavy Metals	0	1	0	1	3
Other: Mold	0	9	4	29	42
Other: Smoke/Products of Combustion	5	19	37	81	46
Other: Virus	3	1,878	266	203	61
Total	963	4,077	3,606	4,150	1,400

Table 21: Exposure by Route, 2023

Route	Count
Inhalation	1,048
Absorption	227
Injection/Puncture	60
Ingestion	65
Total	1,400

Figure 8: Exposure by Route, 2023, percentages



Table 22: Exposure by Substance, 2023

Substance	Count
Liquid	578
Gas/vapor	514
Solid	309
Total	1,401





Cancer

In June of 2019, the Governor of Texas signed Senate Bill 2551 (SB 2551) which expanded the scope of the law in which firefighters and EMTs who suffer from cancer are presumed to have developed the condition during the course and scope of their employment. The types of cancer this law addresses include:

- cancers that originate at the stomach, colon, rectum, skin, prostate, testis or brain
- non-Hodgkin's lymphoma
- multiple myeloma
- malignant melanoma
- renal cell carcinoma

Reports of cancer diagnoses:

2019	2020	2021	2022	2023
19	47	41	70	91

The TCFP received **91** reports of cancer diagnoses from fire departments in 2023:

Skin - 39 (Males - 27, 31, 32, 38, 41, 41, 41, 41, 41, 41, 42, 42, 43, 43, 44, 44, 44, 45, 46, 46, 47, 47, 47, 49, 50, 51, 52, 53, 54, 54, 54, 54, 55, 55, 55, 55, 57, 58, 59)

Prostate - 9 (Males - 50, 51, 53, 54, 55, 55, 60, 61, 62)

Lymphatic - 8 (Males - 18, 37, 49, 50, 51, 55, 55, 62)

Colon/rectum - 6 (Males - 41, 55, 56, 57, 57, 61)

Testicular - 9 (Males - 28, 32, 32, 33, 35, 41, 44, 44, 55)

Blood - 3 (Males - 47, 56, 60) Thyroid - 4 (Males - 39, 41, 44, 45) Brain - 2 (Male - 24, 55) Appendix - 1 (Male - 43) Kidney - 1 (Male - 51) Lung – 1 (Male - 49) Neuroendocrine - 1 (Male - 47) Stomach - 1 (Male - 43) Throat - 1 (Male - 56) Unidentified - 5

(Males - 51, 52, 52, 67) (Female - 54)

A Reminder for Fire Departments

Any injuries to fire protection personnel that are reported to the Texas Worker's Compensation Commission must be reported to the Texas Commission on Fire Protection. This includes cancer diagnoses.

The commission strongly encourages fire departments to report cancer

diagnoses; the commission recognizes that the number of job-related cancers reported during this time-period represents only a fraction of the cases that Texas fire departments are currently managing. There is a growing awareness of the impact that cancer is having on fire protection personnel nationwide, and the commission urges departments to use this reporting tool to help contribute to the education and awareness of the issue in Texas.

SOP Issues; PPE and PASS Failures

In 2023 there were five injuries attributed to failures of fire protection personnel to follow their departments' standard operating procedures (SOPs). All but a few were instances where the individuals were not wearing their provided PPE/SCBA gear in an environment or situation in which they should have been wearing it.

In its compliance inspections, the Texas Commission on Fire Protection verifies that fire departments have written SOPs that cover the appropriate subject matter.

				Previous years' toto			otals
Activity	Minor	Serious	Total	2022	2021	2020	2019
EMS	0	0	0	1	1	18	11
Fire Suppression	2	0	2	7	8	10	10
Skills Training	1	1	2	3	2	5	1
Fire related rescue	1	0	1	1	0	0	2
Station Duties	0	0	0	4	1	2	6
Nonfire related rescue	0	0	0	1	0	0	4
Totals	4	1	5	17	12	35	34

Table 23: Injuries Attributed to SOP Issues, 2023

Table 24: Injuries Attributed to PPE and PASS Failures, 2023

				-	Previous years' totals			als
Activity	Minor	Serious	Total	_	2022	2021	2020	2019
Fire Suppression	15	3	18		7	4	7	2
EMS	1	0	1		0	1	4	0
Skills Training	1	2	3		1	1	1	2
Nonfire related rescue	2	0	2		0	0	0	0
Station Duties	1	0	1	-	0	1	0	1
Totals	20	5	25		8	7	12	5

Recommendations

The commission would like to thank Texas fire departments for their ongoing participation in reporting fire protection personnel injuries. This report would not be possible without their efforts.

Based on their review of the data contained within this report, the commission offers the following recommendations and reminders for the Texas Fire Service:

[Following are recommendations from the Fire Fighter Advisory Committee, which were discussed at the June 20, 2024 meeting.]

- 1. NFPA 1851: Standard on Selection, Care, and Maintenance of Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting as required by state law.
- 2. Continue to review and practice roadway safety and traffic incident management practices.
- 3. Review all of your department's SOPs with a focus on injury prevention, emphasizing skills training and wellness/fitness in the SOPs.

[The following item was discussed by the commission at the May 16, 2024 meeting, and it was requested that it be added to the injury report as a possible recommendation.]

1. Recommend early screenings for prostate cancer.

Commission-Adopted Standards

The commission has adopted several NFPA and other nationally recognized standards to help keep Texas fire protection personnel safe. This list summarizes the relationships between some of the Texas laws and national standards and is not intended to be all-inclusive:

Texas Government Code

<u>§419.040, Protective Clothing</u>

§419.041, Self-Contained Breathing Apparatus

<u>§419.042, Personal Alert Safety Systems</u>

§419.043, Applicable National Fire Protection Association Standard

<u>§419.044, Incident Management System</u>

§419.045, Personnel Accountability System

<u>§419.046, Fire Protection Personnel Operating at Emergency Incidents</u>

§419.047, Commission Enforcement

Texas Administrative Code

CHAPTER 425 FIRE SERVICE INSTRUCTORS

§443.9 National Fire Protection Association Standard

CHAPTER 435 FIRE FIGHTER SAFETY

<u>§435.21 Fire Service Joint Labor Management Wellness-Fitness Initiative</u>

<u>§435.23 Fire Fighter Injuries</u>

<u>§435.25 Courage to be Safe So Everyone Goes Home Program</u>

<u>§435.27 Live Fire Training Structure Evolutions</u>

CHAPTER 451 FIRE OFFICER

CHAPTER 457 INCIDENT SAFETY OFFICER CERTIFICATION

Commission's web page

NFPA Standards adopted by the commission

AGENDA ITEM NUMBER 11 WITH RELEVANT ATTACHMENTS CONTINUED

11. Matters referred to the Commission by the Fire Fighter Advisory Committee:

B. Discussion and possible action regarding proposed 37 Texas Administrative Code (TAC), Chapter 469, Technical Rescue **(please see attached)**.

<u>CHAPTER 469</u>

TECHNICAL RESCUE

SUBCHAPTER A

MINIMUM STANDARDS FOR ROPE RESCUE AWARENESS AND OPERATIONS

§469.1. Rope Rescue Awareness Level/Operations Level Certification.

- (a) <u>A Rope Rescue Awareness Level/Operations Level Rescuer is an individual who has met</u> the requirements of Chapters 5.1 and 5.2 of NFPA 1006, Standard for Technical Rescue <u>Personnel Professional Qualifications and has the knowledge, skills, and ability to</u> <u>perform Rope Rescue at the Awareness Level/Operations Level.</u>
- (b) <u>All individuals holding a Rope Rescue Awareness Level/Operations Level certification</u> <u>shall be required to comply with the continuing education requirements in Chapter 441</u> <u>of this title (relating to Continuing Education).</u>
- (c) <u>Special temporary provision. Individuals are eligible to take the Commission</u> <u>examination for Rope Rescue Awareness Level/Operations Level by:</u>
 - (1) <u>holding as a minimum, Structural Fire Protection Personnel, Aircraft Rescue Fire</u> <u>Fighting Personnel, or Marine Fire Protection Personnel through the Commission; and</u>
 - (2) providing documentation acceptable to the Commission, in the form of an affidavit from the individual's Head of Department or Chief Training Officer, that the individual has met the department's requirements to perform as a Rope Rescuer and has demonstrated proficiency as a Rope Rescuer at the Rope Rescue Awareness Level/Operations Level.
- (d) <u>All applications for testing during the special temporary provision period must be</u> received no earlier than October 1, 2024, and no later than October 1, 2025.
- (e) This special temporary provision will expire on November 1, 2025.

§469.3. Minimum Standards for Rope Rescue Awareness Level/Operations Level Certification.

To be certified to the Rope Rescue Awareness Level/Operations Level, an individual must:

- (1) <u>hold certification as Structural Fire Protection Personnel. Aircraft Rescue Fire Fighting</u> <u>Personnel, or Marine Fire Protection Personnel; and</u>
- (2) <u>complete a Commission-approved Rope Rescue Awareness Level/Operations Level</u> <u>program and successfully pass the Commission examination as specified in Chapter</u> <u>439 of this title (relating to Examinations for Certification). An approved Rope Rescue</u> <u>Awareness Level/Operations Level program must consist of one of the following:</u>

(A) completion of an in-state Rope Rescue Awareness Level/Operations Level program meeting the requirements of the applicable NFPA standard and conducted by a Commission-certified training provider that was submitted and approved through the Commission's training prior approval system; or

(B) completion of an out-of-state educational institution of higher education, and/or military training program that has been submitted to the Commission for evaluation and found to meet the requirements of the applicable NFPA standard.

§469.5. Examination Requirement.

Examination requirements in Chapter 439 of this title (relating to Examinations for Certification) must be met to receive Rope Rescue Awareness Level/Operations Level certification.

