

FEDERAL FIRE SAN DIEGO

HAZARDOUS MATERIALS TEAM TRACKER AND TASK BOOK



TASK BOOK ASSIGNED TO:

NAME AND RANK/TITLE

TASK BOOK INITIATED BY:

TRAINING CHIEF

DATE TASK BOOK INITIATED

FEDERAL FIRE DEPARTMENT SAN DIEGO

HAZARDOUS
MATERIALS OPERATOR
TASK BOOK

EFFECTIVE DATE

December 27, 2018

Fire & Emergency Services

Federal Fire Department San Diego "Metro"

And

International Association of Firefighters Local F-33

Agree to Hazardous Materials Operator Task book

Dated 27 December, 2018



San Diego Metro Fire Chief Mary Anderson

12/21/18

Date



Union President Local F-33 Michael Massone

12/21/18

Date

FEDERAL FIRE DEPARTMENT SAN DIEGO	COMPANY OFFICER TASK BOOK	EFFECTIVE DATE December 27, 2018
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INTRODUCTION

The Hazardous Materials Tools and Equipment Task book was developed to assist those Individuals who seek to work on the Federal Fire Department San Diego Hazardous Materials Team. The completion of this task book will allow the individual to effectively manipulate all the hazardous materials equipment and tools carried on HazMat 17.

The task book is designed to test your knowledge of the many specialized tools and equipment carried on HazMat 17. You will be expected to know the following for each tool and equipment. Additionally, the exact location, tool setup and operation, and all safety requirements will be required of you. The combination of continued coursework and team training will provide a foundation for further learning once assigned to the Hazardous Materials Team.

The individual's assigned Captain or Duty HazMat Captain for TAD personnel will have the responsibility for the Task Book Program. Verification of the individuals training will require specific knowledge and ability to use tools and equipment on HazMat 17. Training will be conducted by In Service Hazardous Materials Team Members.

Once Completed the Individual should have a comprehensive understanding of the tools and equipment carried on the Hazardous Materials vehicle. Additionally the individual should be able to effectively identify and operate all tools and equipment assigned.

SECTION I

ISSUED EQUIPMENT (IF APPLICABLE)

- HM Jumpsuit
- Duffle Gear Bag (Black)

Manufacture Date: _____

Date Issued: _____

INDOCTRINATION

- Review and understand the responsibility of a supplemental / Permanent Haz Mat Team member.
- Understand our roll of the “joint powers of agreement” for the (HIRT) Hazardous Incident Response Team. Haz Mat. (Captains will define your roll.)
- Understand and describe information in the Hazardous Materials Standard Operating Procedures. (Engineers and Captains assigned MUST have thorough knowledge.)
- Review Incident Action Plan and site safety Forms.
- Review CFR 29 1910.120
- Understand Commitment to the Haz Mat Team

SECTION II

CHEMICAL DETECTION EQUIPMENT

HAZCAT KIT AND PROCESS

▪ Under Safety Precautions:

1. When sampling an effervescing material in a test tube, do not place what on the test tube (_____) OR PLUG
2. Give samples to assist for respirator protection during HazCat identification system SCBA OR (_____)
3. Give samples to assist for dermal protection during HazCat identification system for chemical and thermal protection (_____) AND STRUCTURE GLOVE DURING USE WITH PROPANE TORCH
4. Give samples to assist for eye protection during HazCat identification system- (_____) GLASSES, GOGGLES, OR LAB FACESHIELD

INITIALS

▪ Describe two main physical substances the HazCat kit is designed to identify

1. LIQUID and
2. (_____)

INITIALS

▪ Demonstrate minimally, the following LIQUID identification sampling techniques and interpret findings, both as tester and reader:

1. Oxidizer Test
2. Peroxide Test
3. Water Solubility Test
4. pH Test
5. Combustibility Test
6. Char Test

INITIALS

▪ Demonstrate minimally, the following SOLID identification sampling techniques and interpret findings, both as tester and reader:

1. Oxidizer Test
2. pH Test
3. Water Solubility Test
4. Char Test
5. Char Hairpin Test

INITIALS

TRUDEFENDER FTX

- Under Safety Precautions
 1. Perform Self-Test
 2. Demonstrate use
 3. The TruDefender FTIR Identifies up to 32,000 substances. Demonstrate how to add/delete a chemical into its substance library.
 4. Interpret scan results? Identify the different color results and explain there meanings.
 5. Demonstrate the validation process for the TruDefender FTIR and explain why this process takes place.
 6. The TruDefender FTIR utilizes (_____) sensor which allows effective substance assessment of chemicals that may have been contaminated with more than one material, like water or dirt. How does this technology benefit the technician and is this equipment capable of being utilized down range?
 7. Describe the communication technology available on the TruDefender FTIR?

