



# California Office of Emergency Services

## HazMat Team Typing Program For California



2 - 2014 Edition



# HazMat Team Typing Program for California



Presented by:  
**Jan Dunbar**

Division Chief  
Special Operations  
Fire Rescue Division



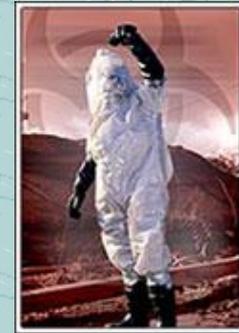
# Overview

- **FIRESCOPE**
- **ICS System**
- **State Master Mutual Aid**
- **Resource Typing**
- **HazMat Equipment List (SEL)**
- **HM Team Typing Criteria**
- **SEL**



# Overview (Cont)

- **Inspection Process**
- **Documentation & Reports**
- **Activation of Teams**
- **Grant Audit Program**



# FIRESCOPE

- **Firefighting Resources of California Organized for Potential Emergencies**

Development of an ALL-RISK Incident Management and Multi-Agency coordination system, to enhance and encourage full participation by the California fire service in the statewide Fire Rescue Mutual Aid System, and to develop and maintain the FIRESCOPE Incident Command System (ICS) and the Multi-Agency Coordination System (MACS).



# **FIRESCOPE**

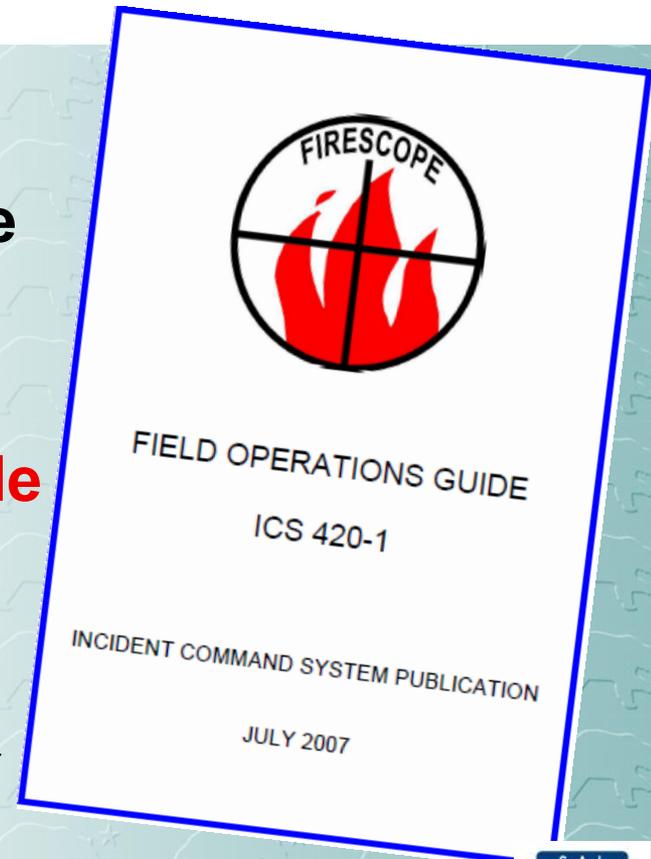
- **Formed about 1971**
- **Original Focus:**
  - **Develop and provide an ICS system and concept for Wildland Fires**
  - **Borrowed concepts and terminology from US Military (Army)**
  - **Management of 100's to 1000's of personnel (per incident)**
  - **Assignment of 100's to 1000's of resources**



# FIRESCOPE

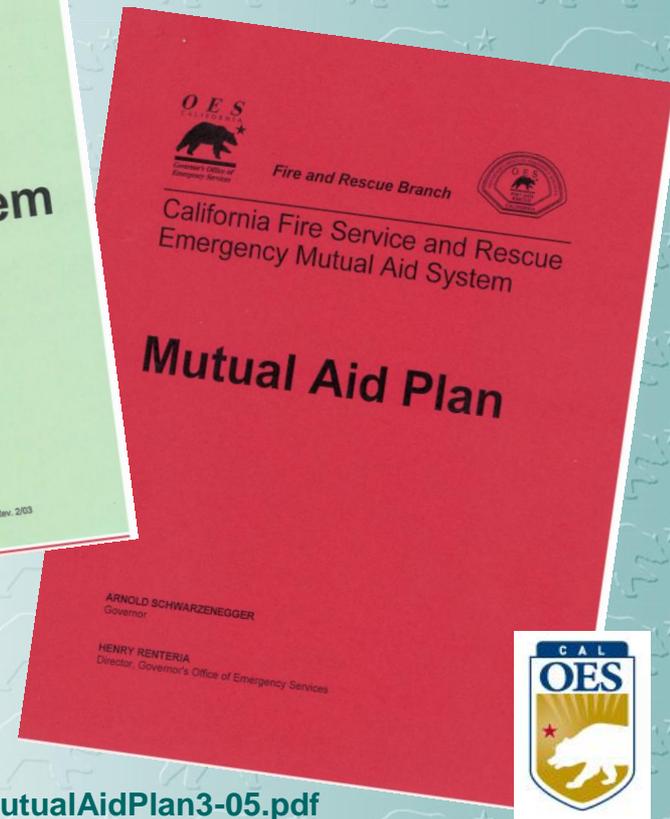
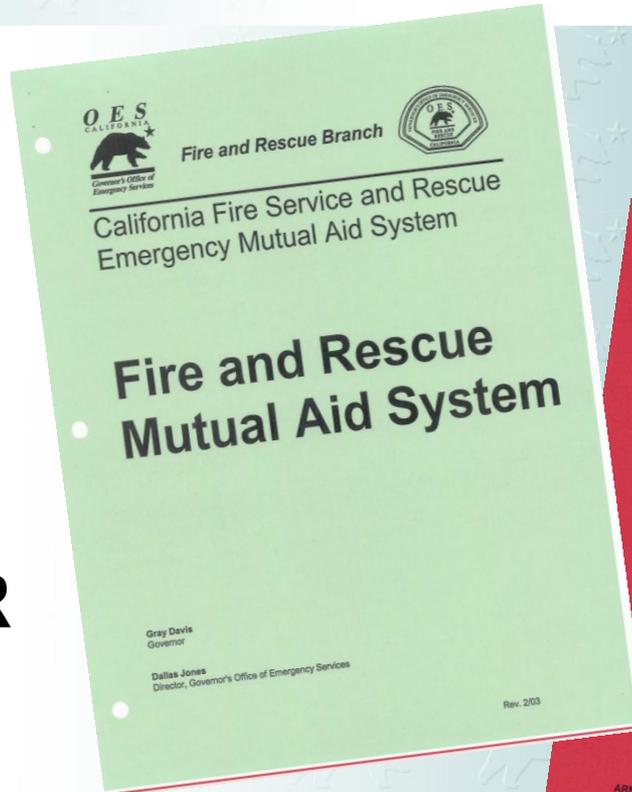
- **Extensions:**

- 1981 Developed “Hi-Rise” Module
- 1985 Developed “Swift Water Rescue” Module
- 1989 Developed **“Haz-Mat” Module**
- 1991 Developed “Multi-Casualty” Module
- 1993 Developed “Urban Search & Rescue” Module
- 2003 Developed “Terrorism” Module



# FIRESCOPE

- **MELD “ICS”  
INTO THE  
STATE MASTER  
MUTUAL AID  
SYSTEM:**



<http://www.chabotfire.com/CaliforniaMutualAidPlan.pdf>

[http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/FirePDFs/\\$file/MutualAidPlan3-05.pdf](http://www.oes.ca.gov/Operational/OESHome.nsf/PDF/FirePDFs/$file/MutualAidPlan3-05.pdf)



# RESOURCE TYPING

July 2007

ICS 420-1

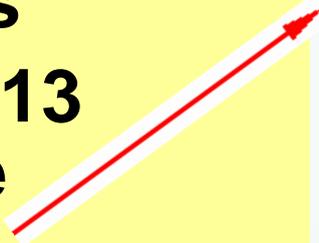
## PRIMARY MOBILE SUPPRESSION RESOURCES (Minimum ICS Standards)

RESOURCE	RADIO CALL	COMPONENTS	TYPES			
			1	2	3	4
Engine Company	Engine Telesquirt*	Pump Water Tank Hose 2 1/2" Hose 1 1/2" Hose 1" Ladder Master Stream Personnel	1,000GPM 400 Gal. 1,200 Ft. 400 Ft. 200 Ft. 20 Ft. Ext. 500 GPM 4	500 GPM 400 Gal. 1,000 Ft. 500 Ft. 300 Ft. 20 Ft. Ext. - 3	120 GPM 300 Gal. - 1,000 Ft. 800 Ft. - - 3	50 GPM 200 Gal. - 300 Ft. 800 Ft. - - 3
* Engine with elevated stream capability, specify when requested.						
Truck Company	Truck	Aerial (Specify platform or ladder), Elevated Stream, Ground Ladders, Personnel	75 Ft. 500 GPM 115 Ft. 4	50 Ft. 500 GPM 115 Ft. 4		
Water Tender	Water Tender	Pump Water Tank	300 GPM 2,000 Gal.	120 GPM 1,000 Gal.	50 GPM 1,000 Gal.	
Brush Patrol	Patrol	Pump -15 GPM Hose 1"-150 Ft. Tank -75 Gal. Personnel - 1				
Medical/Non Transport	Rescue, Squad, Medic Engine	Non Transport, capability and personnel determined by local EMS authority	ALS	BLS		
Medical/Transport	Ambulance, Medic	Transport, capability and personnel determined by local EMS authority	ALS	BLS		
Bulldozer	Dozer	Size Horse Power Operator Example(s):	Heavy 200 HP 1 D-7, D-8	Medium 100 HP 1 D-5, D-6	Light 50 HP 1 D-4	
Bulldozer Tender	Dozer Tender	Fuel-100 Gal				

- Resources
  - Based on Capability
- Typing
  - Based on numerous intervention “Criteria”
- Type “1”
  - Is always the highest capability



- **Three “Types”**
- **Based upon 13 Performance Criteria**



- **Field Testing**
- **Air Monitoring**
- **Sampling**
- **Radiological Detection**
- **CPC Ensembles**
- **CPC Gloves, Boots**
- **Technical Reference**
- **Special Intervention**
- **Decontamination**
- **Communications**
- **Respiratory Protection**
- **Training / Staffing**

## HAZARDOUS MATERIALS COMPANY TYPES

Components	Type 1	Type 2	Type 3
Field Testing	Known Chemicals	Known Chemicals	Known Chemicals
	Unknown Chemicals	Unknown Chemicals	
	WMD Chem / Bio		
Air Monitoring	Combustible Gas Oxygen Carbon Monoxide Hydrogen Sulfide	Combustible Gas Oxygen Carbon Monoxide Hydrogen Sulfide	Combustible Gas Oxygen Carbon Monoxide Hydrogen Sulfide
	Specialty Gases Hydrocarbon Liquid Vapors	Specialty Gases Hydrocarbon Liquid Vapors	
	WMD Chem / Bio		
Sampling: Capturing Labeling Evidence Collection	Known Chemicals	Known Chemicals	Known Chemicals
	Unknown Chemicals	Unknown Chemicals	
	WMD Chem / Bio		
Radiation Monitoring and Detection	Gamma	Gamma	Gamma
	Beta	Beta	Beta
	Alpha; Radionuclide		
Chemical Protective Clothing: Ensembles	Liquid-Splash Protective	Liquid-Splash Protective	Liquid-Splash Protective
	Vapor Protective	Vapor Protective	
	Flash Fire Vapor Protective	Flash Fire Vapor Protective	
	WMD Chem / Bio Vapor Protective		
	WMD Chem / Bio Liquid Splash Protective		
Chemical Protective Clothing: Gloves - Boots	NFPA Compliant Replacement	NFPA Compliant Replacement	NFPA Compliant Replacement
	Hi-Temp. Protective Gloves	Hi-Temp. Protective Gloves	
	Cryogenic Protective Gloves	Cryogenic Protective Gloves	
	Radiation Protection Gloves		
Technical Reference	Printed and Electronic	Printed and Electronic	Printed and Electronic
	Plume Air Modeling, Map Overlays	Plume Air Modeling, Map Overlays	
	WMD Chem / Bio Sources		