CHAPTER 469

TECHNICAL RESCUE

SUBCHAPTER B

MINIMUM STANDARDS FOR ROPE RESCUE TECHNICIAN

§469.201. Rope Rescue Technician Level

- (a) <u>A Rope Rescue Technician Level Rescuer is an individual who has met the</u> requirements of chapter 5.3 of NFPA 1006, Standard for Technical Rescue Personnel <u>Professional Qualifications, and has the knowledge, skills, and ability to perform</u> <u>Rope Rescue at the Technician Level.</u>
- (b) <u>All individuals holding a Rope Rescue Technician Level certification shall be required</u> to comply with the continuing education requirements in Chapter 441 of this title (relating to Continuing Education).
- (c) <u>Special temporary provision. Individuals are eligible to take the Commission</u> <u>examinations for the Rope Rescue Technician Level by:</u>
 - (1) <u>holding as a minimum, Structural Fire Protection Personnel, Aircraft Rescue Fire</u> <u>Fighting Personnel, or Marine Fire Protection Personnel through the Commission;</u> <u>and</u>
 - (2) <u>providing documentation acceptable to the Commission, in the form of an affidavit</u> <u>from the individual's Head of Department or Chief Training Officer, that the</u> <u>individual has met the department's requirements to perform as a Rope Rescuer</u> <u>and has demonstrated proficiency as a Rope Rescuer at the Rope Rescue Technician</u> <u>Level.</u>
- (d) <u>All applications for testing during the special temporary provision period must be</u> received no earlier than October 1, 2024, and no later than October 1, 2025.
- (e) This special temporary provision will expire on November 1, 2025.

§469.203. Minimum Standards for Rope Rescue Technician Level Certification

To be certified at the Rope Rescue Technician Level, an individual must:

(1) <u>Option 1-- hold certification as Structural Fire Protection Personnel, Aircraft Rescue</u> <u>Fire Fighting Personnel, or Marine Fire Protection Personnel; and</u>

- (A) hold a Rope Rescue Awareness Level/Operations Level certification through the Commission: and
- (B) <u>complete a Commission-approved Rope Rescue Technician Level program and</u> <u>successfully pass the Commission examination for Rope Rescue Technician as</u> <u>specified in Chapter 439 of this title (relating to Examinations for Certification). An</u> <u>approved Rope Rescue Technician Level program must consist of one of the</u> <u>following:</u>

(ii) completion of an in-state Rope Rescue Technician Level program meeting the requirements of the applicable NFPA standard and conducted by a Commissioncertified training provider that was submitted and approved through the Commission's training prior approval system; or

(ii) successful completion of an out-of-state educational institution of higher education, and/or military training program that has been submitted to the Commission for evaluation and found to meet the requirements of the applicable NFPA standard.

(2) <u>Option 2--_hold certification as Structural Fire Protection Personnel, Aircraft Rescue</u> <u>Fire Fighting Personnel, or Marine Fire Protection Personnel; and</u>

(A) complete a Commission-approved Rope Rescue Awareness Level/Operations Level program. An approved Rope Rescue Awareness Level/Operations Level program must consist of one of the following:

(i) <u>completion of an in-state Rope Rescue Awareness Level/Operations Level</u> <u>program meeting the requirements of the applicable NFPA standard and conducted</u> <u>by a Commission-certified training provider that was submitted and approved</u> <u>through the Commission's training prior approval system; or</u>

(ii)successful completion of an out-of-state educational institution of higher education, and/or military training program that has been submitted to the Commission for evaluation and found to meet the requirements of the applicable NFPA standard; and

(B) <u>complete a Commission-approved Rope Rescue Technician Level program. An</u> <u>approved Rope Rescue Technician Level program must consist of one of the following:</u>

(i) completion of an in-state Rope Rescue Technician Level program meeting the requirements of the applicable NFPA standard and conducted by a Commission-certified training provider that was submitted and approved through the Commission's training prior approval system; or

(ii) completion of an out-of-state educational institution of higher education, and/or military training program that has been submitted to the Commission for evaluation and found to meet the requirements of the applicable NFPA standard; and

(C) <u>successfully pass the Commission examinations for the Rope Rescue Technician</u> <u>Level as specified in Chapter 439 of this title (relating to Examinations for</u> <u>Certification).</u>

§469.205. Examination Requirement.

Examination requirements in Chapter 439 of this title (relating to Examinations for Certification) must be met to receive Rope Rescue Technician Level certification.

AGENDA ITEM NUMBER 12 WITH RELEVANT ATTACHMENTS

12. Discussion and possible action on the proposed 37 TAC, Chapter 449, Head of Department **(please see attached)**.

CHAPTER 449

HEAD OF A FIRE DEPARTMENT

SUBCHAPTER A

MINIMUM STANDARDS FOR HEAD OF A SUPPRESSION FIRE DEPARTMENT

§449.1. Minimum Standards for the Head of a Suppression Fire Department.

(a) An individual who becomes employed and is appointed as the head of a suppression fire department must be certified by the commission as Head of a Suppression Fire Department, within one year of appointment. The requirements in this subchapter also apply to an individual who is appointed on an interim basis to head of a suppression fire department.

(b) Prior to being appointed as the head of a suppression fire department, an individual must:

(1) hold a Texas Commission on Fire Protection certification as fire protection personnel in any discipline that has a commission approved curriculum that requires structural fire protection personnel certification. The individual must have five years of experience in a full-time fire suppression position or ten years in a part-time fire suppression position at the time of appointment, or attain the required years of experience within one year of the appointment; or

(2) provide documentation of accreditation from the International Fire Service Accreditation Congress that is deemed equivalent to the commission's approved basic fire suppression curriculum, and provide documentation in the form of a sworn non-self-serving affidavit of five years of experience in a full-time fire suppression position in a jurisdiction other than Texas; or

(3) provide documentation in the form of a sworn non-self-serving affidavit of ten years of experience as an employee of a local governmental entity in a full-time structural fire protection personnel position in a jurisdiction other than Texas; or

(4) provide documentation in the form of a sworn non-self-serving affidavit of ten years of experience as an active volunteer fire fighter in one or more volunteer fire departments. The ten years of volunteer service must include documentation of attendance at 40% of the drills for each year and attendance of at least 25% of a department's emergencies in a calendar year while a member of a volunteer fire department or departments with ten or more active members that conducts a minimum of 48 hours of drills in a calendar year.

(c) Holding the Head of a Fire Suppression Fire Department certification does not qualify an individual for any other certification. An individual who seeks certification in another discipline must meet the requirements for that discipline.

(d) Nothing contained in this chapter shall be construed to supersede Chapter 143, Local Government Code, in regard to appointment of a head of a suppression fire department.

(e) Individuals certified as the Head of a Suppression Fire Department must meet the continuing education requirement as provided for in Chapter 441 of this title (relating to Continuing Education).

(f) An individual certified as Head of a Suppression Fire Department under this subchapter may engage in fire fighting activities only as the head of a suppression fire department. These activities include incident command, direction of fire fighting activities or other emergency activities typically associated with fire fighting duties, i.e. rescue, confined space and hazardous materials response.

Source Note: The provisions of this §449.1 adopted to be effective February 26, 2015, 40 TexReg 831; amended to be effective November 18, 2018, 43 TexReg 7557

§449.3. Minimum Standards for Head of a Suppression Fire Department Certification.

Applicants for Head of a Suppression Fire Department Certification must complete the following requirements:

(1) must be appointed as head of a fire department; and

(2) complete the Standards Review Assignment for Head of a Fire Department identified in the applicable chapter of the Certification Curriculum Manual; and

(3) meet with a Texas Commission on Fire Protection Compliance Section representative for review and approval of the Standards Review Assignment; and

(4) attend at least one Texas Commission on Fire Protection regularly scheduled commission meeting, [or] one regularly scheduled <u>standing committee meeting</u> (Firefighter Advisory, <u>Curriculum and Testing, or Health and Wellness</u>), or a scheduled regional meeting [fire fighter advisory committee meeting] in the first year of appointment; and

(5) document completion of the National Incident Management System courses 100, 200, 300, 400, 700, and 800.

Source Note: The provisions of this §449.3 adopted to be effective February 26, 2015, 40 TexReg 831; amended to be effective November 18, 2018, 43 TexReg 7557

CHAPTER 449

HEAD OF A FIRE DEPARTMENT

SUBCHAPTER B

MINIMUM STANDARDS FOR HEAD OF A PREVENTION ONLY FIRE DEPARTMENT

§449.201. Minimum Standards for the Head of a Prevention Only Fire Department.

(a) An individual who becomes employed and is assigned as the head of a prevention only fire department must be certified by the commission as Head of a Prevention Only Fire Department, within one year of appointment. The requirements in this subchapter also apply to an individual who is appointed on an interim basis to head of a prevention only fire department.

- (b) Prior to being appointed as the head of a prevention only fire department, an individual must:
- (1) hold a Texas Commission on Fire Protection certification as a fire inspector, fire investigator, or arson investigator. The individual must have five years of experience in a full-time fire prevention position or ten years in a part-time fire prevention position at the time of appointment, or attain the required years of experience within one year of the appointment; or
- (2) possess valid documentation of accreditation from the International Fire Service Accreditation Congress that is deemed equivalent to the commission's approved basic arson investigator, fire investigator or fire inspector curriculum and provide documentation in the form of a sworn non-self-serving affidavit of five years of experience in a full-time fire prevention position in a jurisdiction other than Texas; or
- (3) provide documentation in the form of a sworn non-self-serving affidavit of ten years of experience as an employee of a local governmental entity in a full-time fire inspector, fire investigator, or arson investigator position in a jurisdiction other than Texas; or
- (4) provide documentation in the form of a sworn non-self-serving affidavit of ten years of experience as a certified fire investigator, fire inspector or arson investigator as a part-time fire prevention employee; or
- (5) provide documentation in the form of a sworn non-self-serving affidavit of ten years of fire prevention experience as an active volunteer fire inspector, fire investigator, or arson investigator.

(c) Holding the Head of a Prevention Only Fire Department certification does not qualify an individual for any other certification. An individual who seeks certification in another discipline must meet the requirements for that discipline.

(d) Nothing contained in this chapter shall be construed to supersede Chapter 143, Local Government Code, in regard to appointment of a head of a prevention only fire department.