INITIALS

MULTIRAE PRO MULTI-THREAT MONITOR

1. Demonstrate Calibration procedures (Multi Sensor/Single Sensor)
 - Fresh Air Calibration
 - Zero Calibration
 - Span Calibration
 - Bump (Functional) Test
 - PID Calibration
 2. Demonstrate basic operation
 - Check calibration status
 - Test Alarm indicators
 - Pump Status
 - operate backlight
 - interpret readings to HZ team member
 3. The MultiRAE Pro combines a PID (photoionization Detector) with the standard four gases of a confined space monitor. Name the four (4) gases and what specific Smart Sensor gases we carry on HZ 17?
 4. Change sensors.
 5. Clean / Change PID bulb with appropriate cleaner
 6. What is the eVoltage for the PID bulb? _____ eV (It's important for gas conversions.)
 7. There are five alarms High alarm, Low alarm, _____ alarm, _____ alarm & _____ .
 8. The MultiRAE Pro has many applications from a Haz Mat Stand point describe what the applications are as a member of the Haz Mat team?
- _____
9. Describe what type of battery pack the MultiRAE Pro utilizes and how is the long battery life under normal operating use?

INITIALS

THERMAL IMAGE CAMERA (BULLARD T4MAX)

1. Demonstrate use
2. Explain the function of the Relative Heat Indicator (RHI)?
3. Explain the Super Red Hot feature?
4. What is the Battery Life of the NiMH Battery Pak?

INITIALS

MSA SAFESITE

1. Describe the basic Operation of the SafeSite
2. Explain the deployment of the SafeSite
3. What is the battery life of the Lithium Ion Batteries?
4. How many MTX Detectors can be wirelessly linked to the SafeCOM Command Center?
5. Aside from the CBRNE capabilities what specific sensors would be beneficial for FFSD to have available for OUR specific hazards?

Name 3 (_____) (_____) (_____).

INITIALS

WAHL HEAT GUN

1. How does the Heat Spy get a temperature reading? Through infrared energy; Objects have a certain amount of energy that they radiate which the Heat Spy absorbs and can put a temperature reading on.
2. What types of surfaces can the Heat Spy be used on? Opaque surfaces; transparent plastic surfaces that have a thickness greater than .020
3. What types of surfaces can the Heat Spy NOT be used on? (_____) (due to its ability to absorb IR energy)
4. What powers the Heat Spy, and where is the power source located? (___) 9-Volt battery, located in the handle
5. What will you see if the power source is low? "_____" on the display
6. Where are the filters located? (_____)
7. What does the infrared lamp do? Reduces reflections from shiny surfaces, and reduces effects of atmospheric CO2 and H2O

INITIALS

CHEMICAL, BIOLOGICAL, RADIOLOGICAL, NUCLEAR EXPLOSION (CBRNE)

JOINT CHEMICAL AGENT DETECTOR (JCAD M4)

1. Explain what the major components of the JCAD are?
2. What are the 3 modes of operation? *CW-5 CW-1 TIC*
3. Explain the operation of the JCAD?
4. What is the Sieve pack utilized for? *Moisture Control*
5. Explain what the audible and visual indicators are?
6. Demonstrate the Confidence test?

INITIALS

PRO STRIP-5T BIOLOGICAL TEST STRIP

1. The Pro strip is a hand held Assay (HHA) for rapid quantitative detection of anthrax, Ricin, Botulinum toxin, Y. Pestis and SEB. A laboratory conformation evaluation is recommended.
2. Demonstrate the proper use and operation of the HHA using an expired test packet.
3. Interpret final readings of a test HHA

INITIALS

RADEYE B20

1. Describe the major components of the RadEye B20
2. Describe the types of radiation RadEye B20 detects
3. Demonstrate how to turn on unit and perform functional test.
4. identify the uses of the Radeye B20

INITIALS

WMD SCREENING SYSTEM

1. Complete identical process as HAZCAT Kit

INITIAL

NEUTRON RAE II PERSONAL MONITER

1. Issued to HazMat personnel only
2. What radiation sources are detected by RAE II?
3. Demonstrate how to turn on monitor and set up for belt wear.
4. Demonstrate how to identify LOW and HIGH alarms.
5. Demonstrate how to change batteries in unit.
6. Describe the purpose of this piece of equipment.