# RESOURCE TYPING

## HAZ-MAT TEAMS (Continued)

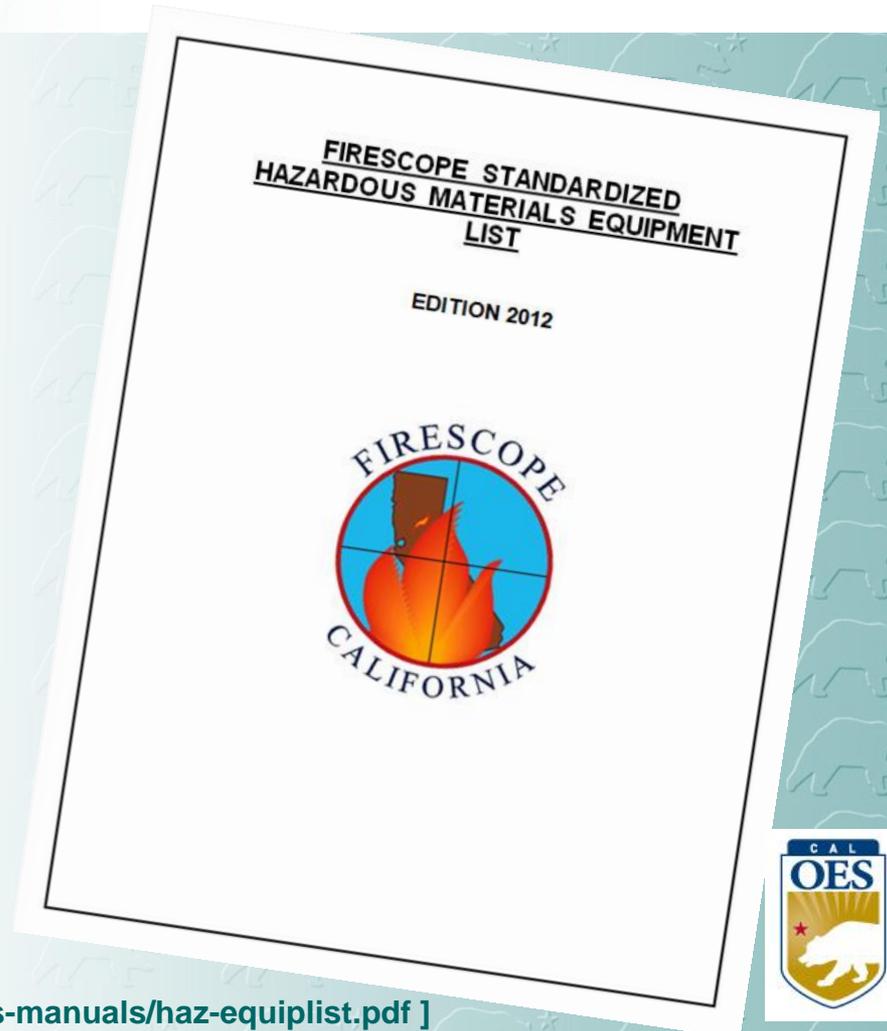
### IN A NUT SHELL:

- **Type 3 – Known Industrial Chemicals**  
**(Liquids, Solvents, Powders)**
- **Type 2 – Unknown Industrial Chemicals**  
**(Vapors, Gases, plus the above)**
- **Type 1 – WMD / CBRN Capabilities**  
**(Nuclides, plus all the above)**



# STANDARDIZED EQUIPMENT LIST (SEL)

- In 3 “Parts”
  - Introduction/Use
  - Equipment List
  - Appendicies (Eight)



# STANDARDIZED EQUIPMENT LIST (SEL)

- **PART 2 of SEL**
  - Equipment List Section
  - Includes a “Ground Floor” description for each Criteria
  - Includes itemized listing of equipment, each with its own specific description
  - Indicates Minimum Requirement
  - Indicates if the specific equipment item is required for each Team Type

**FIRESCOPE STANDARDIZED  
HAZARDOUS MATERIALS EQUIPMENT LIST**

**PART 2: LIST OF EQUIPMENT**

**1. FIELD TESTING and DETECTION**

Field Testing and Detection are procedures that can be employed in the field. They are utilized to support verification as to the possible presence of, or the specific identification of, industrial chemicals, WMD kits, individual testing paper strips, tickets, and packets, the use of colorimetric tube technology, and biological agent testing kits.

The objective of field testing is to employ an adequate and acceptable subjective testing procedure that will yield results with a high degree of credibility. The results should focus on at least verifying the presence of a substance, categorizing a substance according to chemical and physical property hazards, and occasionally identifying a substance by common or chemical name. Field testing category does not include instruments or devices for continuous survey. Continuous survey is included in the Air Monitoring category.

**1.1 Color Change Analysis - Non-Electronic [Sub-Category]**

Field testing employed to verify presence of suspect known substances. This type of analysis is also used to determine possible presence of unknown industrial chemicals, WMD chemicals and biological substances. This testing and detection process is largely predicated upon a “color change” technology. The results are often interpreted in a “yes – no” environment, such as employed by single use test paper, test strips, test cards, tickets, and coupons. This includes: pH paper, chemical specific test strips (i.e. formaldehyde, cyanides); chemical classification strips (i.e. nitrodes, nitrates, heavy metals); or chemical and physical property determination (i.e. oxidizer, water reactivity).

Inv. #:	Item Name and Description	Requirement	Certification Or Standard	Type I	Type II	Type III
1.1.1	TEST STRIPS, pH PAPER, Packets: To test acidity or alkalinity of aqueous solutions; 1" wide x 3" long nominal; Presence is based upon a color change.	1 Pkt		R	R	R
1.1.2	TEST STRIPS, OXIDIZER, Packets: Physical or chemical property sensitive; Presence is based upon a color change.	1 Pkt		Opt	Opt	Opt
1.1.3	TEST STRIPS, PEROXIDE, Packets: Physical or chemical property sensitive; Presence is based upon a color change.	1 Pkt		R	R	R
1.1.4	TEST STRIPS, CHEMICAL SPECIFIC, Packets: Additional industrial chemicals test strips, usually sensitive for chemical (i.e. formaldehyde, chloramines, organo-phosphate; halogen ions: chlorate, nitrate, cyanides, sulfite).	1 Pkt of each		R	R	R
1.1.5	TEST STRIPS, CHEMICAL SPECIFIC, Packets: Additional industrial chemicals test strips, usually sensitive for chemical (i.e. formaldehyde, chloramines, organo-phosphate; halogen ions: chlorate, nitrate, cyanides, sulfite).	1 Pkt of each		Opt	Opt	Opt
1.1.6	CLASSIFICATION, Kit: Single use kit for 5 or more ions or compounds (typically is a combination of the following: arsenic, sulfite, sulfide, nitrite, nitrate, potassium, lead, arsenic, organo-phosphates – depending on manufacturer); upon color change.	1 Kit		Opt	Opt	Opt

14



# STANDARDIZED EQUIPMENT LIST (SEL)

- Some of the 13 Criteria Sections are divided into smaller Sub-Sections

## PART 2: LIST OF EQUIPMENT 14

1.	<b>FIELD TESTING and DETECTION</b> .....	14
1.1	Color Change Analysis - Non-Electronic [Sub-Category].....	14
1.2	Qualitative Analysis, Kits - Non-Electronic [Sub-Category].....	15
1.3	Qualitative Analysis, Kits - Electronic [Sub-Category].....	16
1.4	Colorimetric Analysis - Non-Electronic [Sub-Category].....	17
1.5	WMD Biological Detection - Electronic.....	17
2.	<b>AIR MONITORING</b> .....	18

- Each with its own defining description

1.1.7	<b>TEST STRIPS, WATER QUICK TEST, Kit:</b> Test strip detects 6 or more common contaminants in water simultaneously (Typically chlorine ion, pH, alkalinity, hardness, nitrates, nitrites). Based upon color change.	1 Kit			Opt	Opt	Opt
1.1.8	<b>TEST STRIPS, WATER QUALITY, Kit:</b> More advanced test kit in addition to kit above, also tests for bacteria, ammonia, sulfates, free iron, free copper.	1 Kit			Opt	Opt	Opt
1.1.9	<b>TEST STRIPS, WMD CHEMICAL, Kit:</b> Military grade detection papers for field testing of liquids only: (i.e. "M-8" paper booklet of 25 sheets, which are also part of the M256A1 Kit, for nerve agents GA, GB, GD, GF VX and blister agents L, H, HD). Strip turns to one of four colors. (i.e. "3-WAY" adhesive paper booklet of 12 sheets; for some nerve agents, blister agents). Strip turns to one of three colors.	1 Pkt			R	NA	NA
1.1.10	<b>TEST PAPER, WMD CHEMICAL, Roll:</b> Military grade (i.e. "M-9" paper rolls, for nerve or blister agents). Presence is based upon a single color change, and does not distinguish between nerve agents and blister agents.	1 Pkt			R	NA	NA
1.1.11	<b>TEST PAPER, WMD CHEMICAL, Card:</b> Military M256A1 plastic card test kit (twelve disposable plastic test cards are part of the M256A1 kit; for nerve [GA, GB, GD, VX], blister [H, HD, CX, L], blood [AC, CQ] Presence is based upon color changes)	1 Kit			R	NA	NA
1.1.12	<b>TEST CARD, TRAINING ONLY, WMD CHEMICAL:</b> Military M256A1 Training Kit.	1 Kit			R	NA	NA
1.1.13	<b>TEST TICKET, NERVE AGENT ONLY, Sensor:</b> Applicable only for some nerve agents, color change based upon detection of organo-phosphate radicals, in air or water.	1 Package or Kit			R	NA	NA
1.1.14	<b>TEST TICKET, MUSTARD AGENT ONLY, Sensor:</b> Applicable only for mustard agents, color change based upon detection of chloroethyl radical, in air or water.	1 Package or Kit			Opt	NA	NA
1.1.15	<b>DETECTION, EXPLOSIVE SUBSTANCE, Kit:</b> Kit contains three sensor cards, each to test for a specific group of explosives (A - TNT, TMS DNT, picric acid; B - RDX, nitro dynamite, PETN, SEMTEX; C - ANFO, black powder, nitrates, gun powder, potassium chlorate). Positive results are based upon color change.	1 Package or Kit			Opt	Opt	NA
1.2	<b>Qualitative Analysis, Kits - Non-Electronic [Sub-Category]</b> A more advanced and disciplined qualitative analysis that incorporates numerous step-by-step procedures. Often assembled and marketed as complete stand-alone kits to detect presence of specific chemicals or verify chemical classes based on hazards, these kits are a compilation of numerous test procedures which may also be based upon color change comparison, including color changes in a liquid medium. Their inventory may incorporate detection papers comparison, including color changes in a liquid medium. Their inventory may incorporate detection papers and test strips, sensor tickets, a wide range of reagent vials, some colorimetric tubes, and step-by-step instruction booklets. Testing a known or unknown in accordance to a protocol may incorporate numerous test procedures, and each test procedure may include numerous test steps.						
Inv. #:	<b>Item Name and Description</b>	<b>Requirement</b>	<b>Certification Or Standard</b>	<b>Type I</b>	<b>Type II</b>	<b>Type III</b>	
1.2.1	<b>INDUSTRIAL CHEMICALS, KNOWN, Qualitative:</b> Test Kit, Qualitative analysis. For testing and detection of known industrial chemicals	1 Kit			NA	NA	R
1.2.2	<b>INDUSTRIAL CHEMICALS, UNKNOWN, Qualitative:</b> Test Kit, Qualitative analysis. For testing and detection of unknown industrial chemicals, not for biological substances. (Usually this is an advanced version of the kits listed in # 1.2.1). If included in inventory, satisfies requirement for 1.2.1.	1 Kit		R	R	Opt	



# STANDARDIZED EQUIPMENT LIST (SEL)

- **STANDARDS and CERTIFICATIONS**

- The SEL also indicates if any other certifying requirement applies to the specified equipment item, such as:



Underwriters  
Laboratories



# STANDARDIZED EQUIPMENT LIST (SEL)

## SOME EXAMPLES



Inv. #:	Item Name and Description	Requirement	Certification Or Standard	Type I	Type II	Type III
5.2.1	LIQUID SPLASH PROTECTIVE, NFPA 1992; Industrial Chemicals for liquid contact and splash protection (no vapor protection), can be jumpsuit style or multi-piece ensemble depending on manufacturer design.	6 – Type I Company	NFPA 1992	R	R	R
5.2.2	LIQUID SPLASH PROTECTIVE, with NFPA 1994 Class 3 WMD Chemical / Biological Protection: A separate NFPA 1994 Class 3 WMD Chemical / Biological Protection Ensemble which provides for liquid splash protection. Provides a lesser level of protection than selected to be in inventory, meets requirement for item 5.2.1.	4 – Type II Company or either type	NFPA 1994, Class 3	R	Opt	NA
9.1.3	ENCAPSULATING SPREADABLE POWDER – <u>General Purpose</u> (and suitable for Pesticides): Must be NON-CLAY based and NON-CLAY based solvents including pesticides. Nominal size 5-10 lbs dispenser box or bag. (Rev2008)	1 Container (Not "kittv diatomaceous earth) (Rev2008)	OSHA 29CFR 1910.119, or EPA 40CFR170 (Rev2008)	R	R	Opt
9.1.6	FIRE EXTINGUISHER, CLASS "D", Sodium Chloride formulation: Capacity 30 lbs; suited for metal fires of magnesium, sodium, potassium, calcium, and lithium alloys.	Must have at least ONE.	FM Approval	R	R	R
9.1.7	FIRE EXTINGUISHER, CLASS "D", Copper compound formulation: Capacity 30 Lbs minimum; suited for lithium, lithium alloys.	these two types will satisfy.	FM Approval	R	R	R

# HMRT INSPECTION PROGRAM

- **LETTER OF INVITE**
- **REQUEST AN INSPECTION**
- **IDENTIFY A “POINT OF CONTACT”**
- **SELECT RECOMMENDED DATE**
- **REVIEW INFORMATION PACKET**
- **REVIEW CD**
- **EQUIPMENT DISPLAY**
- **INSPECTION PROCESS**
- **DOCUMENTATION**



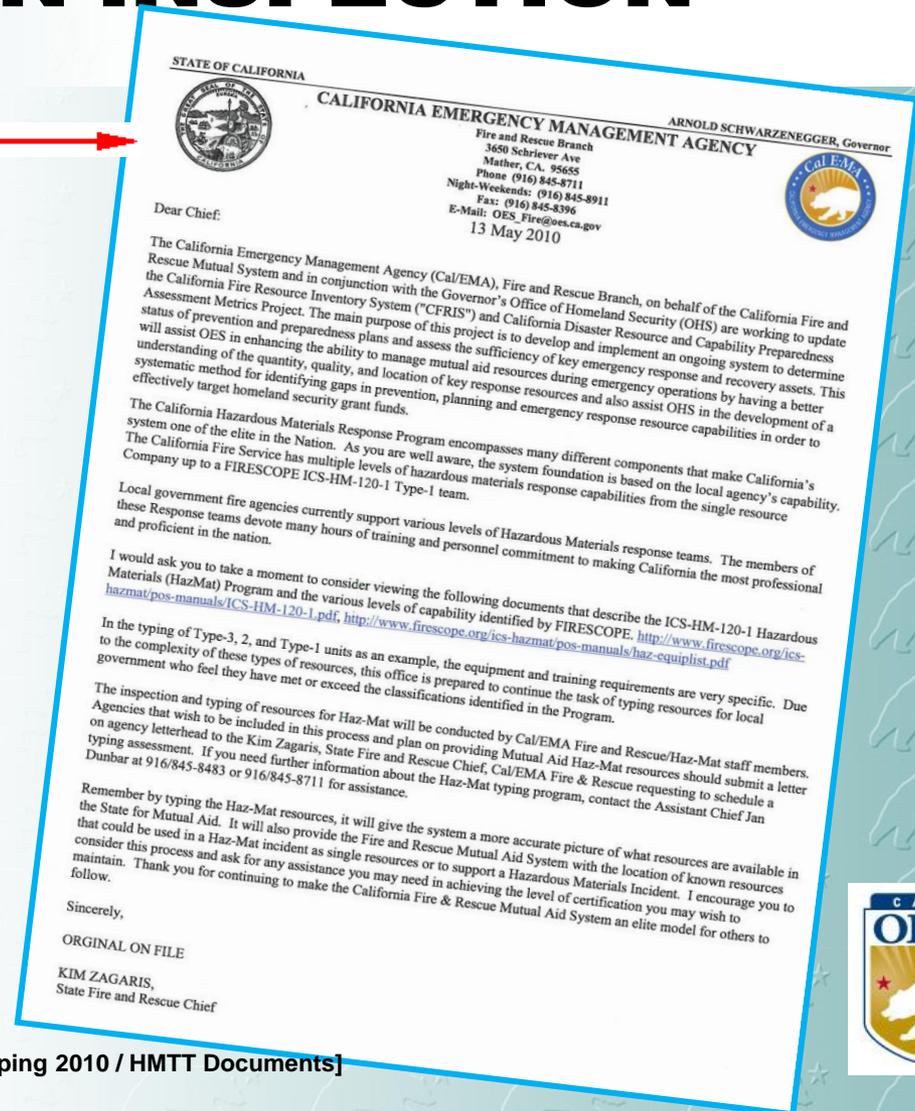
# HMRT INSPECTION PROGRAM CALL FOR AN INSPECTION

## LETTER OF INVITE

- From State Fire & Rescue Chief

*“It will give the system a more accurate picture of what resources are available in the State for Mutual Aid”*

*Kim Zagaris, Chief  
Fire & Rescue Division*

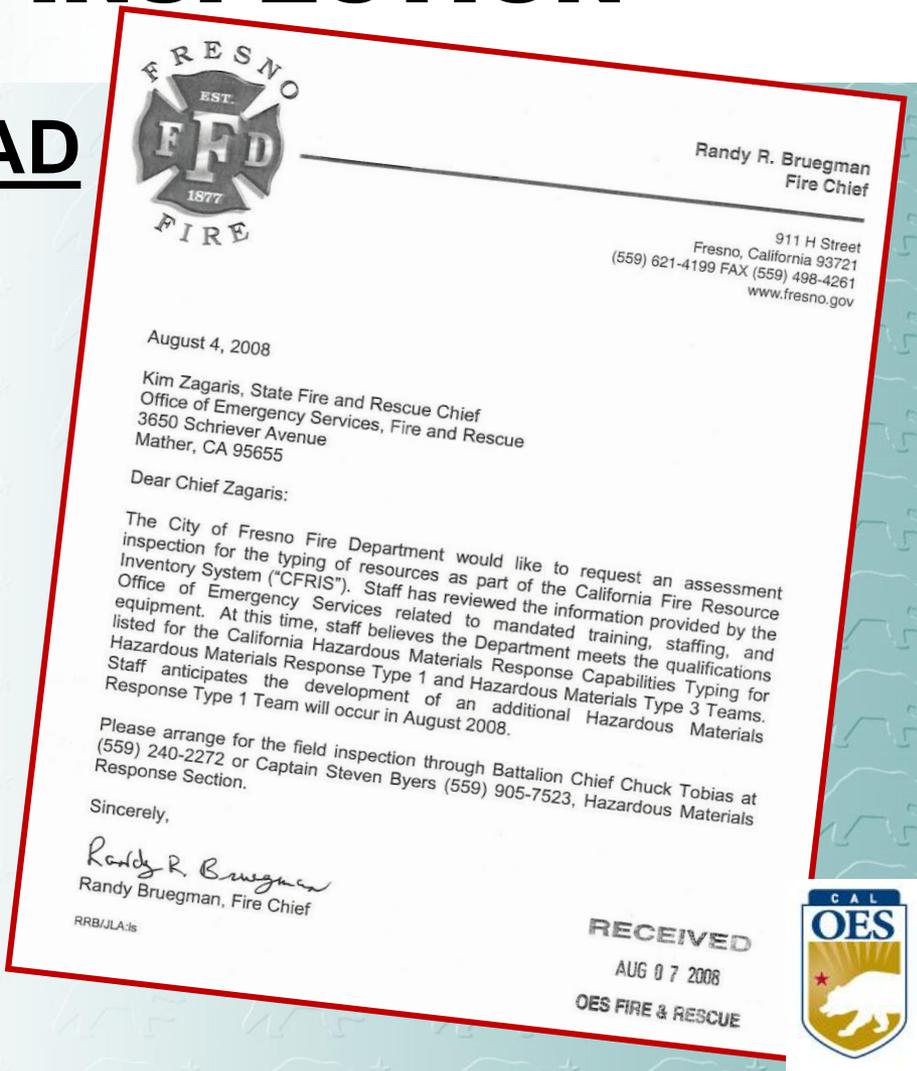


# HMRT INSPECTION PROGRAM REQUEST AN INSPECTION

## ON AGENCY LETTERHEAD

- From Fire Chief

***“The City of Fresno Fire Department would like to request an assessment inspection for the typing of resources as part of the Californian Fire Resources Inventory System”***



# HMRT INSPECTION PROGRAM

## POINT-OF CONTACT PERSON

### IDENTIFIES A LEAD POINT

- To whom information is to be sent
- Identifies Unit
- Identifies inspection Type
- Identifies Location
- Opens paper and electronic files

STATE OF CALIFORNIA

CALIFORNIA EMERGENCY MANAGEMENT AGENCY  
 Fire and Rescue Branch  
 3650 Schriever Ave  
 Mather, CA, 95655  
 Phone (916) 845-3711  
 Night-Weekends: (916) 845-8911  
 Fax: (916) 845-8396  
 E-Mail: OES\_Fire@oes.ca.gov

ARNOLD SCHWARZENEGGER, Governor  
 OES CALIFORNIA  
 Governor's Office of Emergency Services

TO: Joseph Daly, Chief  
 AGENCY: Rawhide Fire Department  
 ATTENTION: Hazardous Materials Branch  
 May 13, 2010

Please Return Within 10 Working Days

We are delighted to hear that your department has agreed to participate in the Hazardous Materials Resource Team Typing Project conducted by the California Emergency Management Agency, Fire & Rescue Branch. We would like to get in touch with you to schedule and document appropriate dates on the calendar, and to share preliminary information with you. Therefore, we would like to confirm who the official representative would be for your department as a continuing point-of-contact. Please complete this questionnaire, make a copy for your records, and send it at your earliest convenience to:

California Emergency Management Agency  
 Fire / Rescue Branch  
 Jan R Dunbar, Assistant Chief  
 Haz-Mat Team Typing Inspection Project  
 3650 Schriever Avenue  
 Mather, CA, 95655

Name (Please print all information)		Project Point - of - Contact:		Office Phone	
James McCracken		Title Captain		(218) - 645-0987	
Mailing Address (Street or P.O. Box)		City		Cell Phone	
323 Fish Ladder Way		Rawhide		(218) - 333-7777	
Work Location, Address (Street)		City		Fax #	
2121 County Road 5		Rawhide		(218) - 645-0900	
E-mail address:		Zip Code			
James.mccracken@rawhide.ca.gov		95933			

We would like to confirm the HMRT Company or Companies you would like to have inspected, the company typing (Type 1, 2, or 3), and the preferred location of the inspection:

	Company Designation	OES / MACS Designation	Type 1, 2, or 3 ?	Station #	Street Address (Or where inspection will be conducted)	Phone # at Inspection Location
1 <sup>st</sup>	HM - 89	XAS RAW	1	52	2121 County Road 5 Rawhide, CA, 95933	(218) - 645-0052
2 <sup>nd</sup>						( ) -
3 <sup>rd</sup>						( ) -

Regarding inspection dates, if your agency has more than one HMRT Company, we would prefer to inspect all companies while we are in your vicinity. Please review a calendar, and provide for us about 6 options to dates that would work well for you, weekdays only. Scheduling multiple inspections back-to-back on the same day, or on consecutive days would be beneficial. We need a little flexibility on our end so that we can combine some inspections on consecutive days in the same Operational or Regional Area.