(e) Individuals certified as the Head of a Prevention Only Fire Department must meet the continuing education requirement as provided for in Chapter 441 of this title (relating to Continuing Education).

Source Note: The provisions of this §449.201 adopted to be effective February 26, 2015, 40 TexReg 831; amended to be effective November 18, 2018, 43 TexReg 7558

§449.203. Minimum Standards for Head of a Prevention Only Fire Department Certification.

Applicants for Head of a Prevention Only Fire Department Certification must complete the following requirements:

(1) must be appointed as head of a prevention only fire department; and

(2) complete the Standards Review Assignment for Head of a Fire Department identified in the applicable chapter of the Certification Curriculum Manual; and

(3) meet with a Texas Commission on Fire Protection Compliance Section representative for review and approval of the Standards Review Assignment; and

(4) attend at least one Texas Commission on Fire Protection regularly scheduled commission meeting, [or] one regularly scheduled <u>standing committee meeting (Firefighter Advisory,</u> <u>Curriculum and Testing, or Health and Wellness), or a scheduled regional meeting [fire fighter</u> advisory committee meeting] in the first year of appointment; and

(5) documentation of completion of National Incident Management System 100, 200, 300, 400, 700 and 800.

Source Note: The provisions of this §449.203 adopted to be effective February 26, 2015, 40 TexReg 831; amended to be effective November 18, 2018, 43 TexReg 7558

AGENDA ITEM NUMBER 13 WITH RELEVANT ATTACHMENTS

13. Proposed rule review for the following:

A. 37 TAC, Chapter 403, Criminal Convictions and Eligibility for Certifications **(please see attached)**.

TEXAS ADMINISTRATIVE CODE: As in effect on 07/31/2024. TITLE **37 PUBLIC SAFETY AND CORRECTIONS**

PART 13 TEXAS COMMISSION ON FIRE PROTECTION

CHAPTER 403 CRIMINAL CONVICTIONS AND ELIGIBILITY FOR CERTIFICATION

§403.1 Purpose

(a) The purpose of this chapter is to establish policy, procedures and criteria on the eligibility of persons with a criminal conviction for a certificate or renewal of a certificate issued by the Texas Commission on Fire Protection (the commission) and to establish procedures for suspension, probation, revocation, or denial of a certificate held or applied for by persons with a criminal conviction pursuant to Chapter 53, Texas Occupations Code.

(b) The duties and responsibilities of persons who hold certifications issued by the commission each involve matters that directly relate to public safety, specifically to the reduction of loss of life and property from fire. Thus, conduct involving the injury to a person or the destruction of property by fire, relates directly to the fitness of the individual to be fire protection personnel. Fire protection personnel often have access to areas not generally open to the public. The public relies on the honesty, trustworthiness, and reliability of persons certified by the commission. Thus, crimes involving moral turpitude, including, but not limited to, fraud and dishonesty, are directly relevant. In addition, the ability of such persons to function unimpaired by alcohol or the illegal use of drugs, in dangerous or potentially dangerous circumstances, including, but not limited to, the operation of emergency vehicles is paramount in light of the duty to protect the health and safety of the public.

§403.3 Scope

(a) The policy and procedures established in this chapter apply to a person who holds or applies for any certificate issued under the commission's regulatory authority contained in Government Code, Chapter 419.

(b) When a person is convicted of a crime of a sexual nature, the conviction of which would require the individual to be registered as a sex offender under Chapter 62 of the Code of Criminal Procedure; or

(c) When a person is convicted of a crime that is an offense under Title 7 of the Texas Penal Code, or a similar offense under the laws of the United States of America, another state, or another jurisdiction, the person's conduct directly relates to the competency and reliability of the person to assume and discharge the responsibilities of fire protection personnel. Such conduct includes, but is not limited to, intentional or knowing conduct, without a legal privilege, which causes or is intended to cause a fire or explosion with the intent to injure or kill any person or animal or to destroy or damage any property. The commission may:

(1) deny a person the opportunity to be examined for a certificate;

(2) deny the application for a certificate;

(3) grant the application for a new certificate with the condition that a probated suspension be placed on the newly granted certificate;

(4) refuse to renew a certificate;

(5) suspend, revoke, or probate the suspension or revocation of an existing certificate; or

(d) When a person's criminal conviction of a felony or misdemeanor directly relates to the duties and responsibilities of the holder of a certificate issued by the commission, the commission may:

(1) deny a person the opportunity to be examined for a certificate;

(2) deny the application for a certificate;

(3) grant the application for a new certificate with the condition that a probated suspension be placed on the newly granted certificate;

(4) refuse to renew a certificate;

(5) suspend, revoke, or probate the suspension or revocation of an existing certificate; or

(6) limit the terms or practice of a certificate holder to areas prescribed by the commission.

§403.5 Access to Criminal History Record Information

(a) Criminal history record. The commission is entitled to obtain criminal history record information maintained by the Department of Public Safety, or another law enforcement agency to investigate the eligibility of a person applying to the commission for or holding a certificate.

(b) Confidentiality of information. All information received under this section is confidential and may not be released to any person outside the agency except in the following instances:

(1) a court order;

(2) with written consent of the person being investigated;

(3) in a criminal proceeding; or

(4) in a hearing conducted under the authority of the commission.

(c) Early review. A regulated entity that employs a person regulated by the commission, a person seeking to apply for a beginning position with a regulated entity, a volunteer fire department, or an individual participating in the commission certification program may seek the early review under this chapter of the person's present fitness to be certified. Prior to completing the requirements for certification, the individual may request such a review in writing by following the required procedure. A decision by the commission based on an early review does not bind the commission if there is a change in circumstances. The following pertains to early reviews:

(1) The commission will complete its review and notify the requestor in writing concerning potential eligibility or ineligibility within 90 days following receipt of all required and necessary information for the review.

(2) A notification by the commission regarding the results of an early review is not a guarantee of certification, admission to any training program, or employment with a local government.

(3) A fee assessed by the commission for conducting an early review will be in an amount sufficient to cover the cost of conducting the review process, as provided in §437.19 of this title (relating to Early Review Fees).

(4) An early review request will be considered incomplete until the requestor submits all required ³²¹d necessary information. Early review requests that remain incomplete for 90 days following receipt of the initial request will expire. If the request expires and an early review is still desired, a new request and fee must be submitted.

§403.7 Criminal Convictions Guidelines

(a) The following crimes are considered to relate directly to the ability, capacity, and fitness required to perform the duties and discharge the responsibilities of persons certified by the commission:

(1) offenses under the Government Code, Chapter 419, relating to the Texas Commission on Fire Protection;

(2) offenses under the Texas Transportation Code Title 6 Roadways, which are punishable by fines greater than \$200, or imprisonment, or both fine and imprisonment;

- (3) offenses under the Health and Safety Code, Chapter 481, concerning controlled substances;
- (4) offenses under the Health and Safety Code, Chapter 483, concerning dangerous drugs;
- (5) offenses under the following titles of the Texas Penal Code:
- (A) Title 5--offenses against the person;
- (B) Title 6--offenses against the family;
- (C) Title 7--offenses against property;
- (D) Title 8--offenses against public administration;
- (E) Title 9--offenses against public order and decency;
- (F) Title 10--offenses against public health, safety and morals;
- (G) Title 11--offenses involving organized crime; and

(H) Title 4--inchoate offenses Chapter 15 preparatory offenses to any of the offenses in this section;

(6) the offenses listed in this subsection are not inclusive, in that the commission may consider other particular crimes in special cases in order to promote the intent of the statutes administered by the commission.

- (b) In all cases the commission shall consider:
- (1) the nature and seriousness of the crime;

(2) the relationship of the crime to the purposes for requiring the certificate issued by the commission;

(3) the extent to which the certificate might offer an opportunity to engage in further criminal activity of the same type as that in which the person previously had been involved;

(4) the relationship of the crime to the ability, capacity, or fitness required to perform the duties and discharge the responsibilities of the certificate holder;

(6) the level and nature of access to public, commercial, and residential properties, including access after regular business hours and access to areas not open to the general public.

§403.9 Mitigating Factors

(a) In addition to the factors that must be considered under §403.7 of this title (relating to Criminal Convictions Guidelines), in determining the present fitness of a person who has been convicted of a crime, the commission shall consider the following evidence:

(1) the extent and nature of the person's past criminal activity;

(2) the age of the person at the time of the commission of the crime;

(3) the amount of time that has elapsed since the person's last criminal activity;

(4) the conduct and work activity of the person prior to and following the criminal activity;

(5) evidence of the person's rehabilitation or rehabilitative effort while incarcerated or following release; and

(6) other evidence of the person's present fitness, including letters of recommendation from:

(A) prosecution, law enforcement, and correctional officers who prosecuted, arrested, or had custodial responsibility for the person;

(B) the sheriff or chief of police in the community where the person resides; and

(C) any other persons in contact with the convicted person.

(b) It shall be the responsibility of the applicant to the extent possible to secure and provide to the commission as required the recommendations of prosecution, law enforcement, and correctional authorities as required by statute and these rules upon request by the commission staff. The applicant shall upon request also furnish:

(1) a copy of the indictment, information or complaint;

(2) a copy of the judgement(s) or order(s) of the court adjudicating guilt, granting probation, community supervision, deferred adjudication, or discharge from probation or community supervision;

(3) a record of steady employment in the form of a letter from current or former employers;

(4) a record that the applicant has supported his or her dependents in the form of a letter from a person in the applicant's community with personal knowledge of the circumstances;

(5) evidence that the applicant has paid all outstanding court costs, supervision fees, fines, and restitution as may have been ordered in all criminal cases in which he or she has been convicted, in the form of copies of official records, documents, or a letter from the person's probation or parole officer where applicable concerning his or her current status; and

(6) a copy of the police or offense report(s).

§403.11 Procedures for Suspension, Revocation, or Denial of a Certificate to Persons with Criminal Backgrounds

(a) If the commission proposes to suspend, revoke, limit, or deny a certificate based on the criteria in this chapter, the commission shall notify the individual per Government Code, Chapter 2001. The notice of intended action shall specify the facts or conduct alleged to warrant the intended action.