INITIAL

RADIOLOGICAL DOSIMETER MK 2 EPD (THERMO ELECTRON CORPS)

1. Sensitive to Beta, Gamma, and X-Ray Radiation
2. Dose Rate Specific
3. 10 Year data retention without battery
4. Powered by one (1) "AA" battery
5. Display and function controlled by single button on front

INITIAL

DRAEGER CIVIL DEFENSE SIMULTEST KIT (CDS)

1. The Draeger CDS Kit is designed to provide a rapid ID of a chemical agent using specially designed and calibrated detector tubes.
2. Identify Major components of CDS Kit
3. Accuro Pump is used for sampling with Draeger tubes
4. Pump Draws (100cc) of air through the simultaneous Test Sets on each pump stroke
5. Simultaneous Test Sets contain 2 separate quantitative sets.
6. Each set consists of five (5) specially calibrated detector tubes.
7. This system allows for very rapid determination of eight (8) chemical warfare agents
8. Perform the operation of the Draeger CDS .
9. Utilizing the laminated cards identify the test results of the test tubes.

INITIAL

IDENTIFINDER 2 RADIATION DETECTION DEVICE.

1. Hand held electronic monitoring device.
2. User friendly light weight device, that is ready to operate within _____.
3. The identiFINDER 2 can detect, quickly locate, measure, and Identify sources of radiation.
4. Housing assembly has a large view window, with a three key pad, for easy program navigation.
5. IdentiFINDER 2 has a large ANSI N42.34 library to identify exact isotope present at scene.
6. Device has a stable _____ internal radiation source, for an easy calibration, as well reduces false alarms.
7. identiFINDER 2 has an onboard Bluetooth capability so operator can communicate to support team members.

COMMUNICATION

400 MHZ RADIO

1. Describe major components of Motorola XTS 500R
2. Perform tasks:
 - Radio check
 - Channel Changing
 - Zone Changing
 - Channel Scanning
 - Emergency channel activation
 - Proper radio communication skills

INITIAL

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800 MHZ RADIO

1. Describe major components of Motorola XTS 500R
2. Perform tasks:
 - Radio check
 - Channel Changing
 - Zone Changing
 - Channel Scanning
 - Emergency channel activation
 - Proper radio communication skills

INITIAL

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SCOTT HAZMAT RADIOCOM SYSTEM

1. Interfaces with Motorola XTS 500R
2. Perform installation of system and effectively communicate with the HazMat RadioCom
3. Allows for clear communication in an IDLH environment
4. Intrinsically safe for Explosive environment
5. Push-to-talk button is oversized for use with gloved hand
6. Power system runs off the battery of the user's radio.

INITIAL

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VERIZON HAZ MAT CELL PHONE

1. Perform functions of the cell phone
2. Add / remove contacts
3. Call using a saved contact
4. Describe Station 17 policy on Phone handling

INITIAL

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CONTAINMENT EQUIPMENT AND SUPPLIES

CHLORINE KIT "A"

1. Describe Uses
2. Demonstrate methods used to detect chlorine leak
3. Demonstrate methods used to remedy leaks through the following areas :
 - Valve Packing Gland
 - Valve Seat
 - Valve Inlet Threads
 - Broken Off Valves
 - Blow Out Valves
 - Blown out Valve Stem Assembly
 - Fusible Plug
 - Applies Hood for Valve Device
 - Applies clamp For Fusible Plug
 - Applies Patch for Sidewall Leaks
 - Describe Basic Kit maintenance
 - Describe Kit Limitations

INITIAL

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CHLORINE KIT "B"

1. Describe Uses
2. Demonstrate methods used to detect chlorine leak
3. Demonstrate methods used to remedy leaks through the following areas
 - Valve Packing Gland
 - Valve Seat
 - Valve Inlet Threads
 - Broken Off Valves
 - Blow Out Valves
 - Blown out Valve Stem Assembly
 - Applies Hood for Valve Device
 - Applies clamp For Fusible Plug
 - Applies Patch for Sidewall Leaks
 - Describe Basic Kit maintenance
 - Describe Kit Limitations
 - Fusible Plug

INITIAL

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MERCURY SPILL KIT

1. Describe uses
2. Describe Safe Operation of Spill Kit

INITIAL

ABSORBENT PADS

1. Explain the proper uses of the assortment of absorbent pads HZ 17 Carries

INITIAL

PLUG AND DIKE

1. Describe product
2. POWDER MIXING WITH WATER TO FORM A CLAY LIKE SUBSTANCE
3. Describe uses
4. TEMPORARY PLUG FOR (_____) LEAKS (GASOLINE AND DIESEL)