C.A.L. OES

# HMRT INSPECTION PROGRAM

## SELECT INSPECTION DATE

### SEVERAL MONTHS IN ADVANCE

- There is no rush
- Convenient to the “client”

Recommended Inspection Dates Are As Follows:							
Choice:	Date: (mm-dd-yy)	Day:	Timeframe:	Choice:	Date: (mm-dd-yy)	Day:	Timeframe:
1 <sup>st</sup>	11-01-12	Mon	AM PM	4 <sup>th</sup>	01-22-13	Mon	AM
2 <sup>nd</sup>	11-02-12	Tue	AM	5 <sup>th</sup>	02-21-13	Mon	AM
3 <sup>rd</sup>	12-25-12	Fri	PM	6 <sup>th</sup>	04-27-13	Wed	AM PM

We will contact you to let you know what specific day or days, and timeframe would work best for us. Timeframes are morning (0830 – 11:30) or afternoon (13:30 to 16:30). Inspection of one HMRT company takes about 2 to 3 hours.

To assure that you are ready for inspection, we recommend that you review the *FIRESCOPE Standardized Hazardous Materials Equipment List*, which is posted on the FIRESCOPE web-page <http://www.firescope.org/ics-hazmat/pos-manuals/haz-equiplist.pdf>. Further, Appendix “A”, “B”, and “C” can be used as a self-check. We will be using these same forms during the inspection process.



# HMRT INSPECTION PROGRAM REVIEW INFORMATION PACKET

## INSPECTION PROGRAM BULLETINS

- Aids in preparing for a Haz-Mat Team Typing inspection
- 30 Bulletins

	BULL#1-SEL-EQUIP UpdateFIRESCOPElist
	BULL#2-SEL-EQUIP UpdateSOURCElist
	BULL#3-ProblemWithFAXdigital
	BULL#4-WMDequivCLASSES
	BULL#4-WMDequivCLASSES - web page info
	BULL#5-WMDequivCRITERIA
	BULL#6-CPCcertifiedLISTS
	BULL#7-CPClabelingREQUIRE
	BULL#8-WMDlabelingREQUIRE
	BULL#9-GLOVEreplacements
	BULL#10-BOOTlabelingREQUIRE
	BULL#11-NeutralizMemo
	BULL#12-AbsorptionPesticides
	BULL#13-AbsorptionFormaldehyde
	BULL#14-AbsorptionSolvents
	BULL#15-IntrinsicSafe
	BULL#16-SCBAnioshLABEL
	BULL#17-CANNISTERcolorCODE
	BULL#18-STENCILINGstandard
	BULL#19-EPA Protocols A and B
	BULL#20-Mutual Aid Roster
	<b>BULL#21-HM Inspection Request</b>
	BULL#22-HM Inspection Process
	BULL#23-RKB and AEL
	BULL#24 - Grant Rules
	BULL#25-Container Proper Markings
	BULL#27 - Incident Action Plan IAP
	BULL#28 - Relmbursement Rates
	BULL#29 - Team Typing, Explained
	BULL#30 - Strike Team Leader Manual

# HMRT INSPECTION PROGRAM REVIEW INFORMATION PACKET

## EXAMPLES

STATE OF CALIFORNIA  
 CALIFORNIA EMERGENCY MANAGEMENT AGENCY  
 Fire and Rescue Branch  
 3650 Schriever Ave  
 Mather, CA. 95655  
 Phone (916) 845-8711  
 Night-Weekends: (916) 845-8911  
 Fax: (916) 845-8396  
 E-Mail: OES\_Fire@oes.ca.gov

ARNOLD SCHWARZENEGGER, Governor



March 11, 2010

Fire & Rescue Branch  
 Hazardous Materials Section

**BULLETIN # 7 – R.E. SEL # 5.1.1, 5.1.5, 5.2.1, 5.2.2**

**NFPA CHEMICAL PROTECTIVE CLOTHING LABELING REQUIREMENTS for INDUSTRIAL SUBSTANCES**

During a typical Haz-Mat Team Typing inspection, the inspection team will look and examine chemical protective clothing ensembles and individual items to assure they meet minimum NFPA CPC Standards and requirements applicable to the Type 1, Type 2, or Type 3 inventory requirements. Further, the inspection team will verify that the CPC have certifying labeling attached. If there is no certifying labeling attached, the garment, ensemble, or individual item in all likelihood will not be found acceptable.

This bulletin is provided with information we hope will be helpful in assuring that CPC ensembles and individual items being considered for purchase do indeed meet labeling criteria and will pass inspection.

**Garment Ensembles:**

The National Fire Protection Association (NFPA) mandates in their Standards # 1991, 1992, and 1994 that ensembles meeting the testing criteria of a specified standard must have a certifying label attached to the inside of the certified suit ensemble. There are no exceptions. Typical NFPA wording excerpted from a standard reads in-part as follows:

NFPA 1991 CERTIFIED VAPOR PROTECTIVE SUIT

MODEL # TRELLCHEM®VPS  
 SERIAL # 408861  
 Size XXL

SEI Cert. Mod (NFPA)

DATE OF COMPLIANCE TESTING TO ASTM F 1052 / DATE OF MANUFACTURE 2007-06-07

GARMENT MATERIAL: TRELLCHEM® VPS  
 VISOR MATERIAL: 2 MM HIGH IMPACT PVC  
 GLOVE: KEVLAR OUTER GLOVE / RUBBER GLOVE / MULTILAYER  
 INNER GLOVE  
 TRELLCHEM® VPS SOCK

FOOTWEAR ITEM:

THIS VAPOR PROTECTIVE ENSEMBLE MEETS THE BASIC REQUIREMENTS OF NFPA 1991, STANDARD ON VAPOR-PROTECTIVE ENSEMBLES FOR HAZARDOUS MATERIALS EMERGENCIES, 2005 EDITION, AND ANY ADDITIONAL REQUIREMENTS AS NOTED BELOW.

THE TECHNICAL DATA PACKAGE CONTAINS INFORMATION ON CHEMICALS AND SPECIFIC CHEMICAL MIXTURES FOR WHICH THIS ENSEMBLE IS CERTIFIED CONSULT TECHNICAL DATA PACKAGE AND MANUFACTURER'S INSTRUCTIONS BEFORE USE.

DO NOT REMOVE THIS LABEL.

ADDITIONAL REQUIREMENTS	YES	NO
LIMITED CHEMICAL FLASH FIRE PROTECTION FOR ESCAPE ONLY IN THE EVENT OF A CHEMICAL FLASH FIRE		x
ADDITIONAL GAS PROTECTION		x

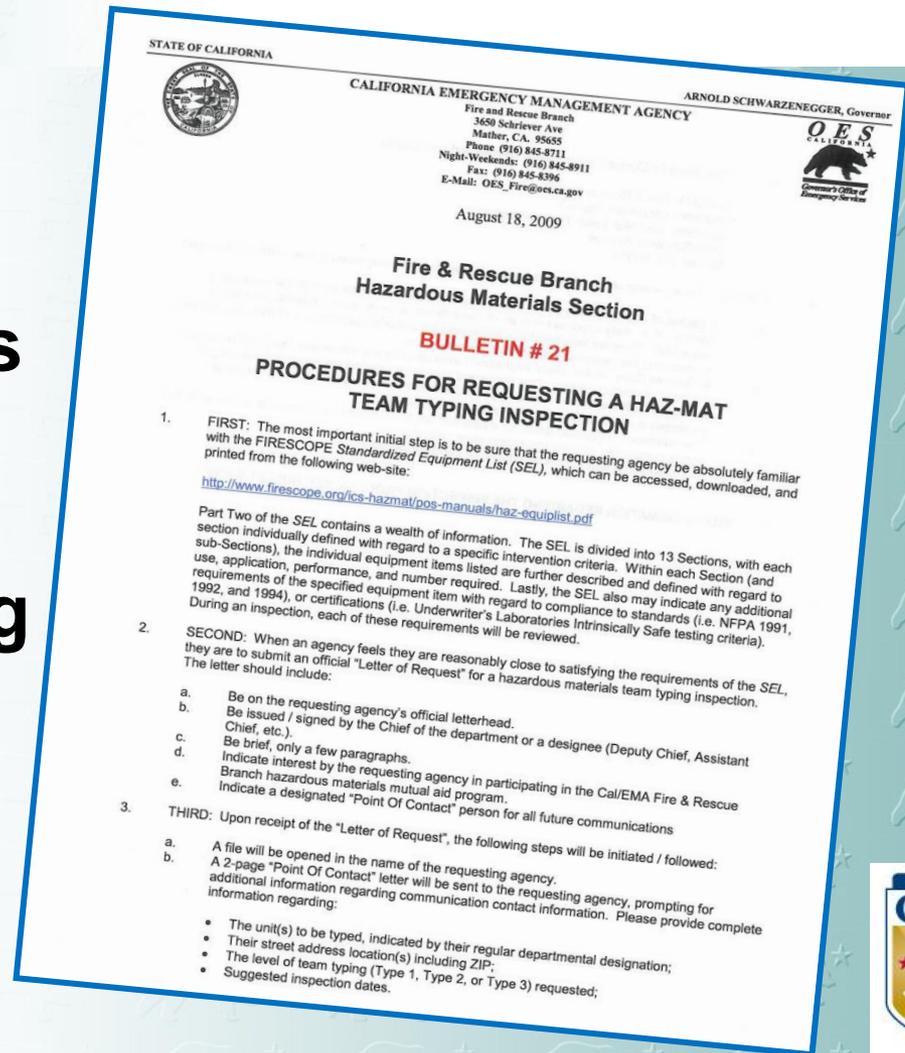
IN COMPLIANCE WITH NFPA 1991, THE FOLLOWING COMPONENTS MUST BE PRESENT IN CONJUNCTION WITH THIS VAPOR-PROTECTIVE ENSEMBLE:  
 1. KEVLAR/AR/C Kevlar Over Glove  
 2. HARD HAZMATX 87012 SAFETY BOOTS



# HMRT INSPECTION PROGRAM REVIEW INFORMATION PACKET

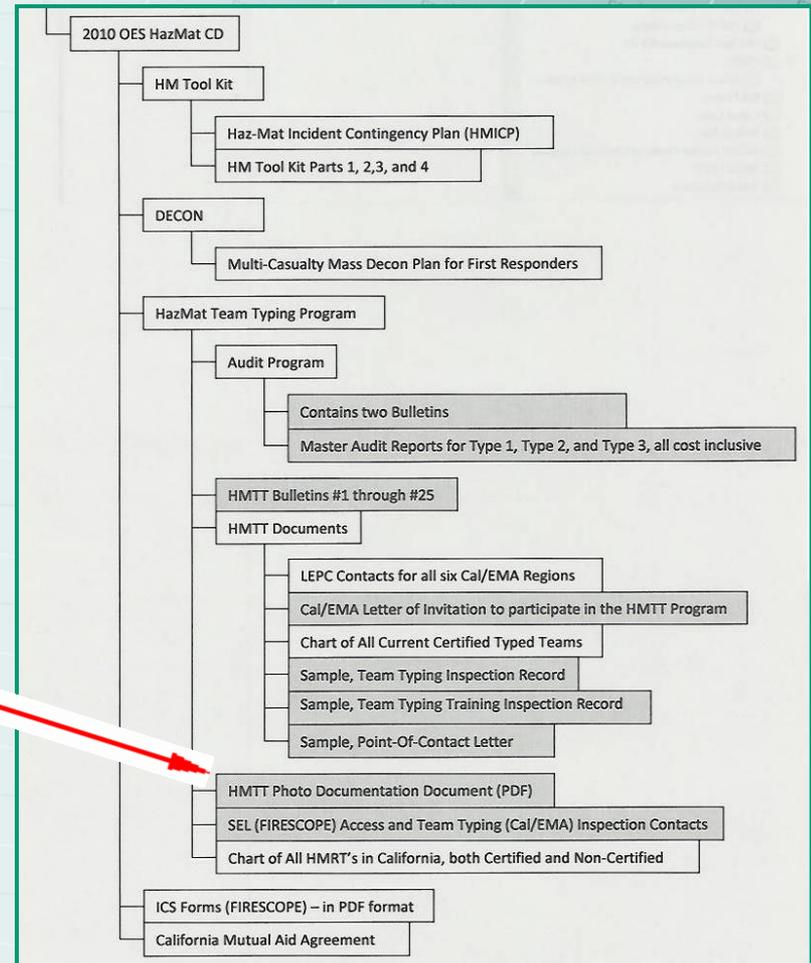
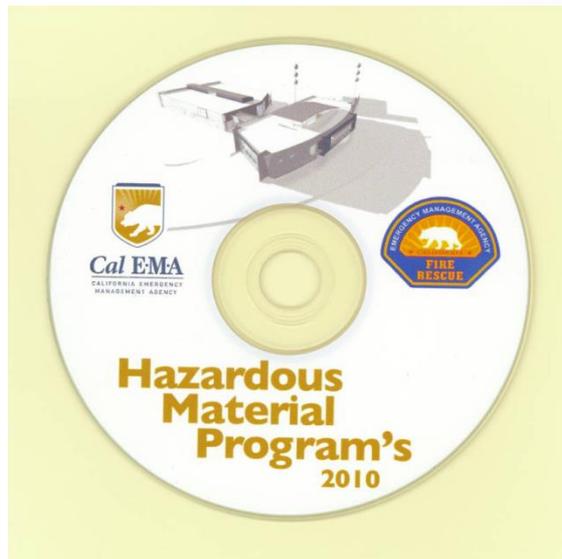
## EXAMPLES