(b) If the proposed action is to limit, suspend, revoke, or refuse to renew a current certificate, or deny an application for a new certificate, a written notice of intended action shall comply with the preliminary notice requirements of Government Code §2001.054(c). The individual may request, in writing, an informal conference with the commission staff in order to show compliance with all requirements of law for the retention of the certificate, pursuant to Government Code §2001.054(c). A written request for an informal staff conference must be submitted to the division director no later than 15 days after the date of the notice of intended action. If the informal staff conference does not result in an agreed consent order, a formal hearing shall be conducted in accordance with the Administrative Procedure Act, Government Code, Chapter 2001.

(c) If the individual does not request an informal staff conference or a formal hearing in writing within the time specified in this section, the individual is deemed to have waived the opportunity for a hearing, and the proposed action will be taken.

(d) If the commission limits, suspends, revokes, or denies a certificate under this chapter, a written notice shall be provided to the person that includes:

(1) the reasons for the decision;

(2) that the person may appeal the decision to the commission in accordance with §401.63 of this title (relating to Final Decision and Orders) within 30 days from the date the decision is final and appealable;

(3) that the person, after exhausting administrative appeals, may file an action in a district court of Travis County, Texas, for judicial review of the evidence presented to the commission and its decision; and that such petition must be filed with the court no later than 30 days after the commission action is final and appealable.

§403.15 Report of Convictions by an Individual or a Department

(a) A certificate holder must report to the commission, any conviction, other than a minor traffic offense (Class C misdemeanor) under the laws of this state, another state, the United States, or a foreign country, within 14 days of the conviction date.

(b) A regulated entity or local government entity shall report to the commission, any conviction of a certificate holder other than a minor traffic offense (class C misdemeanor) under the laws of this state, another state, the United States, or foreign country, that it has knowledge of, within 14 days of the conviction date.

(c) A certificate holder is subject to suspension, revocation, or denial of any or all certifications for violation of the requirements of subsection (a) of this section. Each day may be considered a separate offense.

(d) A regulated entity or government entity regulated by the commission violating subsection (b) of this section may be subject to administrative penalties of up to \$500. Each day may be considered a separate offense.

(e) Notification may be made by mail, e-mail or in-person to the Texas Commission on Fire Protection
AGENDA ITEM NUMBER 13 WITH RELEVANT ATTACHMENTS CONTINUED

13. Proposed rule review for the following:

B. 37 TAC, Chapter 421, Standards for Certification.

TITLE 37 PUBLIC SAFETY AND CORRECTIONS

PART 13 TEXAS COMMISSION ON FIRE PROTECTION

CHAPTER 421 STANDARDS FOR CERTIFICATION

§421.1 Procedures for Meetings

The Commission may maintain advisory committees and ad hoc committees to assist with rulemaking, curriculum development, and the performance of the Commission's duties. Rules related to these committees are outlined in the 37 Texas Administrative Code (TAC), Chapter 463, Advisory Committees, Practices and Procedures.

§421.3 Minimum Standards Set by the Commission

(a) General statement. It shall be clearly understood that the specified minimum standards described in this section are designated as a minimum program. Employing entities are encouraged to exceed the minimum program wherever possible. Continuous in-service training beyond the minimum standards for fire protection personnel is strongly recommended. Nothing in these regulations shall limit or be construed as limiting the powers of the Civil Service Commission, or the employing entity, to enact rules and regulations which establish a higher standard of training than the minimum specified, or which provides for the termination of the services of unsatisfactory employees during or upon completion of the prescribed probationary period.

(b) Functional position descriptions.

(1) Structural Fire Protection personnel. The following general position description for structural fire protection personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the fire fighter operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. Successfully complete a commission approved course; achieve a passing score on written and performance certification examinations; must be at least 18 years of age; generally, the knowledge and skills required show the need for a high school education or equivalent; ability to communicate verbally, via telephone and radio equipment; ability to lift, carry, drag, and balance weight equivalent to the average human weight; ability to interpret in English, written and oral instructions; ability to work effectively in high stress situations; ability to work effectively in an environment with loud noises and flashing lights; ability to function through an entire work shift; ability to calculate weight and volume ratios; ability to read and understand English language manuals including chemical, medical and technical terms, and road maps; ability to accurately discern street signs and address numbers; ability to document in English, all relevant information in prescribed format in light of legal ramifications of such; ability to converse in English with coworkers and other emergency response personnel. Good manual dexterity with ability to perform all tasks related to the protection of life and property; ability to bend, stoop, and crawl on uneven surfaces; ability to withstand varied environmental conditions such as extreme heat, cold, and moisture; and ability to work in low or no light, confined spaces, elevated heights and other dangerous environments.

(B) Competency. A basic fire fighter must demonstrate competency handling emergencies utilizing equipment and skills in accordance with the objectives in Chapter 1 of the commission's Certification Curriculum Manual.

(2) Aircraft Rescue Fire Fighting personnel. The following general position description for aircraft rescue fire fighting personnel serves as a guide for anyone interested in understanding the qualifications, competencies,

and tasks required of aircraft rescue fire fighting personnel operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for basic structural fire protection personnel: familiarity with geographic and physical components of an airport; ability to use and understand communication equipment, terminology, and procedures utilized by airports; ability and knowledge in the application of fire suppression agents; and ability to effectively perform fire suppression and rescue operations.

(B) Competency. Basic fire fighting and rescue personnel must demonstrate competency handling emergencies utilizing equipment and skills in accordance with the objectives in Chapter 2 of the commission's Certification Curriculum Manual.

(3) Marine Fire Protection personnel. The following general position description for marine fire protection personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the marine fire fighter operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for basic structural fire protection personnel: familiarity with geographic and physical components of a navigable waterway; ability to use and understand communication equipment, terminology, and procedures used by the maritime industry; and knowledge in the operation of fire fighting vessels.

(B) Competency. A marine fire fighter must demonstrate competency in handling emergencies utilizing equipment and skills in accordance with the objectives in Chapter 3 of the commission's Certification Curriculum Manual.

(4) Fire Inspection personnel. The following general position description for fire inspection personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the fire inspector operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. Successfully complete a commission approved course; achieve a passing score on certification examinations; must be at least 18 years of age; generally, the knowledge and skills required to show the need for a high school education or equivalent; ability to communicate verbally, via telephone and radio equipment; ability to lift, carry, and balance weight equivalent to weight of common tools and equipment necessary for conducting an inspection; ability to interpret written and oral instructions; ability to work effectively with the public; ability to work effectively in an environment with potentially loud noises; ability to function through an entire work shift; ability to calculate area, weight and volume ratios; ability to read and understand English language manuals including chemical, construction and technical terms, building plans and road maps; ability to accurately discern street signs and address numbers; ability to document, in writing, all relevant information in a prescribed format in light of legal ramifications of such; ability to converse in English with coworkers and other personnel. Demonstrate knowledge of characteristics and behavior of fire, and fire prevention principles. Good manual dexterity with the ability to perform all tasks related to the inspection of structures and property; ability to bend, stoop, and crawl on uneven surfaces; ability to climb ladders; ability to withstand varied environmental conditions such as extreme heat, cold, and moisture; and the ability to work in low light, confined spaces, elevated heights, and other dangerous environments.

(B) Competency. A fire inspector must demonstrate competency in conducting inspections utilizing equipment and skills in accordance with the objectives in Chapter 4 of the commission's Certification Curriculum Manual.

(5) Fire Investigator personnel. The following general position description for fire investigator personnel

serves as a guide for anyone interested in understanding the qualifications, competencies, and task³²⁸ equired of the fire investigator operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. Successfully complete a commission approved course; achieve a passing score on certification examinations; be at least 18 years of age; generally, the knowledge and skills required to show the need for a high school education or equivalent; ability to communicate verbally, via telephone and radio equipment; ability to lift, carry, and balance weight equivalent to weight of common tools and equipment necessary for conducting an investigation; ability to interpret written and oral instructions; ability to work effectively with the public; ability to work effectively in a hazardous environment; ability to function through an entire work shift; ability to calculate area, weight and volume ratios; ability to read and understand English language manuals including chemical, legal and technical terms, building plans and road maps; ability to accurately discern street signs and address numbers; ability to document, in writing, all relevant information in a prescribed format in light of legal ramifications of such; ability to converse in English with coworkers and other personnel. Good manual dexterity with the ability to perform all tasks related to fire investigation; ability to bend, stoop, and walk on uneven surfaces; ability to climb ladders; ability to work in low light, confined spaces, elevated heights, and other potentially dangerous environments.

(B) Competency. A fire investigator or arson investigator must demonstrate competency in determining fire cause and origin utilizing equipment and skills in accordance with the objectives in Chapter 5 of the commission's Certification Curriculum Manual.

(6) Hazardous Materials Technician personnel. The following general position description for hazardous materials personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the hazardous materials technician operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for basic structural fire protection personnel: successfully complete a commission approved course; achieving a passing score on the certification examination; the ability to analyze a hazardous materials incident, plan a response, implement the planned response, evaluate the progress of the planned response, and terminate the incident.

(B) Competency. A hazardous materials technician must demonstrate competency handling emergencies resulting from releases or potential releases of hazardous materials, using specialized chemical protective clothing and control equipment in accordance with the objectives in Chapter 6 of the commission's Certification Curriculum Manual.

(7) Hazardous Materials Incident Commander personnel. The following general position description for Hazardous Materials Incident Commander serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Hazardous Materials Incident Commander operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for awareness and operations level personnel, the Hazardous Materials Incident Commander is an individual who has met all the job performance requirements of Hazardous Materials Incident Commander as defined in Chapter 8 of NFPA 472, Competence of Responders to Hazardous Materials Incidents/Weapons of Mass Destruction. The individual should demonstrate knowledge in the policies, plans, and procedures regarding hazardous materials response as adopted by the local jurisdiction; and all components of the incident command system and their proper utilization.