INITIAL

PARATECH LEAK SEAL SYSTEMS

1. Describe uses
2. Demonstrate use and care
3. List sizes of air bags

INITIAL

OVER PACK DRUMS

1. 95-gallon plastic over pack
2. Demonstrate use and capabilities

INITIAL

PERSONAL PROTECTIVE EQUIPMENT

LEVEL A

1. Donning / Doffing
2. Care and maintenance
3. Equipment / Pressure testing
4. Complete obstacle course

INITIAL

LEVEL B

1. Donning / Doffing
2. Care and maintenance
3. Equipment / Pressure testing
4. complete obstacle course

INITIAL

LEVEL C

1. Donning / Doffing
2. Care and maintenance

INITIAL

GLOVES

1. Identify proper glove sets for different chemical hazards

INITIAL

BOOTS

1. Perform proper operation of equipment

INITIAL

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SCOTT SCBA 4.5

1. The SCOTT AIR-PAK self-contained breathing apparatus (SCBA) is a Respirator intended to provide respiratory protection to an individual when entering into, working in and exiting an objectionable, an IDLH atmosphere.
2. Identify the major components of the Scott 4.5
3. Describe the alarm systems associated with the breathing apparatus
4. Heads-up display provides a visual monitor of the air supply with Four lights that appear just below the face piece field of vision. A separate Low battery light warns the user that the batteries must be replaced. The Heads-up display detects cylinder pressure directly and is totally Independent of the VIBRALERT.
5. Perform a daily inspection of breathing apparatus
6. Describe the operation of the breathing apparatus in conjunction with a level "A" and Level" Haz Mat Suit

INITIAL

SCOTT HIPA

1. Cartridge filter respirator assembly
2. Provides protection from
 - Organic vapors
 - Acid Gas
3. Provides protection in a NON- IDLH Environment and Non-O2 Deficient applications.
4. Perform the proper Operation of the respirator assembly
5. Explain the Limitations of the Cartridge filter respirator assembly

INITIAL

DECONTAMINATION

BLEACH

1. Describe the proper Decontamination procedure for using Bleach

INITIAL

DAWN SOAP

1. Describe the proper Decontamination procedure for using Bleach

INITIAL

DQE QUICK RESPONSE DECON SHOWER

1. Four Shower Heads plus an Independent hand held sprayer for thorough decontamination
2. 150 Gallon Capacity
3. Water inlet is a standard garden hose

INITIAL

POP UP POOLS

1. Perform proper deployment of personal decon pools

INITIAL

NEUTRALIZING AGENTS

1. Neutralization is a simple chemical reaction through which hazardous materials such as acids, alkalis, aldehydes, etc. are converted into products that are, in most cases, safe for disposal as non-hazardous waste.
2. Be sure to adequately mix the neutralizing agent into all areas of the spill and check with pH paper for the desired range in order to stop the application of neutralizer. Before application begins assure the spill is static and cannot migrate. Always be careful in conducting the neutralization process.
3. Describe the proper steps needed to take to effectively neutralize a hazardous spill.

INITIAL

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TVI TENT

1. When you as a Technician level responder are called upon to perform formal Decon you will always have a technician level responder available usually in the former of "Decon team leader" you are also required to wear a level A suit but most likely will be outfitted in a fully encapsulated level B suit.
2. Perform the proper construction of a mass Decon Shower with FFSD Decon Team 110.

INITIAL

INFORMATION MANAGEMENT

CONTACTING DEPARTMENT OF ENVIRONMENTAL HEALTH

1. Perform a call back with County Health (619-778-3591) utilizing the Haz Mat Cell phone.

INITIAL

HAZARDOUS MATERIAL REPORTING SYSTEMS (IC 208)

1. Form IC 208 is located in cab of HZ17
2. Form IC 214 is located in cab of HZ17
3. Properly fill out form as the Technical Reference Operator

INITIAL

HAZARDOUS MATERIAL INCIDENT COMMAND SYSTEM

1. Describe the Hazmat Incident Command Branch
2. Define your roll in the Operations Division

INITIAL

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APPARATUS SUPPORT EQUIPMENT

WEEKLY EQUIPMENT CHECKS

- Describe HazMat 17 Function and shared responsibility with Rescue and Truck 17
- Describe use of:
 1. Generator
 - perform the steps to operate the generator
 - Describe the needs for the vehicle generator to operate as a hazardous materials Team
 2. Awning
 - Describe the setup procedures for a Haz Mat entry and the Awnings roll
 3. Winch
 4. Air supply / Power Reels
 5. Ranger Cascade Oxygen Filling Station
 6. Big Foot Stabilizing System
 7. Video Camera
 8. Light Tower

INITIAL