- **Bulletin # 21 explains the procedures on how to request a Haz-Mat Team Typing Inspection**



# HMRT INSPECTION PROGRAM REVIEW CD

## AIDS IN PREPARING FOR INSPECTION



- Contains numerous helpful files
- Tons of other additional information

# HMRT INSPECTION PROGRAM REVIEW CD

## FOR EXAMPLE

- Photo Documentation of Equipment
- Contains photos, pictures, or drawings of every inventory item in the FIRESCOPE SEL
- 256 Page
- Is on the CD



# HMRT INSPECTION PROGRAM PHOTO DOCUMENT

## Field Testing & Detection (Color Change Analysis – Non-Electronic)

Test Strips, pH Paper, Packets  
(pH “0” to pH “14”)



1.1.1

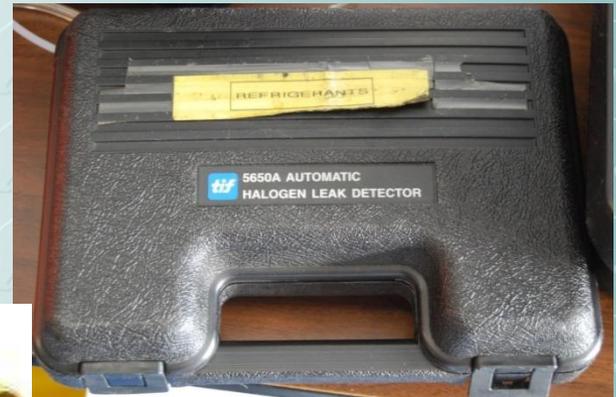
# HMRT INSPECTION PROGRAM

## PHOTO DOCUMENT

### Air Monitoring (Specialty Gas Capabilities)

#### Halogen Gases

Chlorine is Required,  
other Halogen Gases  
Optional



# HMRT INSPECTION PROGRAM EQUIPMENT DISPLAY



# HMRT INSPECTION PROGRAM

## INSPECTION PROCESS

- Compliance to the SEL is documented



# HMRT INSPECTION PROGRAM

## INSPECTION PROCESS

- Inspection Record
- Is a 16 page document
- Lists all SEL equipment items
- And categorized by "Type"
- Documents a "Pass" or a "Fail"
- Inspection takes about 2 to 3 ½ hours

CALIFORNIA EMERGENCY MANAGEMENT AGENCY  
FIRE & RESCUE BRANCH

**HAZARDOUS MATERIALS COMPANY TYPING**  
**INSPECTION RECORD**

Department 3 Letter Identifier (MACS): **XSD** Department Name: **San Diego Fire Dept** Company Designation: **COM**

Lead Point Of Contact: **Dave Williams, BC** Date of Inspection: **2-11-2010** Location of Inspection (Address): **10011 Black 92126**

Inspection Team: **Dunbar, Anderson, Olguin, Harrah** Inspection TYPE: (Enter 1, 2, 3) **1** Inspection Result (Circle): **PASS**

**MASTER**

----- OFFICIAL USE ONLY -----

UPDATE:  TeamTypeOnlyList  TeamListComplete  TeamTypeCompletion (PF)  Q & F Table  
MAIL:  InspRecord  TrngingRecord  TeamTypeCompletion (PF)  To M. Mail List  
FILE:  Master  F & R  Client  MutualAidTable

NOTE: Please refer to the latest Edition of FIRESCOPE Standardized Hazardous Materials Equipment List, "LIST OF EQUIPMENT", for a complete description of each tool or equipment item, required sizes, and listing of components for kits. (Latest Revision January 5, 2010)

1. FIELD TESTING and DETECTION						
1.1 Color Change Analysis – Non-Electronic						
Inv. #:	Item Name and Description	Requirement	Function, Certification Or Standard	Type I	Type II	Type III
1.1.1	TEST STRIPS, pH PAPER, Packets (i.e. ColorpHast, phydron, Whitman, LabSafety)	1 Pkt		✓		
1.1.3	TEST STRIPS, OXIDIZER, Packets (Physical or chemical property sensitive; Color change; i.e. Emquant, Sensafe)	1 Pkt		✓		
1.1.4	TEST STRIPS, PEROXIDE, Packets (Presence is based upon a color change; i.e. Emquant, Sensafe)	1 Pkt		✓		
1.1.9	TEST STRIPS, WMD CHEMICAL, KIT: (M-8 booklet of 25 sheets - Or - 3-WAY WMD CHEMICAL KIT) THESE TEST PACKETS ARE A PART OF M256A1 KIT)	1 Pkt of either one	Must detect nerve agents and blister agents	✓		
1.1.10	TEST PAPER, WMD CHEMICAL, Roll: (M-9 paper rolls or equal)	1 Pkt	Single color change for nerve or blister	○		
1.1.11	TEST PAPER, WMD CHEMICAL, Card: Military M256A1 plastic card test kit; (i.e. Fisher, Tradeways)	1 Kit	(Usually contains about 12)	✓		
1.1.12	TEST CARD, TRAINING ONLY, WMD CHEMICAL; (Same as M256A1 but for training only)	1 Kit	Training Only	✓		
1.2 Qualitative Analysis, Kits – Non-Electronic						
Inv. #:	Item Name and Description	Requirement	Function, Certification Or Standard	Type I	Type II	Type III
1.2.1	INDUSTRIAL CHEMICALS, KNOWN, Qualitative: Test Kit (i.e. abbreviated or limited 5-Step or 5-Step or equal)	1 Kit	Testing of Knowns	✓		
1.2.2	INDUSTRIAL CHEMICALS, UNKNOWN, Qualitative: Test Kit (i.e. Full function HazCat or 5-Step) (Also satisfies 1.2.1)	1 Kit	Testing of Unknowns	✓		

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CALIFORNIA EMERGENCY MANAGEMENT AGENCY  
FIRE & RESCUE BRANCH

**HAZARDOUS MATERIALS COMPANY TYPING**  
**INSPECTION RECORD**

Department 3 Letter Identifier (MACS): **X** Department Name: **San Diego Fire Dept** Company Designation: **COM**

Lead Point Of Contact: **Dave Williams, BC** Date of Inspection: **2-11-2010** Location of Inspection (Address): **10011 Black 92126**

Inspection Team: **Dunbar, Anderson, Olguin, Harrah** Inspection TYPE: (Enter 1, 2, 3) **2** Inspection Result (Circle): **PASS**

----- OFFICIAL USE ONLY -----

UPDATE:  TeamTypeOnlyList  TeamListComplete  TeamTypeCompletion (PF)  Q & F Table  
MAIL:  InspRecord  TrngingRecord  TeamTypeCompletion (PF)  To M. Mail List  
FILE:  Master  F & R  Client  MutualAidTable

NOTE: Please refer to the latest Edition of FIRESCOPE Standardized Hazardous Materials Equipment List, PART TWO, "LIST OF EQUIPMENT", for a complete description of each tool or equipment item, required sizes, and listing of components for kits. (Latest Revision May 13, 2010)

1. FIELD TESTING and DETECTION						
1.1 Color Change Analysis – Non-Electronic						
Inv. #:	Item Name and Description	Requirement	Function, Certification Or Standard	Type I	Type II	Type III
1.1.1	TEST STRIPS, pH PAPER, Packets (i.e. ColorpHast, phydron, Whitman, LabSafety)	1 Pkt		✓		
1.1.3	TEST STRIPS, OXIDIZER, Packets (Physical or chemical property sensitive; Color change; i.e. Emquant, Sensafe)	1 Pkt		✓		
1.1.4	TEST STRIPS, PEROXIDE, Packets (Presence is based upon a color change; i.e. Emquant, Sensafe)	1 Pkt		✓		
1.1.9	TEST STRIPS, WMD CHEMICAL, KIT: (M-8 booklet of 25 sheets - Or - 3-WAY WMD CHEMICAL KIT) NOTE: SOMETIMES THESE TEST PACKETS ARE A PART OF M256A1 KIT)	1 Pkt of either one	Must detect nerve agents and blister agents	✓		
1.1.10	TEST PAPER, WMD CHEMICAL, Roll: (M-9 paper rolls or equal)	1 Pkt	Single color change for nerve or blister	○		
1.1.11	TEST PAPER, WMD CHEMICAL, Card: Military M256A1 plastic card test kit; (i.e. Fisher, Tradeways)	1 Kit	(Usually contains about 12)	✓		
1.1.12	TEST CARD, TRAINING ONLY, WMD CHEMICAL; (Same as M256A1 but for training only)	1 Kit	Training Only	✓		
1.2 Qualitative Analysis, Kits – Non-Electronic						
Inv. #:	Item Name and Description	Requirement	Function, Certification Or Standard	Type I	Type II	Type III
1.2.1	INDUSTRIAL CHEMICALS, KNOWN, Qualitative: Test Kit (i.e. abbreviated or limited HazCat or 5-Step or equal)	1 Kit	Testing of Knowns	✓		
1.2.2	INDUSTRIAL CHEMICALS, UNKNOWN, Qualitative: Test Kit (i.e. Full function HazCat or 5-Step) (Also satisfies 1.2.1)	1 Kit	Testing of Unknowns	✓		

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# HMRT INSPECTION PROGRAM

## INSPECTION PROCESS

- **De-Briefing**
- **Concludes the Inspection**
- **Briefly discusses prognosis**
- **Official documents will be mailed**
- **“Where do we go from here?”**



# HMRT INSPECTION PROGRAM DOCUMENTATION

- After-Inspection Report

- - - if **FAIL** - - -

- Lists all missing items that need to be acquired
- Documents Training Record Compliance
- Explains how to “Catch Up”
  - Copies of P.O.’s, photocopies, photographs
- Discusses funding sources

STATE OF CALIFORNIA  
CALIFORNIA EMERGENCY MANAGEMENT AGENCY  
Arnold Schwarzenegger, Governor  
Fire and Rescue Branch  
3650 Scribner Ave  
Mather, CA 95655  
Phone: (916) 845-8711  
Night-Weekends: (916) 845-8911  
Fax: (916) 845-8396  
E-Mail: OES\_Fire@oes.ca.gov

20 October 2009

Brendan O'Leary, Assistant Deputy Chief  
Hazardous Materials Section  
San Francisco Fire Department  
698 Second Street  
San Francisco, CA, 94107

**COMPLETED**  
**FILE COPY**

RE: **HMRT TYPE 2 INSPECTION**, San Francisco Fire Dept. (XSF-SFR), "Haz-Mat 1"

Dear Chief O'Leary:

This letter is to confirm the completion of your Haz-Mat Type 2 inspection conducted on 13 October 2009, at 109 Oak Street, 94102. The results of the inspection are as follows:

Training Records:	<b>PASS</b>
Equipment:	<b>FAIL</b>

**Review of Training Records:** It was confirmed that you have met the minimum commitment of maintaining at least five (5) assigned members to the CSTI 240 hour Hazardous Materials Specialist curriculum. Additionally, it was confirmed by demonstration of certificate that one member of your team has been trained to Assistant Safety Officer, Hazardous Materials, as described.