(B) Competency. In addition to the competencies of awareness and operations level personnel, a Hazardous

Materials Incident Commander must demonstrate competency in such areas as: analyzing an incident via the collection of information and an estimation of potential outcomes; planning appropriate response operations; implementing a planned response; evaluating the progress of a planned response and revising as necessary; terminating an incident; conducting a post-incident critique; and reporting and documenting an incident in a manner consistent with local, state, and federal requirements.

(8) Driver/Operator-Pumper personnel. The following general position description for driver/operatorpumper personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the driver/operator-pumper of a fire department pumper operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for basic structural fire protection personnel: ability to perform specified routine test, inspection, and maintenance functions; ability to perform practical driving exercises; ascertain the expected fire flow; ability to position a fire department pumper to operate at a fire hydrant; ability to produce effective streams; and supply sprinkler and standpipe systems.

(B) Competency. A driver/operator-pumper must demonstrate competency operating a fire department pumper in accordance with the objectives in Chapter 7 of the commission's Certification Curriculum Manual.

(9) Fire Officer I personnel. The following general position description for Fire Officer I personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Officer I operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for basic structural fire protection and Fire Instructor I personnel: the ability to supervise personnel, and assign tasks at emergency operations; the ability to direct personnel during training activities; the ability to recommend action for member-related problems; the ability to coordinate assigned tasks and projects, and deal with inquiries and concerns from members of the community; the ability to implement policies; the ability to perform routine administrative functions, perform preliminary fire investigation, secure an incident scene and preserve evidence; the ability to develop pre-incident plans, supervise emergency operations, and develop and implement action plans; the ability to deploy assigned resources to ensure a safe work environment for personnel, conduct initial accident investigation, and document an incident.

(B) Competency. A Fire Officer I must demonstrate competency in handling emergencies and supervising personnel utilizing skills in accordance with the objectives in Chapter 9 of the commission's Certification Curriculum Manual.

(10) Fire Officer II personnel. The following general position description for Fire Officer II personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Officer II operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications for Fire Officer I and Fire Instructor I personnel: the ability to motivate members for maximum job performance; the ability to evaluate job performance; the ability to deliver life safety and fire prevention education programs; the ability to prepare budget requests, news releases, and policy changes; the ability to conduct pre-incident planning, fire inspections, and fire investigations; the ability to supervise multi-unit emergency operations, identify unsafe work environments or behaviors, review injury, accident, and exposure reports.

(B) Competency. A Fire Officer II must demonstrate competency in supervising personnel and coordinating multi-unit emergency operations utilizing skills in accordance with the objectives in Chapter 9 of the commission's Certification Curriculum Manual.

(11) Fire Officer III personnel. The following general position description for Fire Officer III pers³³⁰nel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Officer III operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. A Fire Officer III is a midlevel supervisor who performs both supervisory and first-line managerial functions. In addition to the qualifications and competency for Fire Officer II, the Fire Officer III is an individual who has met all the job performance requirements of Fire Officer III as defined in Chapter 6 of NFPA 1021, Standard for Fire Officer Professional Qualifications. Typical duties of an individual at the Fire Officer III level include: establishing procedures for hiring, assignment, and professional development of personnel; developing public service/partnership and programs; preparing budgets and budget management systems; planning for organizational resource management; evaluating inspection and public safety programs and plans; managing multi-agency plans and operations; serving as Incident Commander at expanding emergency incidents for all hazard types; and developing and managing a departmental safety program.

(B) Competency. A Fire Officer III must demonstrate competency doing research; analyzing data and using evaluative techniques; developing proposals; developing, preparing, and implementing various procedures and programs within an organization; managing personnel resources; preparing and managing budgets; utilizing techniques to encourage personnel participation and development; and working in top-level positions within the incident command system.

(12) Fire Officer IV personnel. The following general position description for Fire Officer IV personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Officer IV operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. A Fire Officer IV is an upper level supervisor who performs both supervisory and managerial functions. In addition to the qualifications and competency for Fire Officer III, the Fire Officer IV is an individual who has met all the job performance requirements of Fire Officer IV as defined in Chapter 7 of NFPA 1021, Standard for Fire Officer Professional Qualifications. Typical duties of an individual at the Fire Officer IV level include: administering job performance requirements; evaluating and making improvements to department operations; developing long-range plans and fiscal projections; developing plans for major disasters; serving as Incident Commander at major incidents for all hazard types; and administering comprehensive risk management programs.

(B) Competency. A Fire Officer IV must demonstrate competency in appraising and evaluating departmental programs to ensure adherence to current laws and best practices; developing medium and long-range plans for organizations; and assuming a top-level leadership role in both the organization and community.

(13) Fire Service Instructor I personnel. The following general position description for Fire Service Instructor I personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Service Instructor I operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to successfully completing a commission approved course and achieving a passing score on the certification examination: must have the ability to deliver instructions effectively from a prepared lesson plan; the ability to use instructional aids and evaluation instruments; the ability to adapt to lesson plans to the unique requirements of both student and the jurisdictional authority; the ability to organize the learning environment to its maximum potential; the ability to meet the record-keeping requirements of the jurisdictional authority.

(B) Competency. A Fire Service Instructor I must demonstrate competency in delivering instruction in an

environment organized for efficient learning while meeting the record-keeping needs of the authority having jurisdiction, utilizing skills in accordance with the objectives in Chapter 8 of the commission's Certification Curriculum Manual.

(14) Fire Service Instructor II personnel. The following general position description for Fire Service Instructor II personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Service Instructor II operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to successfully completing a commission approved course, achieving a passing score on the certification examination, and meeting the qualifications for Fire Service Instructor I: the ability to develop individual lesson plans for a specific topic, including learning objectives, instructional aids, and evaluation instruments; the ability to schedule training sessions based on the overall training plan of the jurisdictional authority; the ability to supervise and coordinate the activities of other instructors.

(B) Competency. A Fire Service Instructor II must demonstrate competency in developing individual lesson plans; scheduling training sessions; and supervising other instructors, utilizing skills in accordance with the objectives in Chapter 8 of the commission's Certification Curriculum Manual.

(15) Fire Service Instructor III personnel. The following general position description for Fire Service Instructor III personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Service Instructor III operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to successfully completing a commission approved course, achieving a passing score on the certification examination, and meeting the qualifications for Fire Service Instructor II: the ability to develop comprehensive training curricula and programs for use by single or multiple organizations; the ability to conduct organizational needs analysis; and the ability to develop training goals and implementation strategies.

(B) Competency. A Fire Service Instructor III must demonstrate competency in developing comprehensive training curricula and programs; conducting organizational needs analysis; and developing training goals and implementation strategies, utilizing skills in accordance with the objectives in Chapter 8 of the commission's Certification Curriculum Manual.

(16) Incident Safety Officer personnel. The following general position description for Incident Safety Officer personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Incident Safety Officer operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. An Incident Safety Officer is an individual who has met the requirements of Fire Officer Level I specified in NFPA 1021, Standard for Fire Officer Professional Qualifications and Chapter 6 of NFPA 1521, Standard for Fire Department Safety Officer and has the knowledge, skill, and abilities to manage incident scene safety. Typical Incident Safety Officer duties include risk and resource evaluation; hazard identification and communication; action plan reviews; safety briefings; accident investigation; post incident analysis; and participation in safety committee activities.

(B) Competency. An Incident Safety Officer must demonstrate competency in management of incident scene safety through a working knowledge of the various emergency operations as prescribed by the local jurisdiction; an understanding of building construction; fire science and fire behavior; managing an organization's personnel accountability system; and incident scene rehabilitation methodology.

(17) Basic Wildland Fire Protection personnel. The following general position description for Basic Wildland

Fire Protection personnel serves as a guide for anyone interested in understanding the qualification³³, competencies, and tasks required of the Basic Wildland Fire Fighter operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. A Basic Wildland Fire Fighter is an individual who has met the requirements of Chapter 5 of NFPA 1051, Standard for Wildland Fire Fighter Professional qualifications, and should demonstrate knowledge in: wildland fire behavior; fireline safety and use; limitations of personal protective equipment; fire shelter use; fire suppression tactics and techniques in wildland settings; and have an understanding of the fire fighter's role within the local incident management system.

(B) Competency. A Basic Wildland Fire Fighter must demonstrate competency in such areas as: maintaining personal protective equipment and assigned fire suppression tools and equipment; the ability to quickly prepare for a response when notified; recognizing hazards and unsafe situations in a wildland fire; securing a fire line; mopping up a fire area; and patrolling a fire area so as to ensure fire control.

(18) Intermediate Wildland Fire Protection personnel. The following general position description for Intermediate Wildland Fire Protection personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Intermediate Wildland Fire Fighter operating in the State of Texas. It is ultimately the responsibility of an employer to define specific job descriptions within each jurisdiction.

(A) Qualifications. In addition to the qualifications and competency for the Basic Wildland Fire Fighter, the Intermediate Wildland Fire Fighter is an individual who has met the requirements of Chapter 6 of NFPA 1051, Standard for Wildland Fire Fighter Professional qualifications, and should demonstrate knowledge in: basic map reading; use of a locating device such as a compass; radio procedures as adopted by the local jurisdiction; and record keeping.

(B) Competency. An Intermediate Wildland Fire Fighter must demonstrate competency in such areas as: the ability to lead a team of fire fighters in the performance of assigned tasks while maintaining the safety of personnel; implementing appropriate fireline construction methods and other techniques for protection of exposed property; operation of water delivery equipment; securing an area of suspected fire origin and associated evidence; and serving as a lookout in a wildland fire.

(19) Plans Examiner personnel. The following general position description for Plans Examiner personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Plans Examiner operating in the State of Texas.

(A) Qualifications. A Plans Examiner is an individual who has met the requirements of Plans Examiner specified in NFPA 1030 (1031) Chapter 8, Standard for Professional Qualifications for Fire Prevention Program Positions.

(B) Competency. A Plans Examiner analyzes building construction, hazardous processes, and architectural drawings or plans to ensure compliance with building and fire codes. This individual is also charged with reviewing plans for new construction as well as modifications to existing structures to ensure that applicable fire and life safety codes are followed.