**Review of Equipment Inspection:** The following items need attention in order to attain your requested team typing certification:

- Item 3.1.5 PIPETTE, TRANSFER, Plastic, 6 1/2" length, as described, 100 required, - Had approx 50 on hand, need 50 more.
- Item 3.1.6 PIPETTE, TRANSFER, Plastic, 12" length, as described, 100 required, - Had approx 50 on hand, need 50 more.
- Item 3.1.11 FIBERGLASS CLOTH, maintained in EPA sterile jar, as described, 100 required, - Had a few on hand, need to verify 100 in kit.
- Item 3.1.20 FUNNEL, Disposable or Re-Useable, as described, in three sizes, - Need a complement of eight (8) representing the three different sizes.
- Item 3.1.26 SPOON, Plastic, for sampling, in four different sizes as described, - Had two on hand, need two (2) more representing different sizes.
- Item 3.1.27 SCOOP, Small, approx 2 oz., as described, - Need one (1).
- Item 3.2.1 PUMP, Syphon, of any one of the three different types as described, - Need one (1), with hose.
- Item 3.2.7 PUMP, Diaphragm, Hand, as described, - Need one (1).
- Item 3.3.4 SAMPLE JARS, Amber Glass, 4 or 8 oz capacity; meeting EPA Protocol "A" or "B", - Need four (4).
- Item 3.3.7 SAMPLE VIALS, Clear Glass, nominal 1.3 oz capacity, meeting EPA Protocol "A" or "B", - Need four (4).

NOTE: For items # 3.3.2, 3.3.4, and 3.3.7, these sampling jars and vials should be maintained in their original factory or manufacturers' box packaging, and not separated and distributed to other individual sampling "kits", as this negates the possibility to confirm via packaging markings that they are sterile or pre-cleaned and thus meet EPA Protocol "A" or "B".

- Item 3.3.8 STOPPERS, Conical, of nine different sizes as described, - Need a compliment of five (5) representing at least five different sizes.
- Item 3.3.10 BAGS, Evidence, Tamper-Proof, as described, - Need one roll or package of at least 25.
- Item 3.3.15 LABELS, Evidence Seals, Tamper-proof, as described, - Need one roll or package of at least 25.

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# HMRT INSPECTION PROGRAM DOCUMENTATION

- After-Inspection Report  
- - - if **PASS** - - -
- Certifies that HM Unit has met minimum requirements
- Certifies Team “Type”
- All equipment as inspected must respond upon “Activation”
- “..your agency must also insure that when activated and mobilized the staffing of your company shall always comply with the minimum as required (five for a Type 2)..”

STATE OF CALIFORNIA

CALIFORNIA EMERGENCY MANAGEMENT AGENCY  
Fire and Rescue Branch  
3650 Sclerwin Ave  
Mather, CA, 95655  
Phone (916) 845-8711  
Night-Weekends: (916) 845-8911  
Fax: (916) 845-8396  
E-Mail: OES\_Fire@oes.ca.gov

ARNOLD SCHWARZENEGGER, Governor

21 April 2010

Ed Laidlaw, Captain  
Hazardous Materials Section  
Eureka Fire Department  
533 “C” Street  
Eureka, CA, 95501

**ORIGINAL**

RE: **HMRT TYPE - INSPECTION, Fire Department, (XHU - EUR) Unit # HM-8190**

Dear Captain Laidlaw:

This letter is to confirm the completion of your Haz-Mat Type 2 Hazardous Materials Team Typing inspection, originally conducted on July 7<sup>th</sup>, 2009 at 533 “C” Street, Eureka, 95501. The results of the inspection are as follows:

Training Records:	<b>PASS</b>	Equipment:	<b>PASS</b>	Team Typing:	<b>2</b>
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According to our records, all items or equipment pieces that were missing or incomplete as noted during the original inspection have been received by your department and you have sent verification that they are now a part of your haz-mat response team’s inventory.

According to our records, all items required for a Type 2 Hazardous Materials Company in accordance with the FIRESCOPE Standardized Equipment List are now found to be present and available. Therefore, we can certify that your hazardous materials response unit, “ HM-8190 ”, has met all requirements for standardized equipment for a California Emergency Management Agency, Fire & Rescue Branch Type 2 Hazardous Materials Team, and has met all training requirements for the same. We would like to remind you that effective immediately and here-after, all equipment and gear as presented and documented in the Inspection Record must be available and respond with your company whenever activated and mobilized for a mutual aid response through the Cal EMA Fire & Rescue Mutual Aid system. Similarly, your agency must also insure that when activated and mobilized the staffing of your company shall always comply with the minimum as required (five for a Type 2) and trained to the minimum State requirement level (Hazardous Materials Specialist).

I and the inspection team would like to congratulate you and the members of Sonoma County Department of Emergency Services on achieving this Hazardous Materials Response Team Typing designation.

Please extend to all of your members who assisted with the inspection process our gratitude and thanks. You, our crew, and your department are to be congratulated.

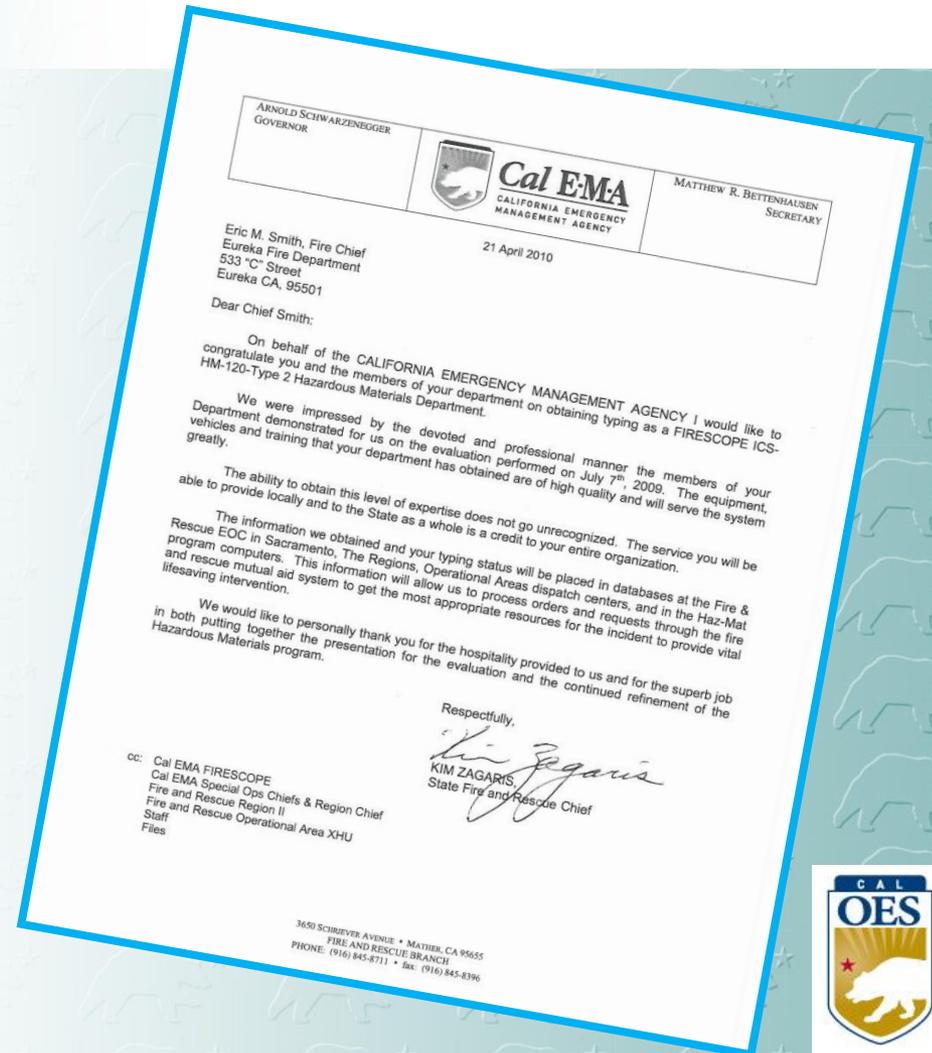
Most Respectfully,  
  
Jan R. Dunbar, Assistant Chief  
Special Operations  
Fire / Rescue Branch  
California Emergency Management Agency  
(916) 845-8483  
(916) 845-8396  
cc: File

C:\Documents and Settings\dunbarj\CALEMA\My Documents\FiretypeStaff\TeamType-Completion-Eureka-PASS-Letter.doc



# HMRT INSPECTION PROGRAM DOCUMENTATION

- Congratulatory Letter
- From Fire & Rescue Branch Chief
- Addressed to the Chief of the respective agency
- Unit is placed in State Mutual Aid Database
- Contact information is added to Master Mailing lists



# HMRT INSPECTION PROGRAM DOCUMENTATION

- Teams That Have Been Typed and Certified

CERTIFIED HAZ-MAT TEAMS, BY TYPE (Items highlighted is new data since last update) – AS OF 8/9/10						
	AGENCY	Operational and Local Identifier	Region	Unit Designation	Attained	Zip Code
TYPE 1	Glendale City Fire	XLC-GLN	I	HM-24	2-26-08	91204
	Vernon City Fire	XLE-VER	I	HM-151	5-14-09	90058
	Santa Ana Fire	XOR-STA	I	HM-9	6-22-10	92705
	Ventura County Fire	XVE-VNC	I	HM-50	6-23-10	93010
	Alameda County Fire	XAL-ACF	II	HM-12	3-10-08	94546
	Santa Clara County Fire	XSC-CNT	II	HM – 2	12-16-09	95403
	Roseville City Fire	XPL-RSV	IV	HM-1	10-26-06	95678
	Sacramento City Fire	XSA-SCR	IV	HMRT-7	12-27-06	95823
	Sacramento City Fire	XSA-SCR	IV	HMRT-30	12-28-06	95835
	Sacramento Metro F.P.D.	XSA-SAC	IV	HM-109	7-13-06	95608
	Clovis City Fire	XFR-CLV	V	HM-40	5-1-09	93611
	Fresno City Fire	XFR-FRN	V	HMRT-1	11-4-08	93703
	Fresno City Fire	XFR-FRN	V	HMRT-16	11-20-07	93722
U.S. Marin Corp Camp Pendleton	XSD-MCP	VI	HazMat 1	3-13-08	92055	
TYPE 2	Contra Costa County JPA	XCC-CCH	II	?	11-1-07	94553
	Eureka Fire	XHU-EUR	II	HM-8190	4-21-10	95501
	Marin County Fire Haz-Mat JPA	XMR-MRN	II	HM-1	7-22-09	94945
	San Ramon Fire Prot. Dist	XCC-SRM	II	HM-35	6-19-09	94506
	Sonoma County Fire	XSN-SSR	II	HM-2936	11-02-09	95403
	Sunnyvale Dept. Public Safety	XSC-SNY	II	HM-2	6-1-10	94085
	Butte County Fire	XBU-BUT	III	HM-1	4-1-10	95926
	Butte County Fire	XBU-BUT	III	HM-64	4-1-10	95926
	Truckee Fire Prot. District	XTB-TRK	IV	HM-1	10-6-08	96161
	Bakersfield Fire. Dept	XKE-BKF	V	HM-15	6-16-10	93314
	Merced County F.D.	XMD-MRD	V	HM-62	5-09-09	95301
TYPE 3	Long Beach Fire Dept.	XLF-LOB	I	HM-24	2-26-08	90802
	Palo Alto Fire Dept.	XSC-PAF	II	Rescue 2	8-2-2010	94304

# HMRT INSPECTION PROGRAM DOCUMENTATION

- Inspection Results

HAZ-MAT TEAM TYPING – INSPECTION RESULTS QUICK GLANCE – AS OF 14 May 2010													
REGION	INSPECTION REQUESTS RECEIVED (Agency Letter)	INSPECTIONS CONDUCTED				INSPECTION RESULTS							
		TOTAL Conducted	Type 1	Type 2	Type 3	Type 1		Type 2		Type 3		TOTAL PASS	TOTAL FAIL
						Pass	Fail	Pass	Fail	Pass	Fail		
I	12	5	5		1	2	3			1		3	3
II	18	18	4	11	2	2	2	5	6		2	7	10
III	5	3		2	1			2			1	2	1
IV	5	5	4	1		4		1				5	
V	7	6	3	3		3		1	2			4	2
VI	3	3	3			1	2					1	2
<b>TOTALS</b>	<b>50</b>	<b>40</b>	<b>19</b>	<b>17</b>	<b>4</b>	<b>12</b>	<b>7</b>	<b>9</b>	<b>8</b>	<b>1</b>	<b>3</b>	<b>22</b>	<b>18</b>
<i>These Must Jive:</i>		<b>40</b>	<b>40</b>			<b>40</b>						<b>40</b>	



# HMRT INSPECTION PROGRAM

## CAL-OES ACTIVATION

- **MOBILIZATION**  
( Example - BULLETIN # 20 - 6 pages)
- **What happens after we pass typing inspection?**
- What are “Resources”?
- What is the “Response” criteria?
- What is the “Staffing”
- What do we do when we “get there”?
- Are there “Special Forms” we should use?
- How should we prepare for a possible activation?