(20) Fire and Life Safety Educator I personnel. The following general position description for Fire and Life Safety Educator I personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire and Life Safety Educator I, operating in the State of Texas.

(A) Qualifications. A Fire and Life Safety Educator I is an individual who has met the requirements of Fire and Life Safety Educator I specified in NFPA 1030 (1035) Chapter 9, Standard for Professional Qualifications for Fire Prevention Program Positions.

(B) Competency. A Fire and Life Safety Educator I must demonstrate competency in the ability to³²³ ordinate and deliver existing educational programs and information designed to reduce risks within the community.

(21) Fire and Life Safety Educator II personnel. The following general position description for Fire and Life Safety Educator II personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire and Life Safety Educator II operating in the State of Texas.

(A) Qualifications. A Fire and Life Safety Educator II is an individual who has met the requirements of Fire and Life Safety Educator II specified in NFPA 1030 (1035) Chapter 10, Standard for Professional Qualifications for Fire Prevention Program Positions.

(B) Competency. A Fire and Life Safety Educator II must demonstrate competency in the ability to prepare educational programs and information to meet identified needs to reduce risks within the community.

(22) Fire Marshal personnel. The following general position description for Fire Marshal personnel serves as a guide for anyone interested in understanding the qualifications, competencies, and tasks required of the Fire Marshal operating in the State of Texas.

(A) Qualifications. A Fire Marshal is an individual who has met the requirements of Fire Marshal specified in NFPA 1030 (1037) Chapter 4 & 5, Standard for Professional Qualifications for Fire Prevention Program Positions.

(B) Competency. A person designated to provide delivery, management, or administration of fire-protectionand life-safety-related codes and standards, investigations, community risk reduction, education, or prevention services for local, county, state, provincial, federal, tribal, or private sector jurisdictions as adopted or determined by that entity.

§421.5 Definitions

The following words and terms, when used in the Standards Manual, shall have the following meanings, unless the context clearly indicates otherwise.

(1) Admission to employment--An entry level full-time employee of a local government entity in one of the categories of fire protection personnel.

(2) Appointment--The designation or assignment of a person to a discipline regulated by the commission. The types of appointments are:

(A) permanent appointment--the designation or assignment of certified fire protection personnel or certified part time fire protection employees to a particular discipline (See Texas Government Code, Chapter 419, §419.032); and

(B) probationary or temporary appointment--the designation or assignment of an individual to a particular discipline, except for head of a fire department, for which the individual has passed the commission's certification and has met the medical requirement of §423.1(c) of this title (relating to Minimum Standards for Structure Fire Protection Personnel), if applicable, but has not yet been certified. (See Texas Government Code, Chapter, §419.032.)

(3) Approved training--Any training used for a higher level of certification must be approved by the commission and assigned to either the A-List or the B-List. The training submission must be in a manner specified by the commission and contain all information requested by the commission. The commission will not grant credit twice for the same subject content or course. Inclusion on the A-List or B-List does not

preclude the course approval process as stated elsewhere in the Standards Manual.

(4) Assigned/work--A fire protection personnel or a part-time fire protection employee shall be considered "assigned/working" in a position, any time the individual is receiving compensation and performing the duties that are regulated by the commission and has been permanently appointed, as defined in this section, to the particular discipline.

(5) Assistant fire chief--The officer occupying the first position subordinate to the head of a fire department.

(6) Auxiliary fire fighter--A volunteer fire fighter.

(7) Benefits--Benefits shall include, but are not limited to, inclusion in group insurance plans (such as health, life, and disability) or pension plans, stipends, free water usage, and reimbursed travel expenses (such as meals, mileage, and lodging).

(8) Chief Training Officer--The individual, by whatever title he or she may be called, who coordinates the activities of a certified training facility.

(9) Class hour--Defined as not less than 50 minutes of instruction, also defined as a contact hour; a standard for certification of fire protection personnel.

(10) Code--The official legislation creating the commission.

(11) College credits--Credits earned for studies satisfactorily completed at an institution of higher education accredited by an agency recognized by the U.S. Secretary of Education and including National Fire Academy (NFA) open learning program colleges, or courses recommended for college credit by the American Council on Education (ACE) or delivered through the National Emergency Training Center (both EMI and NFA) programs. A course of study satisfactorily completed and identified on an official transcript from a college or in the ACE National Guide that is primarily related to Fire Service, Emergency Medicine, Emergency Management, or Public Administration is defined as applicable for Fire Science college credit, and is acceptable for higher levels of certification. A criminal justice course related to fire and or arson investigation that is satisfactorily completed and identified on an official transcript from a college or in the ACE National Guide may be used to qualify for Master Arson Investigator certification.

(12) Commission--Texas Commission on Fire Protection.

(13) Commission-recognized training--A curriculum or training program which carries written approval from the commission, or credit hours that appear on an official transcript from an accredited college or university, or any fire service training received from a nationally recognized source, i.e., the National Fire Academy.

(14) Compensation--Compensation is to include wages, salaries, and "per call" payments (for attending drills, meetings or answering emergencies).

(15) Expired--Any certification that has not been renewed on or before the end of the certification period.

(16) Federal fire fighter--A person as defined in Texas Government Code, Chapter 419, §419.084(h).

(17) Fire chief--The head of a fire department.

(18) Fire department--A department of a local government that is staffed by one or more fire protection personnel or part-time fire protection employees.

(19) Fire protection personnel--Any person who is a permanent full-time employee of a fire department or governmental entity and who is appointed duties in one of the following categories/disciplines: fire suppression, fire inspection, fire and arson investigation, marine fire fighting, aircraft rescue fire fighting, fire training, fire education, fire administration and others employed in related positions necessarily or customarily appertaining thereto.

(20) Fire Code Inspection--Also called Fire Safety Inspection as referenced in Texas Government Code, Chapter 419, §419.909. An inspection performed for the purpose of determining and enforcing compliance with an adopted fire code.

(21) Fire suppression duties--Engaging in the controlling or extinguishment of a fire of any type or performing activities which are required for and directly related to the control and extinguishment of fires or standing by on the employer's premises or apparatus or nearby in a state of readiness to perform these duties.

(22) Full-time--An officer or employee is considered full-time if the employee works an average of 40 hours a week or averages 40 hours per week or more during a work cycle in a calendar year. For the purposes of this definition paid leave will be considered time worked.

(23) Government entity--The local authority having jurisdiction as employer of full-time fire protection personnel in a state agency, incorporated city, village, town or county, education institution or political subdivision.

(24) High school--A school accredited as a high school by the Texas Education Agency or equivalent accreditation agency from another jurisdiction.

(25) Immediately dangerous to life or health (IDLH)--An atmosphere that poses an immediate threat to life, would cause irreversible adverse health effects, or would impair an individual's ability to escape from a dangerous atmosphere.

(26) Incipient stage fire--A fire which is in the initial or beginning stage and which can be controlled or extinguished by portable fire extinguishers, Class II standpipe or small hose systems without the need for protective clothing or breathing apparatus.

(27) Instructor:

(A) Lead Instructor--Oversees the presentation of an entire course and assures that course objectives are met in accordance with the applicable curriculum or course material. The lead instructor should have sufficient experience in presenting all units of the course so as to be capable of last-minute substitution for other instructors.

(B) Instructor (also Unit Instructor for wildland courses)--Responsible for the successful presentation of one or more areas of instruction within a course, and should be experienced in the lesson content they are presenting.

(C) Guest Instructor--An individual who may or may not hold Instructor certification but whose special knowledge, skill, and expertise in a particular subject area may enhance the effectiveness of the training in a course. Guest instructors shall teach under the endorsement of the lead instructor.

(28) Interior structural fire fighting--The physical activity of fire suppression, rescue or both, inside of buildings or enclosed structures which are involved in a fire situation beyond the incipient stage. (See 29 CFR §1910.155.)

(29) Military active duty (or active duty)--Current full-time military service in the armed forces of the United States, or full-time military service as a member of the Texas military forces or a similar service of another state.

(30) Military service member--A person who is on active duty.

(31) Military spouse--A person who is married to a military service member.

(32) Military veteran--A person who has served on active duty and who was discharged or released from active duty.

(33) Municipality--Any incorporated city, village, or town of this state and any county or political subdivision or district in this state. Municipal pertains to a municipality as defined in this section.

(34) National Fire Academy semester credit hours--The number of hours credited for attendance of National Fire Academy courses is determined as recommended in the most recent edition of the "National Guide to Educational Credit for Training Programs," American Council on Education (ACE).

(35) National Fire Protection Association (NFPA)--An organization established to provide and advocate consensus codes and standards, research, training, and education for fire protection.

(36) National Wildfire Coordinating Group (NWCG)--An operational group designed to establish, implement, maintain, and communicate policy, standards, guidelines, and qualifications for wildland fire program management among participating agencies.

(37) Non-self-serving affidavit--A sworn document executed by someone other than the individual seeking certification.

(38) Participating volunteer fire fighter--An individual who voluntarily seeks certification and regulation by the commission under the Texas Government Code, Chapter 419, Subchapter D.

(39) Participating volunteer fire service organization--A fire department that voluntarily seeks regulation by the commission under the Texas Government Code, Chapter 419, Subchapter D.

(40) Part-time fire protection employee--An individual who is appointed as a part-time fire protection employee and who receives compensation, including benefits and reimbursement for expenses. A part-time fire protection employee is not full-time as defined in this section.

(41) Personal alert safety system (PASS)--Devices that are certified as being compliant with NFPA 1982 and that automatically activates an alarm signal (which can also be manually activated) to alert and assist others in locating a fire fighter or emergency services person who is in danger.

(42) Political subdivision--A political subdivision of the State of Texas that includes, but is not limited to the following:

(A) city;

(B) county;

- (C) school district;
- (D) junior college district;

- (E) levee improvement district;
- (F) drainage district;
- (G) irrigation district;
- (H) water improvement district;
- (I) water control and improvement district;
- (J) water control and preservation district;
- (K) freshwater supply district;
- (L) navigation district;
- (M) conservation and reclamation district;
- (N) soil conservation district;
- (O) communication district;
- (P) public health district;
- (Q) river authority;
- (R) municipal utility district;
- (S) transit authority;
- (T) hospital district;
- (U) emergency services district;
- (V) rural fire prevention district; and
- (W) any other governmental entity that:
- (i) embraces a geographical area with a defined boundary;
- (ii) exists for the purpose of discharging functions of the government; and
- (iii) possesses authority for subordinate self-government through officers selected by it.

(43) Pre-fire Planning--Also called a Pre-fire Survey. A walk-through performed by fire fighters for the purpose of gaining familiarity with a building, its contents, and its occupancy.

(44) Reciprocity for IFSAC seals and TEEX Pro Board certificates--Valid documentation of accreditation from the International Fire Service Accreditation Congress and the National Board on Fire Service Professional Qualifications issued by the Texas A&M Engineering Extension Service used for commission certification may only be used for obtaining an initial certification.

(45) Recognition of training--A document issued by the commission stating that an individual has³³⁸mpleted the training requirements of a specific phase level of the Basic Fire Suppression Curriculum.

(46) School--Any school, college, university, academy, or local training program which offers fire service training and included within its meaning the combination of course curriculum, instructors, and facilities.

(47) Structural fire protection personnel--Any person who is a permanent full-time employee of a government entity who engages in fire fighting activities involving structures and may perform other emergency activities typically associated with fire fighting activities such as rescue, emergency medical response, confined space rescue, hazardous materials response, and wildland fire fighting.

(48) Trainee--An individual who is participating in a commission approved training program.

(49) Volunteer fire protection personnel--Any person who has met the requirements for membership in a volunteer fire service organization, who is assigned duties in one of the following categories: fire suppression, fire inspection, fire and arson investigation, marine fire fighting, aircraft rescue fire fighting, fire training, fire education, fire administration and others in related positions necessarily or customarily appertaining thereto.

(50) Volunteer fire service organization--A volunteer fire department or organization not under mandatory regulation by the commission.

(51) Years of experience--For purposes of higher levels of certification or fire service instructor certification:

(A) Except as provided in subparagraph (B) of this paragraph, years of experience is defined as full years of full-time, part-time or volunteer fire service while holding:

(i) a commission certification as a full-time, or part-time employee of a government entity, a member in a volunteer fire service organization, and/or an employee of a regulated non-governmental fire department; or

(ii) a State Firemen's and Fire Marshals' Association advanced fire fighter certification and have successfully completed, as a minimum, the requirements for an Emergency Care Attendant (ECA) as specified by the Department of State Health Services (DSHS), or its successor agency, or its equivalent; or

(iii) an equivalent certification as a full-time fire protection personnel of a governmental entity from another jurisdiction, including the military, or while a member in a volunteer fire service organization from another jurisdiction, and have, as a minimum, the requirements for an ECA as specified by the DSHS, or its successor agency, or its equivalent; or

(iv) for fire service instructor eligibility only, a State Firemen's and Fire Marshals' Association Level II Instructor Certification, received prior to June 1, 2008 or Instructor I received on or after June 1, 2008 or an equivalent instructor certification from the DSHS or the Texas Commission on Law Enforcement. Documentation of at least three years of experience as a volunteer in the fire service shall be in the form of a non self-serving sworn affidavit.

(B) For fire service personnel certified as required in subparagraph (A) of this paragraph on or before October 31, 1998, years of experience includes the time from the date of employment or membership to date of certification not to exceed one year.

§421.9 Designation of Fire Protection Duties

(a) An individual who performs one or more fire protection duties, listed in the Texas Government Code,

\$419.021(3)(C), for a fire department of local government entity shall be designated to only one of the following categories:

(1) fire protection personnel;

(2) a part-time fire protection employee; or

(3) a volunteer fire fighter or other auxiliary fire fighter.

(b) A fire department regulated by the Commission may not designate the same person under more than one category under this section. The designation shall be made on the records of the department and the designation shall be made available for inspection by the Commission or sent to the Commission on request.

(c) A fire department regulated by the Commission shall report the appointment of fire protection personnel to a regulated discipline via the Commission's online management program, or the appropriate form if available. Fire protection personnel who are assigned to a regulated discipline as part of their regularly assigned duties shall be appointed to that discipline with the Commission. No individual may be appointed to a discipline without approval by the Commission. The Commission shall not approve an initial appointment to a regulated discipline until it has reviewed and approved a person's fingerprint-based criminal history record. Termination of fire protection personnel or part-time fire protection employees shall be reported to the Commission's online management program, or the appropriate form if available within 14 calendar days of the action. In the case of termination, the employing entity shall report an individual's last known home address to the Commission. A Removal from Appointment form may be submitted without the employee's signature.

(d) A fire department may not in a calendar year compensate, reimburse, or provide benefits to a person the department has designated as a volunteer or other auxiliary fire fighter in an amount that is equal to or more than what a person receives working 2,080 hours at the federal minimum wage.

(e) A person certified as fire protection personnel in one fire department may be employed and designated as a part-time fire protection employee in another fire department without additional certification as a part-time fire protection employee.

§421.11 Requirement To Be Certified Within One Year

(a) Except for subsection (c) and (d) of this section, fire protection personnel or part-time fire protection employees of a fire department who are appointed duties identified as fire protection personnel duties must be certified by the commission in the discipline(s) to which they are assigned within one year of their appointment to the duties or within two years of successfully passing the applicable commission examination, whichever is less. The commission shall not approve an initial certification for a regulated discipline until it has reviewed and approved a person's fingerprint-based criminal history record. An individual who accepts appointment(s) in violation of this section shall be removed from the appointment(s) and will be subject to administrative penalties. A department or local government that appoints an individual in violation of this section will also be subject to administrative penalties.

(b) An individual who has been removed from appointment to duties identified as fire protection personnel duties for violation of this section must petition the commission in writing for permission to be reappointed to the duties from which they were removed. The petition will be considered only if the individual has obtained all appropriate certification(s) applicable to the duties to which the individual seeks reappointment.

(c) A military spouse may be appointed to fire protection personnel duties with a regulated fire department without being required to obtain the applicable certification, provided the military spouse submits the following to the commission prior to appointment and has received confirmation of approval from the

commission:

(1) notification to the commission of intent to perform regulated fire protection duties;

- (2) documentation of equivalent certification from another jurisdiction;
- (3) a fingerprint-based criminal history record using the commission approved system;
- (4) proof of residency in Texas; and
- (5) a copy of the individual's military identification card.

(d) A military spouse appointed to fire protection duties under this section may engage in those duties only for the period in which the military service member to whom the spouse is married is stationed at a military installation in Texas, but not to exceed three years from the date the military spouse receives approval from the commission to engage in those duties.

§421.13 Individual Certificate Holders

(a) Employment is not mandatory for certification. An individual may hold or renew any certificate issued by the commission for which they maintain their qualifications.

(b) An individual certificate holder must notify the commission of a change of his or her home address within 14 calendar days of a change of address.

§421.15 Extension of Training Period

A fire department may apply to the commission for an extension of the one-year training period, identified in §419.032(c) of the Government Code, for a time period not exceeding two years from the date of original appointment as follows:

(1) the request for extension shall be placed on the Fire Fighter Advisory Committee's (FFAC's) agenda to be heard at its next regular or special called meeting after submission of the request;

(2) after review by the FFAC, the application along with the FFAC's recommendations will be sent to the commission to be heard at its next regular meeting. If the request for extension is approved by the commission, the extension shall become effective immediately; and

(3) the one-year extension of training time, if granted, shall run from the date of forfeiture and removal or, at the latest, from one year after the original date training began, whichever occurs first.

§421.17 Requirement to Maintain Certification

(a) All full-time or part-time employees of a fire department or local government assigned duties identified as fire protection personnel duties must maintain certification by the commission in the discipline(s) to which they are assigned for the duration of their assignment.

(b) In order to maintain the certification required by this section, the certificate(s) of the employees must be renewed annually by complying with §437.5 of this title (relating to Renewal Fees) and Chapter 441 of this title (relating to Continuing Education) of the commission standards manual.

(c) Except for subsection (d) of this section, or upon determination by the Executive Director when special

circumstances are presented, an individual whose certificate has been expired for greater than one ³/₄ ar but no longer than five years, may renew their certification once they comply with the CE requirements for the period of time their certification was inactive, as outlines in 37 TAC, Chapter 441, Continuing Education, and they pay all applicable certification renewal fees for the period of time that their certification was inactive, as required in 37 TAC, Chapter 437, Fees. Individuals whose certification has been expired longer than five years, may not renew the certificate previously held. To obtain a new certification, an individual must meet the requirements in Chapter 439 of this title (relating to Examinations for Certification).

(d) A military service member whose certificate has been expired for three years or longer may not renew the certificate previously held. To obtain a new certification, the person must meet the requirements in Chapter 439 of this title. In order to qualify for this provision, the individual must have been a military service member at the time the certificate expired and continued in that status for the duration of the three-year period.

(e) The commission will provide proof of current certification to individuals whose certification has been renewed.

AGENDA ITEM NUMBER 14

14. Discussion and possible action regarding the recommendations from the Committee Member Selection Ad Hoc Committee regarding current vacancies on the Health and Wellness, Curriculum and Testing, and Firefighter Advisory Committees.

AGENDA ITEM NUMBER 15 WITH RELEVANT ATTACHMENTS

- 15. Matters from the Agency Chief:
 - A. Update regarding agency duties and responsibilities.
 - B. Decision of the Agency Chief in contested cases and consent orders.
 - C. Status regarding division functions:
 - v. Training Approval & Testing test administered, training approvals, record reviews, and online training audits **(please see attached)**.
 - vi. Certification & Professional Development training applications, IFSAC seals issued, certifications issued, training facilities, curriculum development, library resource requests **(please see attached)**.
 - vii. Compliance biennial inspections, compliance officers training, issues involving regulated entities **(please see attached)**.
 - viii. Information Technology public website design, FARM and FIDO improvements, CAPPS (Central Accounting Payroll/Personnel System), IT security policy, and service requests **(please see attached)**.