December 9, 2009

**Fire & Rescue Branch  
 Hazardous Materials Section**

**BULLETIN # 20**

**CALIFORNIA STATE HAZ-MAT MUTUAL AID ROSTER  
 and  
 HMRT MOBILIZATION**

**WHAT HAPPENS AFTER WE PASS THE HAZ-MAT TEAM TYPING INSPECTION?**

Those agencies that have passed the Cal/EMA Fire & Rescue Branch *Hazardous Materials Team Typing inspection* and have achieved a Haz-Mat Type 1, Type 2, or a Type 3 certification, the specified Company (your agency numerical designation for the unit) is then added to the Haz-Mat Team Mutual Aid Roster. It is an EXCEL table that is maintained by Fire & Rescue Branch, Special Operations. It is important that we indicate each Company by proper Operational Area three-letter designator (i.e. XKE for Kern County Operational Area) and the agency's three-letter designator (i.e. BKF for Bakersfield Fire Dept). Certified teams are also identified by Zip Code number as this identifies a geographical area. All this information is helpful in order to accurately indicate positioning of the Company on GIS over-lays of the State of California. Zip codes are further helpful to determine closest units to an event, and to determine estimated response distances and probable response times.

This EXCEL table is accessible by all Chief Officers of the Fire & Rescue Branch, FIRESCOPE and the Warning Center. Similar EXCEL tables are maintained for the Swift Water Rescue teams, and the Urban Search & Rescue teams. A few examples are shown in the facsimile table below:

CERTIFIED HAZ-MAT TEAMS, BY TYPE (Abbreviated) – AS OF 12/9/09						
	AGENCY	Operational and Local Identifier	Region	Unit Designation	Attained	Zip Code
TYPE 1	Roseville City Fire	XPL-RSV	IV	HM-1	10-26-06	95678
	Sacramento City Fire	XSA-SCR	IV	HMRT-7	12-27-06	95823
	Alameda County Fire	XAL-ACF	II	HM-12	3-10-08	94546
	Clarendo City Fire	XLC-GLN	I	HM-24	2-28-08	91204
TYPE 2	Contra Costa County JPA	XCC-CCH	II	HM-24	11-1-07	94563
	San Ramon Fire Prot. Dist	XCC-SRM	II	HM-35	6-19-09	94506
TYPE 3	Truckee Fire Prot. District	XTB-TRK	IV	HM-1	10-6-08	96161
	Long Beach Fire	XLF-LOB	I	HM-24	2-26-08	90802

**WHO PARTICIPATES IN THE STATE-WIDE HAZARDOUS MATERIALS MUTUAL AID PROGRAM?**

# HMRT INSPECTION PROGRAM

## CAL-OES ACTIVATION

- **MOBILIZATION**

- **What are “Resources”?**

1. A Single Company Resource.\* The request is for just one certified Haz-Mat Team company.
2. A Haz-Mat Task Force.\* The request is for several (usually up to five) resources but with different levels of typing, and a Task Force Leader. The Task Force may be pre-assembled and caravan to the incident, or may be directed to respond directly to the incident and form into the specified Task Force upon arrival.
3. A Haz-Mat Strike Team.\* The request is for several (usually up to five) resources all with the same level of typing (i.e. all Type 1), and a Strike Team Leader. The Strike Team may be pre-assembled and caravan to the incident, or may be directed to respond directly to the incident and form in the specified Strike Team upon arrival.



# HMRT INSPECTION PROGRAM

## CAL-OES ACTIVATION

- **MOBILIZATION**
- **What is the “Response” criteria?**

Response Mode	Time Frame	Criteria
<b>INITIAL ATTACK:</b> Code Three	Respond Instantly at time of activation request and dispatch (As quickly as is possible)	<ul style="list-style-type: none"> <li>• Life and property imminently threatened</li> <li>• Closest available resources within operational area or adjacent operational area</li> <li>• Resources to rendezvous at the incident</li> </ul>
<b>IMMEDIATE NEED:</b> Code Two or Three	Respond within 30 minutes of activation request and dispatch	<ul style="list-style-type: none"> <li>• Life and property threatened</li> <li>• Any available resources within operational area or adjacent operational area</li> <li>• May or may not rendezvous prior to departure</li> </ul>
<b>PLANNED NEED:</b> Normally Code Two	Planned Arrival (Usually within 2 hours of activation request and dispatch)	<ul style="list-style-type: none"> <li>• Resources respond within the operational area, adjacent operational area, region, or the state.</li> <li>• Response is planned for the next operational period or as determined by the requesting agency</li> <li>• Usually will rendezvous prior to departure</li> <li>• Caravan as a Task Force or Strike Team within the 2 hour time-frame</li> </ul>

# HMRT INSPECTION PROGRAM

## CAL-OES ACTIVATION

- **MOBILIZATION**

- **What is the “Staffing”?**

1. The response unit must contain, at the time of the mobilization request, all of the equipment that was inspected for the units' Team Typing Certification. This may require the inclusion of an additional vehicle such as a trailer that contains some equipment and tools not otherwise included on the specified response unit.
2. The response unit and the team as a whole, at the time of the mobilization request, must meet the type of team being requested, i.e. **Type 1**, **Type 2**, or a **Type 3**.
3. Staffing and training level of the Haz-Mat Team, at the time of the mobilization request, must conform to the FIRESCOPE hazardous materials chart on *Hazardous Materials Company Types and Minimum Standards* (Refer to the FOG Guide document ICS-420-1, Chapter 14):
  - a. Type 3 staffing – five, to CSTI Hazardous Materials Technician (HMT)
  - b. Type 2 staffing – five, to CSTI Hazardous Materials Specialist (HMS)
  - c. Type 1 staffing – seven, to CSTI Hazardous Materials Specialist and CSTI Weapons of Mass Destruction (HMS-WMD)

# HMRT INSPECTION PROGRAM

## CAL-OES ACTIVATION

- **MOBILIZATION**
- **What do we do when we get there?**

Upon arrival at the designated incident the Strike Team / Task Force Leader or the individual Haz-Mat Resources must report in. If instructed to report to a “Staging Area”, find the Staging Area Manager and receive your assignments. If no Staging Area has been designated, locate the Command Post and check in with either the Incident Commander or the designated Liaison Officer to receive your briefing and assignments. In large events, Divisions and/or Groups may have been established, including a Hazardous Materials Group. In this case, the Strike Team / Task Force Leader or the Single Company Resource (Haz-Mat) Officer should be directed to report to the Haz-Mat Group Supervisor.

Please refer to and review the following documents for more information:

POSITION	DOCUMENT	PAGE
Strike Team / Task Force Leader	FOG ICS-420-1, Chapter 8	Page 8-5
Single Company Resource	FOG ICS-420-1, Chapter 8	Page 8-7
Hazardous Materials Group Supervisor	FOG ICS-420-1, Chapter 8 FOG ICS-420-1, Chapter 13	Page 8-4 Page 14-8

The entire Chapter 14 “Hazardous Materials” portion of the FIRESCOPE Field Operations Guide (ICS-420-1) should be well known and understood by the members of the mobilized hazardous materials resource. It contains complete descriptions and duties of all of the ICS positions within the Haz-Mat Group and their respective position check-off lists. Copies of the FOG can be accessed and downloaded at:

<http://www.firescope.org/ics-8x11-fog.htm>



# HMRT INSPECTION PROGRAM

## CAL-OES ACTIVATION

- **MOBILIZATION**
- **Are there special forms?**

### **ARE THERE SPECIAL FORMS AND CHECK-OFF LISTS FOR HAZ-MAT MUTUAL AID?**

Yes. The most important packet of pre-designed forms are the standard FIRESCOPE ICS forms. There are about 26 different forms. Those most closely associated to the particular incident should be used. Your Task Force/Strike Team Leader should have a packet of them ready to go at all times. However, these forms are accessible at any time on the FIRESCOPE web page and are printable in PDF format.

<http://www.firescope.org/ics-forms.htm>



# HMRT INSPECTION PROGRAM AUDIT PROGRAM

- Inspection Results  
Are Converted To An  
Audit Report

**CALIFORNIA EMERGENCY MANAGEMENT AGENCY**  
FIRE & RESCUE BRANCH

**HAZARDOUS MATERIALS COMPANY TYPING  
AUDIT EQUIPMENT LIST**  
And  
**AUDIT INSPECTION RESULTS**  
For  
**PROJECTED COSTS - TYPE 1 HMRT TEAM**  
--- FIRE DEPT - UNIT # ---

Department 3 Letter Identifier (MACS):  Department Name:  Company Designation:

Lead Point Of Contact:  Date of Inspection of Audit:  Location of Inspection (Address):

Inspection Team:  Audit TYPE: (Enter 1, 2, 3)  Inspection Result: **AUDIT ONLY**

The following is an abbreviated list of the equipment items from the FIREScope Hazardous Materials Standardized Equipment List (SEL). This list represents a focus on the more important items needed to attain a Type 1 HMRT Certified Team Typing status. It also represents most all of the required more expensive kits, substances, and tools, and it also represents most all of the required sophisticated instruments and support items.

This list **DOES NOT** include the vast majority of very low-cost items (tarp, plastic pipe, scrub brushes, pH papers, test tubes, sample taking tools, regular small hand tools, etc). Nor does it include many of the disposable items (disposable clothing, sponges, labels, pens, soaps, trash bags, pipettes, etc.).

This list **DOES NOT** contain the detailed descriptions and/or specifications for each item. Reference **MUST** be made to the SEL, or to the Cal/EMA Fire & Rescue Hazardous Materials Company Typing Inspection Record for more in-depth inventory item criteria descriptions.

This list **DOES** include approximate cost values noted in U.S. Dollars for each inventory item. These costs are to be considered "ball-park" figures only but should be within a very close range of actual prices. Exact cost of any specific item must be attained by contacting a vendor, distributor, or manufacturer. Variations in item estimate costs depend upon manufacturer, model, quality, additional functions, etc.

To attain a Type 1 Team Certification 252 individual SEL inventory items are required. This reduced list represents only 166 items. Items found missing during the audit are indicated in red in the Total Cost column. Total estimated cost of all missing items is noted on the last page.

**AUDIT INSPECTION RESULTS - SELECTED HIGH-COST EQUIPMENT ITEMS**

No.	SEL Item #	Item Description	*Grand Programs	**RKB AEL No.	Required: (FIREScope SEL)	Unit Cost	Total Cost
<b>FIELD TESTING</b>							
1	1.1.9	TEST STRIPS, WMD, M-8 Booklet of 25	1, 3, 6, 7, 8, 9, 10	07CD01INPA	1 Packet	\$9	
2	1.1.10	TEST STRIPS, WMD, M-9 Paper, Roll	1, 3, 6, 7, 8, 9, 10	07CD01INTP	1 Roll	\$15	



# HMRT INSPECTION PROGRAM

## AUDIT PROGRAM

- Includes only medium to high cost items.
- Includes mostly only those items in the Federal “RKB AEL”\*.
- Includes RKB Numbers.
- Indicates qualifying grants.
- Includes FIRESCOPE typing requirement.
- Includes estimate cost of each item.

\*(Responder Knowledge Base Authorized Equipment List)

AUDIT INSPECTION RESULTS - SELECTED HIGH-COST EQUIPMENT ITEMS							
No.	SEL Item #	Item Description	*Grant Programs	**RKB AEL No.	Required: (FIRESCOPE SEL)	Unit Cost	Total Cost
3	1.1.11	TEST PAPER, WMD, 12 Chemical Cards, Military M256A1 Kit	1, 3, 6, 7, 8, 9, 10	07CD01M256	1 Kit	\$250	
4	1.2.2	HAZ-CAT KIT, Unknowns	1, 3, 6, 7, 8, 9, 10	07CD01KLSV	1 Kit	\$4,560	
5	1.2.8	WMD, WATER TEST KIT, M272 or M273	1, 3, 6, 7, 8, 9, 10	07CD01KWTR	1 Kit	\$995	
6	1.2.9	WMD, CHEMICALS, Test Kit M18A2 or M18A3, or CAD-C-2			1 Kit	\$1,600	
7	1.3.1 Or 1.3.2 Or 1.3.3	a. CHROMATOGRAPHY or b. SPECTROMETRY or c. SPECTROSCOPY	1, 3, 6, 7, 8, 9, 10	a. 07CD02DPGC b. 07CD01DPSI c. 07CD01DPIR or c. 07CD01DPRS	1 Kit	?	\$64,655 \$95,000
	1.4.1 Or 1.4.3	COLORIMETRIC, Kit, Basic, or COLORIMETRIC, Kit, Chip, or COLORIMETRIC, Kit, Multi-Sensing	1, 3, 6, 7, 8, 9, 10	All 07CD01KCTC	1 Kit	\$795 or \$3,900 or \$1,000	
9	1.4.4	COLORIMETRIC, Kit, WMD Special (Cost varies based on Mfg)	1, 3, 6, 7, 8, 9, 10	07CD01KCTC	1 Kit	\$3,025 to \$4,000	
		BIOLOGICAL TESTING, Agent Specific: One of the following:	1, 3, 6, 7, 8, 9, 10	a. 07BD01PTST b. 07BD01KFAS c. 07BD02DNRN	1 Kit of either type	\$6,000 \$8,500 \$36,000	
10	1.9.2	a. Protein Fluorescence, or b. Immuno-Assay, or c. DNA Replication	1, 3, 6, 7, 8, 9, 10				
<b>AIR MONITORING</b>							
11	2.1.1	depending on quality, versatility, functions)	1, 3, 7, 8	03SR03KMON Or 07CD01DPMG	1 Kit	\$535 to \$3,695	
12	2.1.2	CALIBRATION KIT, for # 2.1.1		07CD01DPFI Or 07CD01DPFP	1 Kit	\$210 to \$265	
13	2.2.1	TOXIC VAPOR Monitoring (Can be same unit as 2.1.1)	1, 3, 6, 7, 8, 9, 10	07CD01DPPI	1 Unit or capability	\$3,550 to \$4,500	
14	2.2.2	AROMATIC HYDROCARBONS (Can be same unit as 2.1.1 or 2.2.1)			1 Unit or capability	\$3,550	
15	2.2.4	CALIBRATION KITS, for # 2.2.1, # 2.2.2			1 Unit Ea	?	?
16	2.3.1	AMMONIA GAS (Can be same unit as 2.1.1 or 2.2.1 or 2.3.1 thru 2.3.4)	1, 3, 6, 7, 8, 9, 10	07CD01MONO	1 Unit or capability	\$471 to \$599	
17	2.3.1	PHOSPHINE (Can be same unit as 2.1.1 or 2.2.1 or 2.3.1 thru 2.3.4)	1, 3, 6, 7, 8, 9, 10	07CD01MONO	1 Unit or capability	\$197 to \$750	
18	2.3.3	HALOGEN GASES, Especially Chlorine (Can be same unit as 2.1.1 or 2.2.1 or 2.3.1 thru 2.3.4)	1, 3, 6, 7, 8, 9, 10	07CD01MONO	1 Unit or capability	\$377 to \$525	
19	2.3.4	PHOSPHINE (Can be same unit as 2.1.1 or 2.2.1 or 2.3.1 thru 2.3.4)	1, 3, 6, 7, 8, 9, 10	07CD01MONO	1 Unit or capability	\$377 to \$645	
20	2.3.16	CALIBRATION KITS, As needed, for # 2.3.1, 2.3.2, 2.3.3, 2.3.4			1 Kit Ea		
21	2.4.1	NERVE AGENT DETECTION					
22	2.4.2	BLISTER AGENT (Mustards) DETECTION					
23	2.4.3	BLISTER AGENT (Lewisite) DETECTION	1, 3, 6, 7, 8, 9, 10	07CD01MONO			
24	2.4.4	BLOOD AGENTS (Cyanides) DETECTION					



# HMRT INSPECTION PROGRAM

## AUDIT PROGRAM

- A “High”, “Low”, and “Median” total is calculated.
- The “Median” estimate is forwarded to the OHS side of Cal-EMA.
- OHS manages distribution of all federal equipment grants.
- OHS assembles “Unspent” grant monies.
- Awards them to agencies for whom we have completed an “Audit Report”.

AUDIT INSPECTION RESULTS - SELECTED HIGH-COST EQUIPMENT ITEMS							
No.	SEL Item #	Item Description	*Grant Programs	**RKB AEL No.	Required: (FIRESCOPE SEL)	Unit Cost	Total Cost
154	13.3.6	NON-SPARKING, Hammer, Sledge, 7 to 10 Lbs (Cost varies depending on weight)	1, 2, 3, 4, 7, 8, 9, 10	All "Non-Sparking" tools fall under the following RKB AEL Number: 030E04KTTL	1	\$155 to \$180	\$155 To \$180
155	13.3.7	NON-SPARKING, Hammer, Claw, 20 to 24 oz (Cost varies depending on weight)			1	\$64 to \$91	\$64 To \$91
156	13.3.10	NON-SPARKING, Screwdriver Set, Chisel Point			3 Diff Sizes	\$85 - \$135	\$85 To \$135
157	13.3.11	NON-SPARKING, Screwdriver Set, Phillips Point			3 Diff Sizes	\$75 - \$155	\$75 To \$155
158	13.3.12	NON-SPARKING, Pliers, Ordinary, Utility			1	\$60	\$60
159	13.3.13	NON-SPARKING, Pliers, Wire, Side-Cutting			1	\$115	\$115
160	13.3.14	NON-SPARKING, Pliers, Long-Nose			1	\$95	\$95
161	13.3.17	NON-SPARKING, Wrench, Bung, Universal			1	\$116	\$116
162	13.3.18	NON-SPARKING, Wrench, Crescent, Adjustable (Cost varies depending on size range)			2 Diff Sizes	\$80 to \$108	\$80 To \$216
163	13.3.20	NON-SPARKING, Wrench, Pipe, Adjustable (Cost varies depending on size range)			2 Diff Sizes	\$150 to \$205	\$300 To \$410
164	13.3.26	NON-SPARKING, Knife, Putty	1	\$7	\$7		
165	13.3.27	NON-SPARKING, Shears, Cutting	1	\$113	\$113		
166	13.3.30	REFRIGERATOR, Utility, Small (Cost depends on brand, quality)	1, 2, 3, 5, 7, 13	19GN00RFGR	1	\$750 to \$1250	\$750 To \$1,250
						<b>LOW END</b>	<b>\$234,029</b>
						<b>HIGH END</b>	<b>\$400,577</b>
						<b>MEDIAN</b>	<b>\$317,303</b>

Developed 01 May 2009.

Revised 5 January 2010

\* **Specific Grant Programs:** Grant Programs for which the specified item may be allowable (per the FEMA "Responder Knowledge Base" (RKB) *Authorized Equipment List* (AEL)).

- 1 = SHSP/UASI – State Homeland Security Program/Urban Area Security Initiative
- 2 = LETPP – Law Enforcement Terrorism Prevention Program
- 3 = MMRS – Metropolitan Medical Response System
- 4 = CCP – Citizens Corps Program
- 5 = EMPG – Emergency Management Performance Grants
- 6 = IBSGP – Intercity Bus Security Grant Program
- 7 = TSGP – Transit Security Grant Program
- 8 = PSGP – Port Security Grant Program
- 9 = BZPP – Buffer Zone Protection Program
- 10 = Chem-BZPP – Chemical Buffer Zone Protection Program
- 11 = NSGP – Nonprofit Security Grant Program
- 12 = PSIC – Public Safety Interoperable Communications Program
- 13 = EOC - Emergency Operations Center

\*\* **RKB AEL No.:** "Responder Knowledge Base" *Authorized Equipment List* Number – A number that has been assigned to this specific piece of equipment in the FEMA/DHS *Authorized Equipment List*, and is often required to be referenced in grant application documents when an agency applies for specific equipment grants.

The following websites provide help and guidance in search and application for many of the grant programs.

- [www.firegrantsupport.com](http://www.firegrantsupport.com)
- [www.grants.gov](http://www.grants.gov)
- [www.usagovernmentgrants.org](http://www.usagovernmentgrants.org)

# HMRT INSPECTION PROGRAM

## AUDIT PROGRAM

- Agencies in **GREEN** have been awarded grants in this program.
- This helps in their attaining a Team Typing status.
- Produces efficiency in grant money spending
- (NO WASTE)**

**CHART # 1 -- CAL / EMA – Fire & Rescue Branch – HMRT Audits Developed** (SOME FROM PREVIOUS INSPECTIONS)

Insp. Date	Agency Grant Contact "A A"	Insp. #	Op Area	Reg.	Type Insp.	Type Cert	Pass – Fail	Unit #	\$\$ Low End	\$\$ Hi End	Median \$\$	GRANT MANAGEMENT - AWARDED			
												Notify / Replied	P of P	Amount	
4-15-09	LA County F.D.	18	XLB-LAC	I	1	0	Audit Only	HM #76	\$51,482	\$104,224	\$77,858	Yes Yes	Dean McGuire, BC 323-881-3041 dmcguire@fire.lacounty.gov		\$80,000
4-15-09	LA County F.D.	40	XLB-LAC	I	1	0	Audit Only	HM #105	\$68,147	\$126,112	\$97,130	Yes Yes	Christy Grandon cgrandon@fire.lacounty.gov Hiady Oliva holiva@fire.lacounty.gov		\$100,000
4-18-09	LA City Fire Dept.	38	XLA-LFD	I	1	0	Audit Only	HM #4	\$26,861	\$42,830	\$34,845	Yes			\$35,000
4-18-09	LA City Fire Dept.	39	XLA-LFD	I	1	0	Audit Only	HM #67	\$38,362	\$69,145	\$48,754	Yes			\$50,000
5-21-09	Marin Co FD Haz-Mat JPA	33	XMR-MRN	II	1		(This would be an upgrade to 1) Audit Only	HM-1	\$78,462	\$117,480	\$97,971				\$0
2-28-08	Long Beach	7	XLF-LOB	I	3		3 (This would be an upgrade to 1) Typing Inspection -PASS-	HM-24	\$81,955	\$120,084	\$101,020	Yes Yes	Christopher Rowe Christopher.rowe@longbeach.gov		\$105,000
6-18-09	San Ramon Valley FPD	28	XCC-SRM	II	2		2 (This would be an upgrade to 1) Typing Inspection -PASS-	HM-35	\$127,120	\$201,199	\$167,160				\$0
7-7-09	Eureka Fire Dept	31	XHU-EUR	II	2	0	Typing Inspection -FAIL-	HM-8190	\$22,033	\$33,785	\$27,910				\$0
7-31-09	Butte County Fire (CalFire)	36 & 37	XBU-BU T	III	2	0	Typing Inspection -FAIL-	HM-1 or HM-64	\$89,252	\$121,306	\$105,279	Yes Yes	Russ Fowler, BC 530-838-7111 530-521-8056 (C) Russ.fowler@fire.ca.gov		\$0
10-8-09	Bakersfield F.D.	42	XKE-BKR	V	2	0	Typing Inspection -FAIL-	HM-15	\$8,772	\$17,898	\$13,335	Yes Yes	Garth Milam, BC 661-328-3688 (C) 661-706-3688 (C)		\$205,000
10-8-09	Bakersfield F.D.	42	XKE-BKR	V	Upgrade to 1	2	Upgrade To 1	HM-15	\$122,956	\$262,716	\$192,836		gmilam@bakersfieldfire.us		\$0
10-12-09	Sutter County F.D.	30	XSU-STC	III	3	0	Typing Inspection -FAIL-	Rescue 8	\$28,147	\$34,943	\$31,545	Yes Yes	Dan Yager, Chief 530-822-7400 530-882-7908 (C) dyager@cs.sutter.ca.us		\$6,600
2-2-08	Meredo Co. F.D.	11	XMD-MRD	V	Upgrade to 1	2	PASS	HM-62	\$104,626	\$168,249	\$136,438				\$0
2-11-10	San Diego (HM-1)	9	XSD-SND	VI	2	0	Typing Inspection -FAIL-	HM-1	\$30,007	\$38,949	\$34,478				\$0

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# Any Questions



# That is all Folks!