Commission Quarterly Report

Training Approval and Testing Section

- Test Administration, Training Approvals, Record Reviews, and Training Audits Statistics 3rd Quarter, FY 2024
 - Test Administration 9236 exams were administered during this quarter with a pass rate of 87%.
 - **Training Approvals** Total of **1155** training approvals were submitted with start dates during this quarter in the commission's Training Facility Management System.
 - Record Reviews One hundred eighty-eight (188) record reviews for equivalency were conducted (74 SFFMA/114 out of state, education, and Wildland). One hundred twenty-one (121) out of state, education and Wildland reviews were approved, six (6) were denied and two (2) are pending for additional information. Two hundred ninety-two (292 includes expired certifications and expired test scores) Qual numbers were issued in the Training Facility Management System.
 - Training and Skill Testing Audits Three (3) online training audits were conducted during the 3rd quarter. Two (2) had minor deficiencies noted such as no syllabus attached, no Instructor contact, no course schedule, no textbook information. One (1) was referred to compliance due to violations that were corrected with education. All issues were resolved in one or two days.
 - Online Testing Centers Added:

Southmost College - Brownsville Blinn College – Rellis Campus - Bryan

Activities for the Next Quarter:

Proceed with onboarding 3 additional testing centers (Odessa College – Pecos, Trinty Valley Community College – Terrell and Trinty Valley Community College – Palestine).

Conduct temporary provision testing for the new Fire Marshal certification which ends August 30, 2024.

**Written and Online Exams between March 1st – May 31st:

Online Exams: 5412 (Pass Rate 85.56%) Written Exams: 2532 (Pass Rate 90.11%)

2024 Score Avg. by Course Avg. by Course Avg. by Ouarter																			
	DEC 2023	JAN	FEB	MAR	APR	мау	JUN	JUL	AUG	SEP	ОСТ	NOV	Tracking	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	END OF YEAR AVERAGE %	END OF YEAR AVERAGE FOR ALL EXAMS
ARFF	100.00%	100.00%	96.61%	71.43%	100.00%	85.50%	76.00%							89.93%	85.64%	76.00%	#DIV/0!	#DIV/0!	#DIV/0!
AWS	84.60%	86.87%	90.74%	88.03%	91.40%	79.60%	81.70%	79.60%						85.32%	86.34%	80.65%	#DIV/0!	#DIV/0!	
BWFF	95.83%	93.48%	92.31%	85.71%	86.00%	80.10%	77.00%	81.40%						86.48%	83.94%	79.20%	#DIV/0!	#DIV/0!	
DOA	97.96%	98.80%	98.73%	98.91%	100.00%	85.90%	85.20%	86.30%						93.98%	94.94%	85.75%	#DIV/0!	#DIV/0!	
DOP	89.47%	87.58%	86.58%	85.05%	90.21%	79.10%	78.10%	77.70%						84.22%	84.79%	77.90%	#DIV/0!	#DIV/0!	
FF1	89.06%	86.71%	87.25%	93.98%	93.39%	76.00%	73.10%	78.00%						84.69%	87.79%	75.55%	#DIV/0!	#DIV/0!	
FF2	72.80%	77.57%	73.80%	77.30%	79.60%	75.80%	75.00%	74.10%						75.75%	77.57%	74.55%	#DIV/0!	#DIV/0!	
FLSE1	80.00%	81.82%	93.33%	100.00%	91.67%	84.00%	77.50%	83.10%						86.43%	91.89%	80.30%	#DIV/0!	#DIV/0!	
FLSE2	83.33%	100.00%	100.00%	100.00%	100.00%	80.30%	82.30%	68.00%						89.24%	93.43%	75.15%	#DIV/0!	#DIV/0!	
FM	93.62%	98.55%	95.08%	90.38%	98.46%	82.30%	82.80%	84.30%						90.69%	90.38%	83.55%	#DIV/0!	#DIV/0!	
HZIC	91.67%		0.00%		75.00%	69.00%	60.00%							45.84%	72.00%	60.00%	#DIV/0!	#DIV/0!	
IZMT	25.00%	60.00%	93.44%	66.67%	71.43%	78.70%	73.00%	71.20%						67.43%	72.27%	72.10%	#DIV/0!	#DIV/0!	
IC	96.97%	100.00%	100.00%	94.12%	92.31%	84.20%	85.80%	83.40%						92.10%	90.21%	84.60%	#DIV/0!	#DIV/0!	
INSP						76.30%	77.10%	78.90%						#DIV/0!	76.30%	78.00%	#DIV/0!	#DIV/0!	
NSP1	86.96%	80.85%	83.10%	83.72%	72.31%	75.00%	75.60%	75.30%						79.11%	77.01%	75.45%	#DIV/0!	#DIV/0!	
NSP2	54.84%	55.74%	69.14%	57.63%	52.63%	72.40%	70.50%	73.60%						63.31%	60.89%	72.05%	#DIV/0!	#DIV/0!	
NST1	92.50%	88.54%	91.03%	82.81%	88.46%	79.50%	77.20%	78.30%						84.79%	83.59%	77.75%	#DIV/0!	#DIV/0!	
NST2	97.53%	97.96%	100.00%	100.00%	98.00%	79.60%	83.40%	81.70%						92.27%	92.53%	82.55%	#DIV/0!	#DIV/0!	
NST3	88.89%	87.50%	90.91%	77.78%	81.25%	79.30%	74.30%	74.00%						81.74%	79.44%	74.15%	#DIV/0!	#DIV/0!	
INV	92.31%	84.21%	98.00%	75.00%	96.77%	84.80%	81.80%	80.90%						86.72%	85.52%	81.35%	#DIV/0!	#DIV/0!	
ISO	83.33%	87.10%	74.19%	82.14%	68.75%	74.10%	74.90%	75.60%						77.51%	75.00%	75.25%	#DIV/0!	#DIV/0!	
IWFF	20.00%	100.00%	100.00%	100.00%	50.00%		76.00%	60.00%						74.00%	75.00%	68.00%	#DIV/0!	#DIV/0!	
MAR			100.00%			76.00%							•	100.00%	76.00%	#DIV/0!	#DIV/0!	#DIV/0!	
OFF1	98.98%	98.68%	100.00%	100.00%	98.72%	86.90%	86.40%	85.40%						94.39%	95.21%	85.90%	#DIV/0!	#DIV/0!	
OFF2	88.24%	90.63%	89.58%	91.38%	95.83%	77.50%	77.30%	79.30%						86.22%	88.24%	78.30%	#DIV/0!	#DIV/0!	
OFF3	89.47%	82.35%	73.68%	90.48%	90.91%	77.30%	76.40%	74.00%						81.82%	86.23%	75.20%	#DIV/0!	#DIV/0!	
OFF4	76.92%	63.16%	75.00%	90.91%	90.00%	73.70%	79.20%	78.40%						78.41%	84.87%	78.80%	#DIV/0!	#DIV/0!	
OPS	75.79%	82.14%	81.28%	82.54%	87.84%	78.70%	79.60%	77.70%						80.70%	83.03%	78.65%	#DIV/0!	#DIV/0!	
PE1	60.00%	87.10%	100.00%	87.50%	70.00%	76.90%	76.80%	76.80%						79.39%	78.13%	76.80%	#DIV/0!	#DIV/0!	
-RRAO														#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
T-RRT														#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	
SFF						80.40%	79.90%	81.10%						#DIV/0!	80.40%	80.50%	#DIV/0!	#DIV/0!	

	Q1	Q2	Q3	Q4
Certification/Renewal:				
Professional Development Training Applications	2173	2193	2716	
Issued: IFSAC Seals	1860	1855	2271	
TCFP Certifications	4699	4356	5090	
Criminal History	591	663	1114	
Medical documents:	746	774	884	
Confirmation of Commissions (Peace Officer)	74	30	26	
Service time applications	89	51	85	
<u>Renewals:</u> Department Personnel	36676	63	10	
Certified Training Facilities	25	236	39	
Individual Certified Holders	15502	204	108	
Registered Seals: IFSAC	366	462	394	
TEEX Proboard	193	129	206	
Total number of Training Facilities	468	470	475	

Quarterly Report - Curriculum Development

<u>3rd Quarter Meeting Dates:</u>

4/18 ARFF Ad-Hoc Committee meeting

- NFPA and IFSAC updates
- Question review
- Standards Update

5/13 – 5/15 Inspector Ad-Hoc Committee meeting

- Consolidation updates
- Curriculum/ Standard updates
- Question review

Test Development and Test Bank Maintenance

- Updates/ Maintenance test to bank Ongoing all discipline
- Feedback questions Reviewed, Edited, or Archived Ongoing all discipline
- Question validation/ Reference updates Ongoing all discipline

Commission Quarterly Report Compliance/Investigation Division

Compliance Inspection Activity statistics:



Assisted an agency with identified upward trend in burn injuries.

Worked with testing to establish more on-line testing centers.

Training in Austin

TFCA Conference

Staffed TIFMAS EOC at TFS

8 Regional Meetings

Two compliance officers attended accident investigation course

Completed a "Big 7" investigation

Inspection files forwarded to compliance chief for further action: 7

IT Division report for 3rd quarter:

- TCFP Websites and Web Applications Uptime 99%
- IDF Server room improved with UPS and AC
- Exam Enhancements
 - Improved correlation sheets and question pools.
- FARM & FIDO
 - Added ability to add special instructors.
 - Enhanced IFSAC seals issuance.
- Tools/Public Website Developments
 - Updated Portal for IFSAC personnel monitoring.
 - Enhanced and automated website calendar updates (easy link)
 - Added open committee position page
 - Enhanced tools to manage regional meetings page
- Addressed 462 service requests (Tickets)

17. Personnel matters regarding the appointment, employment, compensation, evaluation, reassignment, and duties of the Agency Chief.

AGENDA ITEM NUMBER 17

17. Recognition of Commissioner Wilson for his service to the Commission.

18. Adjourn meeting.